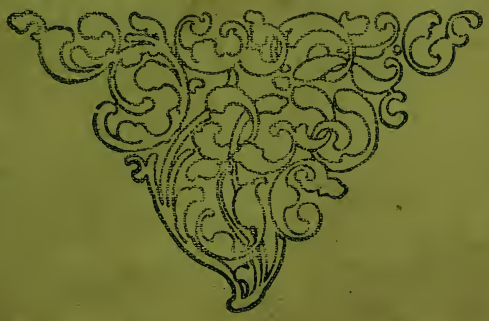
# PSYCHOLOGY AND HIGHER LIFE



# PSYCHOLOGY AND HIGHER LIFE.

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BY

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*REVISED AND ENLARGED EDITION.*

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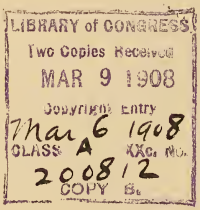

TO MY FAITHFUL HELPMATE.

# PREFACE.

THIS book grew out of a course of lectures delivered to the freshman students in the Kansas Agricultural College. It is intended to present the subject-matter of descriptive psychology in such a way as to constitute a simple text-book for the younger student and at the same time to furnish instructive reading for a much larger constituency.

In every chapter I have had in mind that ever-increasing host of persons who, aside from the routine affairs of life, are giving their attention to the study and conquest of self. I am especially interested in the "man who is down" in any walk of life, and I believe that a closer sympathy among all classes can be brought about by means of a better knowledge of the self. Finally, I am in sympathy with the students of the so-called "higher thought," but it seems to me that in every case such persons will find a more rational basis for their thinking and writing through a careful study of the underlying laws of mind—a matter which many of them have neglected or overlooked.

I am indebted to my colleague, Dr. John V. Cortelyou,

Professor of German in the Kansas State Agricultural College, for reading the manuscript and for helpful criticisms. My acknowledgments are also due to Henry Holt & Co., publishers of James's and Angell's Psychologies; and to Allyn & Bacon, publishers of Walker's Anatomy, Physiology and Hygiene, for permission to use some valuable illustrations.

W. A. M.

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# CONTENTS.

# INTRODUCTION.

The psychologic aspect of things has been attracting much attention of late. The psychology of numerous acts and occupations has had special treatment in the leading magazines, in which it is not unusual to find serious attempts to describe minutely processes of consciousness accompanying such acts as swearing, laughing, fighting, or swimming.

The modern novel has taken the cue, and the reviewer of the book often notes "the author's powers of psychologic analysis." The psychology of advertising is fast becoming a subject of special study, while separate courses are being offered in this branch. A comparison of the advertising matter in a modern first-class magazine with that of ten years ago will show a very marked change of method. The older type of advertising was characterized more by "glittering generalities" and boastful assertions about the quality of goods and the volume of business. The modern advertisement is, above all things else, devised to attract the attention of the reader. So the display type is likely to set forth some simple, familiar phrase that appeals to the personal experience of a person of average intelligence.

So we could go on to show that nowadays the popular thing to do is to try to psychologize about every conceivable subject. But this effort is often attended by many absurd assumptions and by much that is little better

than guessing about the nature of the mind. Many of these vagaries are doubtless attributable to the fact that psychology has come rather suddenly to the attention of the general public without the masses' having had sufficient time or opportunity to study the subject at all systematically. Isolated statements of psychologic fact have been contorted into various forms and expanded into so-called metaphysical discussions. What is intended here, however, is not to discourage these efforts to view common matters psychologically, but to give the whole subject a more rational basis by means of a somewhat careful review of the subject-matter of psychology, and an attempt to show some of its relations to every-day experience.

The people will psychologize. The mental atmosphere seems at present to be charged with a psychic influence. What the majority of intelligent persons here on earth most ardently long for is long life and the pursuit of happiness of some kind. They are coming to the belief that psychology will lend itself to the accomplishment of these ends, and consequently they are ever on the alert for psychologic interpretations of things. Fewer people than ever are today inclined to view their mental activities as a sort of fixed inheritance with little or no possibility of readjustment. Knowledge is of little use and has less meaning if it does not deal with matters viewed in relation to living. A correct method of studying psychology should open to the mind of the individual the problem of the self, and show him that nothing can have vital meaning to him unless it is related to self-expression.

If there is any such thing as pernicious thinking, and if one can secure any control of his consciousness, why is

it not just as reasonable to advocate the production of a better crop of ideas as well as the development of a better quality of physique or of vegetation of any kind? A practical knowledge of mind and of mental laws ought to be an aid in the first instance and in no way a hindrance in the others. If, furthermore, one can be led to realize something of the close relationship existing between mental act and physical act, he will be the more inclined to try to break away from the idea of predestination and to strive for the mastery of the situation that formerly threatened him with defeat. The writer of these lines cannot divest himself of the belief that a systematic knowledge of psychology will somehow aid one in reaching the individual who is down and in helping him to arise and assert his better self.

What makes this world so dreary for many of its inhabitants is the poverty and meanness of their everyday thoughts. They lack spontaneity. They live a life of shreds and patches simply because they do not know how to organize their mental forces in such a way as to make them productive of life-giving thought. Practical mind-training ought to bring about this better result. Moreover, the one who has such discipline will naturally have these things added unto him: (1) A better understanding of others, and of human nature in general; (2) More sympathy for others, because of a better understanding of the obstacles that stand in the way of the progress of every really earnest soul; (3) He will think of people in terms of mental conduct, and thus become a student of motive; (4) Other things being equal, the man of well-organized mind is physically stronger and has greater power of endurance than his weaker-minded

brother; (5) Because of his systematic, well-directed mental discipline he will meet with greater success in his chosen vocation and will thereby become a worthier member of society.

# PSYCHOLOGY AND HIGHER LIFE.

## CHAPTER I.

### THE NEURAL BASIS OF MIND.*

**Mind and Brain Act Together.**—Strange indeed is this mind of ours, by means of which we love and hope and desire and despair and know. And yet, what is it? And where is it? You cannot see it or feel it or taste it, or sense it in any other way. It is in the brain, you say. But cut into the brain and what do you find? Merely a few convolutions of flesh-and-blood matter; *i. e.*, gray and white fibers and cells intermingled with blood vessels—but *no mind.* So we have to be content with saying that mind, so far as we can know it, is composed simply of activities or *processes.* Thus, loving, hoping, desiring, knowing, and the like, are mental processes.

We are accustomed to say, however, that the brain is the seat of the mind; and we find much evidence warranting the statement that every mental process has corresponding to it a brain process. By dissecting the human body scientists find a complex nervous system, which consists, roughly speaking, of brain lobes, medulla oblongata, spinal cords, and nerve fibers branching from the brain and spinal cord to every part of the body. Now all this system of nerves is in some way connected with

* For illustrations of mind-body relations, consult the Appendix.

our mental processes; *i. e.*, with what we think and know. While this network of nerves appears to the naked eye to be a comparatively simple structure, a microscopic examination, especially of the brain mass, reveals a wonderfully intricate arrangement of minute fibers and cells. It is estimated that the normal adult human brain contains four thousand million cells.

Touch the back of your hand with a pencil-point. You say that you *feel* the pressure of the pencil. What takes place? Simply this: the pencil-point comes in contact with (stimulates) the end (terminus) of the nerve imbedded in the skin, and the nerve quickly transmits the impulse to the brain, where it is recognized. Listen to the ringing of a bell, and while you hear it the nerve ends in the ears are being stimulated by the air vibrations and the effect again reaches the brain over the nerve tracts. A similar thing is true of sight. Light-waves strike the retina as a stimulus, and when the impression reaches the brain we call it sight, or speak of it as something seen.

**All Mental States Motor.**—There is not only every reason for asserting that every direct sense impression is attended by a nerve process and a brain process as illustrated above, but it is also true that a brain act attends every thought or idea of an abstract nature. Let me illustrate further. Suppose you sit in a perfectly quiet place with eyes closed so that you would not see or hear anything or experience consciously any other sort of contact with the outer world: even under these circumstances your mental process might still go on freely. You could still think of things you had previously seen and felt and tasted, and compare them mentally. In

every such instance, while the outer nerve stimulation would be lacking, there would nevertheless be a brain process, a kind of activity among the brain cells, accompanying every thought process.

But what seems stranger yet is the fact that every thought one thinks *tends* to *express* itself in an *act.* To make this statement clear, suppose you meet three good friends on the street-corner, each about to depart in a different direction and each urging you to go with him. You listen to A's plea and feel impelled to go with him, and so afterwards with B and C. But all the time they are talking there keeps coming up in your mind a more *impelling* thought than either of them can offer; for example, the thought that you promised your mother that you would return home directly. And so you do go directly home, but you no doubt felt, for a moment, an impulse to act on the suggestion of each of your three friends. So it is that every thought *tends* to express itself in an act, but only one, the one most impelling to action, directs your conduct at any given time. Of the thousands of thoughts that rush through one's mind in the course of a day, comparatively few become realized in actual conduct.

**Conscious and Self-Conscious.**—When one is aware of his surroundings he is conscious. Consciousness, then, is awareness of what exists or what goes on about one's self. During every waking moment I am conscious of something or other about me. This is simply another way of saying that some kind of mind processes go on all the time while I am awake. Self-consciousness is consciousness directed in some way to the self. If one watches himself breathing or listens to his own heart beating, he

is in a sense self-conscious. But we are more likely to think of this term as applying to instances wherein there is thought of one's own personal worth, such as vanity or conceit; or lack of worth, such as humility or bashfulness. The question of self-consciousness is an important one for the student, and it will be treated later at more length.

**Consciousness Always Active.**—Professor James likens consciousness to a flowing stream, and calls it, in an early treatment, "The Stream of Thought." Longfellow in "The Bridge" speaks of a "flood of thoughts. "Fluency of speech" is another more common expression, which really means that there is a rapid flow of ideas. The figure is a good one. Our thoughts do seem to flow like a stream, but like an uneven one. Now the current is deep and strong and now calm and placid. And as the elements of a stream are never in the same relative position twice, neither are two states or processes of consciousness ever precisely the same. Consciousness *never* repeats itself. Suppose you say, "I am thinking of exactly the same thing that I thought of at this time yesterday, viz., my home." A careful analysis will show that, while this is perhaps true of the *object* of your thought, the *process* of thought is a new one. You really have a process of consciousness very different from that of yesterday, and the more you try to make them alike, the wider they differ in their elements or constituent parts. Try this and observe for yourself. Another thing is evident: one cannot sit down and simply cease thinking or think of nothing at all. If one ceases to be conscious he has either gone to sleep or fainted away, or

something of the kind, and his brain is in a state of comparative rest.

**Varying Moods.**—This brings us back to the main thesis of this chapter, viz., that *whatever* the process of consciousness, there is always corresponding to it an analogous brain process. When one's thoughts "flow freely" there is a comparatively high state of excitability in the brain, and when the thinking is slow and sluggish the brain condition is evidently a more quiescent one. Thinking and the circulation of the blood are closely associated. To think clearly and deeply one must have a considerable amount of good, pure blood flowing to the brain. The heart-beat must be strong and vigorous. To verify this, just notice, in the course of the day, the variation in your ability to study or read with undivided attention. When very hungry one's heart-beat and circulation are enfeebled and the blood lacks certain nourishing elements that the brain must have for its best activity. Under such circumstances clear, forceful thinking is impossible, and to try to study is doubtless injurious both to mind and body. Again, after a full meal the digestive processes for a time require the greater portion of the blood, and an intense degree of brain activity is out of the question. Close application to study at this time is at the expense of digestion.

So one's "moods" vary throughout the day, while a hundred different objects come in contact with the nervous organism without and within and make up a multitude of changing conditions. If it were not for the thing we call habit it would seem impossible to form any such thing as a fixed, stable character. Many people are subject to alternating fits of melancholy and buoyancy of

spirit, brought about by little changes in the weather and by other trifling circumstances. Statistics show that more suicides and crimes are committed during gloomy weather than during fair weather. It is also shown that these crimes vary with the time of day. Many agree that it would be harder to do a deed of violence at sunrise on a bright, clear, beautiful morning than during the stormy night. I fully appreciate this sentiment, but there is nearly always a tendency on my part to feel melancholy at about dusk in the evening.

So we observe that consciousness is a sea of shifting, changing moods, never twice presenting the same aspect. It is the part of wisdom, as I shall try to show later, to attempt to control these moods in the interest of stronger character and higher life. "A little stoppage of the gall-duct," says Professor James, "a dose of cathartic medicine, a cup of strong coffee, at the proper moment, will entirely overturn for the time a man's views of life."

**The Neural Tracts.**—Considering the nervous system with reference to its function of transmitting nervous energy, we have (1) the ingoing tracts or fibers; (2) the redirecting brain mass; and (3) the outgoing nerve tracts or fibers. The first are called afferent and the last efferent nerves. The afferent nerves carry the nervous impulses inwardly from the periphery (outside of the body) to the brain, or spinal cord, or smaller nerve centers. These nerve centers constitute the so-called central nervous system, and have the power of redirecting the impulses away from themselves toward the various parts of the body. The efferent nerves transmit these impulses away from the central nerve masses. Of the afferent nerves, those carrying sensations to the brain are called

*sensory;* and of the efferent nerves, those directing the movements of the muscles and limbs are called *motory.* Some one facetiously illustrates the complete sensory-motory nervous process by means of a fish story. A man in a boat succeeds in harpooning a large fish. Immediately a message, a sensory current, is transmitted to the creature's brain: "Harpoon in tail." Whereupon, a motory message replies: "Jerk tail and upset boat."

**The Nerve Termini.**—As suggested above, the nerve tracts branch out from the various parts of the body, many of them coming to, and spreading out over the surface of the true skin. The epidermis contains no nerves. It is by means of these nerve termini that the human being comes into actual contact with the world of objects about him and learns their meaning. The inner ends of the nerves are hidden in the central nerve mass. It is interesting to notice that the nerves over which we receive sensations terminate in the gray covering of the brain, the *cortex*, and that there is for each pair or group of nerves a particular point of termination. For instance, the optic nerve-fibers terminate in the occipital brain lobes, and the olfactory tracts are traced to the lower part of the temporal region.

Thus it seems that each and every movement of muscle or limb is presided over by some specific portion of the brain. When I raise my right hand there is evidently some unusual excitation in the cells to the *left* of the top of the brain mass, and left-hand movements are accompanied by the same disturbance to the *right* of the top-center. Wherefore, right-handed persons are "left-brained"; *i. e.*, there is probably a fuller and more complex development of those brain cells to the left of the upper

center than of those to the right. If this be true, it makes right- or left-handedness an *inheritance* rather than a mere acquirement. It has been noticed that left-handedness frequently "runs in families."

**Various Qualities of Feeling.**—It is also interesting to note the so-called "specific energies" of the various parts of the brain. So far as we can determine, the nerve-fibers are all composed of the same kind of material and they transmit their energy in the same way. Notwithstanding this fact, the brain receives and interprets the various impulses that come in over these similar tracts as having innumerable different qualities. Each region of the cortex responds to the nerve currents that enter it in a manner that is attended by a peculiar quality of feeling. Blindfold a person and touch lightly with your finger, first the back of his hand, then the back of his neck. He will distinguish at once a radical difference in the feeling of the two contacts, and also locate them accurately. This distinction can be made between two points of contact located a small fraction of an inch apart on the surface of the hand. No satisfactory explanation of this power of distinction has ever been made, so far as the author is aware.

**Reflex Action.**—Tickle a sleeping child on the hand and it will jerk the hand away. While you are deeply absorbed in a book, let a fly perch upon the bridge of your nose. Immediately, without direction, your hand will go up and brush the creature away. Both of these are examples of reflex action. The first is entirely unconscious, while the second is (or may be) conscious. In both cases the sensory-motory current is completed and in neither case is there time to think before the motion

is executed. The central nervous system presides over the life centers, as the heart, lungs and stomach, and under its direction there go on the vital processes, such as secretion, digestion, and assimilation. These processes are, in a certain sense, reflex acts of the nervous system. For example, food is taken into the stomach, where it stimulates certain nerves. As a response to this stimulation, the digestive fluids are poured into the stomach. These reflex processes all go on unconsciously.

Man's nervous organism is so constructed as, under normal conditions, to take the best care of the body by a series of reflex acts. The human body is a highly complex machine which, according to the evolutionist, it has taken thousands of years to build. Only a small portion of the many acts performed by the nervous system ever come to consciousness. Just as soon as the organism becomes proficient in the performance of any acquired act, the consciousness of the repetitions of this act either ceases or becomes very dim. I was watching a young woman playing the piano today, and noticed that her fingers flew over the keys so lightly and so rapidly that it was impossible to follow the movements of even one of them. She was watching the music on the page and seemed to be wholly unconscious of what her hands and fingers were doing. Long-continued practice had brought about this condition.

**Summary.**—The discussion so far has implied that to understand the mind to best advantage one must stick pretty close to the body, observing especially the nature of the nervous mechanism. As to which of the two, mind or body, is the more important, or what has the greater influence on the other, I will not here attempt to

decide; but, for the time being, the reader will please observe that he cannot get along very well without either. To summarize, let us note, then, that—

1. For every psychosis (mind-act) there is a neurosis (nerve-act). That is, accompanying every mind-act there is a brain-act.

2. All mental processes tend to express themselves in form of physical acts, although only a few, the most act-impelling ones, succeed in coming to expression in such form.

3. Consciousness is awareness of something existing or taking place in one's environment. Self-consciousness is this same awareness directed to something having reference to one's own person.

4. One's moods change constantly with the every-varying condition of his health and his environment. He may experience joy, sadness, hope and despair all within a single hour, and shortly afterwards, while deeply absorbed in a problem, none of these.

5. The nervous system is composed of (1) afferent nerve-tracts with specialized outer ends to catch the sense of touch, sight, sound, etc.; (2) Central organs of re-direction, as the brain, spinal cord, and smaller ganglia; (3) Efferent nerve-tracts to direct the movements of muscles, limbs, etc.

6. Many of the ingoing nerve currents are redirected and movements executed correspondingly without the attention, or often even without the knowledge, of the person chiefly concerned,—the subject.

## QUESTIONS.

Sensations vary in intensity not only with the strength of the stimulus, but also with the sensitiveness of the organs stimulated. Is there not, moreover, a very wide range of differences in people in reference to the latter factor?

1. Apply the same tickling stimulus to several children of about the same age, and notice the wide difference in response.

2. If you have not an algometer, place some rough surface, points downward and weighted, on the backs of the hands of several small boys, and notice how much more susceptible some are to the pain than others. A nutmeg grater or perforated tin-can lid will serve this purpose.

3. Undertake to comb the hair of the various members of this same group, but offer no comment on their conduct during the experiment. Notice that while one may shriek with pain, another will endure the hair-pulling with complete indifference.

4. Accompany a group of persons to the top of a high building or cliff, and ask each in turn to lean out over the edge. Observe the variety in their behavior. Some will feel a sensation as if being pulled downward forcibly. Others will lean far out with impunity.

5. A small boy is beating vigorously upon a tin pan with an iron spoon while you are reclining on the couch recuperating from the fatigue of work and worry. The "music" seems to satisfy a positive want in the boy's nervous system. Do you enjoy it as much? Why the difference?

6. Observe that a little child just learning to walk will nearly always try to dance in response to rapid-time piano

music. Is this a mark of intelligence, or a mere matter of instinctive response of the nervous system? The same music would likely make a dog howl and a horse prance.

7. Observe the avidity with which some persons partake of their food at the table, and the absent-mindedness and indifference of others in the same act. A difference in appetite, you say. Is there likely also a permanent difference in nerve conditions? People are widely variant in the amount of enjoyment obtained from eating.

8. A loud report such as that of a gun or a door slamming occurs near you. You start very perceptibly. Succeeding reports have a much less effect. Must there not be some rearrangement of the nerves such as enables one to meet this new condition with less pain?

9. According to the testimony of many persons, the pain of fatigue and that of hunger are much alike in some of their stages, there being a vague, indefinable, but positive, feeling of unpleasantness. Let the reader make a simple test of this matter. He will possibly discover that much seeming fatigue can be relieved by partaking of food. A better understanding of these conditions would be of great benefit to parents and teachers.

10. It seems very probable that the ordinary person's nerves vary widely in sensitiveness of response during the course of the day. Excitement and worry may, for a brief time, heighten the acuteness of all the sense organs, but a reaction of an opposite nature likely follows. It is the more or less unconscious practice of some teachers to use some exciting device during the process of instruction. But what specific value have such methods, and to what extent are they to be used?

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## CHAPTER II.

### PERCEPTION.

We know a thousand facts which we do not remember having learned. For instance, when did you learn that some things are true, or beautiful, or good, while others are untrue, or homely, or bad? When did you learn that the whole of anything is greater than any one of its parts? You feel like answering in the language of the schoolboy, "I always knowed such things." Yet there is much to indicate that you have acquired this and all other knowledge you possess since the day of your birth. Descartes (b. 1596), a Frenchman, and the so-called founder of Modern philosophy, believed in innate (inborn) ideas. Some fundamental ideas are in the mind at birth, so he argued, and by means of these we become aware of the great multitude of facts. This theory of innate ideas is not advocated, however, by modern philosophers.

The theory most nearly approaching that of innate ideas is that the child is endowed at birth, through inheritance and variation from the ancestral type, with certain capacities for learning the facts of the world. The basis of these capacities is his brain structure. The sounds and sights and odors so common to us, must run together into one big conglomerate confusion to the new-born child. The fact is, he knows nothing, and blind instinct alone enables him to perform the few simple acts by means of which he is kept alive while the rudiments of his education are being implanted. He doesn't even know any differ-

ence between the "me" and the "not me." The little pink toe at the further extremity of his body means just as much or just as little to him as the big house-clock or the shelf at the other end of the room. The puzzling question is, if the child doesn't know anything to begin with, how does he get his first idea?

**The First Idea.**—This question is a difficult one, which the author does not pretend to answer, although his theory is that the first faint idea comes into the mind of the child as a result of the difference between his more pronounced sense impressions. For example, sights and sounds affect his nervous organism in such a different manner that a consciousness of this distinction must in time be forced upon his intelligent brain-nature. Such an explanation seems plausible, at least.

One well-known theory is that different degrees of bigness or volume of sight and sound and the like, first impress themselves upon the nervous organism in an intelligent way. All we know for certain is what we have actually observed, namely, that after a very few days the infant shows unmistakable indications of taking a slightly intelligent notice of things about him. At the first moment of his existence the noises and ponderable objects touching him from without, and the colic and other disturbances from within, begin an everlasting irritation of his nervous system. He coos and kicks and screams and otherwise "fights back." Thus the *environment impresses* itself upon him, and thus *he reacts* upon it and acquires the more rapidly the little, simple meanings of things. One of the most interesting pastimes imaginable is to observe closely day by day the conduct of the little child as he proceeds to find out the whole world.

**Sensation and Perception.**—The new-born child is perhaps the only person that is capable of experiencing pure sensations, that is, merely vague, uninterrupted, unnamed physical feelings. Such are *sensations*, the so-called first things in consciousness. One reason a pure sensation is well-nigh impossible to the average adult person is the fact that he immediately *interprets* the sensations as they come to him, and such interpretation constitutes *perception*. Unlike the infant, he perceives at once that the object felt is a hot stove or that the thing heard is a bell ringing, etc.

However, you might try this experiment: while some friend is wholly unexpecting it, thrust a pin (not too deep) into the back of his hand. Then, if he is not too much incensed at the experimenter, ask him to state at once whether or not he felt first a mere sensation, while the interpretation (the perception) came later. A number of persons have been able, so they maintained, to separate sensation and perception in some such manner. There is no doubt that a very brief interval of time elapses between these two, although it may not exceed a lightning-flash in duration.

The function or purpose of perception is very evident. Through the avenues of the special senses there come various sense impressions which have to be interpreted, or perceived. This interpretation, or perception, is always in terms of something that has been learned before. To illustrate: Suppose I hold up to your view an object that is very unfamiliar to you. Your first statement is a question, namely, "What is it?" I ask you to examine the object more closely, and you immediately begin trying to find a name for it. That is, you class it with some

object which is already familiar to you. At first you say it is a *thing*, and later you suggest mirror and microscope, till, at last, I tell you it is a color-sense tester.

Perception, then, might be called the interpretation of the raw material of sensation; and it in turn furnishes a comparatively raw material for the higher intellectual activities, such as imagination and reasoning.

**The Special Senses.**—Every part of the peripheral (outer) nervous system seems to be sensitive to contact, but some parts of it have become highly specialized. It was an ancient philosopher named Demetrius who first suggested that the special senses are merely modified forms of the touch sense. Sound vibrations touch the nerve-ends in the ear, sight (ether) vibrations impinge upon the retina, floating particles come in contact with the olfactory nerves, etc. Now, it may be true that millions of years ago, the ancestor of man was like a jelly-fish, or even an amœba, a little simple creature that has exactly the same kind of substance in every part of his body. It may also be true that this little insignificant creature, by means of being tossed and rolled around by the elements, developed finally into something higher and more significant, until after thousands of evolutions he became a man. We do know that a tadpole somehow finally evolves into a frog. But we are not much concerned about all this just now.

What we are concerned about is the unquestionable fact that one can't see very well with his ears or taste very much with his eyes. So while all these special senses may all be modified forms of the touch sense, each one of them has its own very peculiar way of interpreting

a very peculiar form of touch. We see, thus, that their difference is more significant than their likeness.

**The Sense of Sight.**—Very early in life a child begins to notice objects. After a few days his little eyes will follow a moving light, and after that other moving things attract him. Still later, bright, stationary objects are noticed. The sight centers, that is, the portions of the brain that are active in interpreting things seen, lie in the back part of the cerebrum. Here the cells seem to be developed in proportion to the keen-sightedness of the person. In the case of a person blind from birth the convolutions are much shriveled up in this region of the brain.

**An Autopsy.**—President G. Stanley Hall, of Clark University, performed a most interesting experiment. After the death of Laura Bridgeman, a blind deaf-mute, remarkable for her intellectual attainments, Dr. Hall examined her brain carefully and found that the optic lobes were withered and undeveloped, the gray covering being much thinner over this portion. On the contrary, the lateral portions of the brain, the centers for movement of the secondary muscles, showed unusual development. The absence of the two senses of sight and hearing compelled Miss Bridgeman to depend almost wholly upon the musclar sense and the sense of touch in getting her knowledge about things. Hence the full development of the lateral brain convolutions.

**Learning to See.**—The child at birth is blind, at least in the sense that he can't see any meaning in things; and he gradually learns to see by experience. Some of the ways in which he learns to see and distinguish things by

sight are as follows: Images of objects moving about him pass over the retinæ. The same effect occurs with stationary objects when he moves his head. After a few weeks he touches and handles things, thus becoming able to see them at various sides, angles, and distances. Later he may approach or withdraw from a distant object and get the experience of its seeming increase or diminution in size. And then, at greater maturity, he has pointed out to him, and he discovers by various other means, the finer points of likeness or difference in things.

People use their eyes very differently. We see only what we are looking for and are more or less blind to other things. That is, we see best and in greatest detail only those things which experience has taught us how to see, and this likely means the things in which we have the most interest. The specialist in botany sees in tree and plant a hundred specific qualities which never meet our view. A long and tedious experience has enabled him to do this. The professional horse-jockey will likely "cheat you out of your eyes" in a trade unless you have had an equally long and varied experience in observing the points in a horse. It is said that the average society woman can "take in" at a glance all the various articles of dress of three others of her kind whom she may meet and pass hurriedly upon the street. But no doubt this is one of her specialties.

In all these cases of peculiar aptitude for seeing things in their fullest meaning, you may be sure that the persons have had much practice in just this particular kind of thing, and that there goes along with it a natural or acquired inclination for such observation.

**The Sense of Hearing.**—The human ear is a marvel-

ous instrument, being able, as it is, to make distinctions between any two of thousands of different sounds. And yet the special process, so far as we can discern, is always practically the same; *i. e.*, sound-vibrations impinging upon the outer ends of the auditory nerves are carried to the brain. The distinctions seem to arise in the brain itself, where the cells are either excited differently, or else different cells are affected by different sounds. The center for hearing is located in the upper convolution of the temporal brain-lobe. The range of the average human ear is from 16 to 30,000 vibrations per second.

Here, as in the case of sight, we note that one hears best what he has trained to hear and what he is most intently listening for. This suggests why the farm-hand can hear the distant dinner-horn at such a great distance, and also why the trained orchestra leader can detect the slightest discord in the sound of any one of the many instruments playing, and also why the telegraph operator can read off the message from one of a score of clicking instruments. In all these cases there has been a special kind of ear-training. Try to use the telephone in a noisy telegraph office. You can't hear for the confusion, but the office boy can. He has learned how to listen by long practice. It is a well-known fact that the novice in the use of the telephone often complains of not being able to hear. The fact is he has not yet learned to give the peculiar kind of attention required.

**An Experiment.**—You hear, then, intelligently, only what you know how to hear. Hearing, like every other kind of perception, comes from practice. Try the following experiment in a quiet place: Let some one step to the opposite side of the room, and, after taking out his

watch, approach you slowly till you hear the watch ticking. Have a third person mark with crayon the exact spot at which you heard the instrument. Next have the watch brought close to your ear and then let it be carried slowly away from you. You will likely find, as is nearly always the case, that you can hear the watch at a greater distance in the second instance. Why? Because you already have the sound to begin with, and know exactly what to keep listening for.

**Some Specialists.**—The acute hearing of the professional "eaves-dropper" is well known. The public-school teacher is often a good detective in cases of school-room misdemeanors, because of much practice in listening for this kind of thing. The watermelon thief succeeds in securing the "rich juicy fruit" in spite of the darkness of the night, because of his ability to distinguish the "thump" of the ripe melon from that of the green. The law in all these cases is ever the same, that of the attention trained to the peculiar kind or quality of sound to be listened for.

Among physically normal persons, only the pronounced genius may be mentally blind and deaf to things presented to his sight and hearing. He neither sees you approach nor hears your voice, because his mind is absorbed in something else, and just then he has no attention for these particular things.

**Taste and Smell.**—The results of scores of experiments have served to show that these two senses are very dependent, both upon each other and upon the senses of sight and touch. Let one be blindfolded and have his nose plugged up and he will distinguish different articles of food largely by means of the delicate sense of touch in the

tongue. I have found that out of one hundred tests, only one person, a druggist, by means of the smell sense alone was able to distinguish and name a dozen different, very familiar odors. The other 99 did not average over 25 per cent. Before the nose recognizes an odor it usually waits for the eyes to look about and aid in the matter. It is always so much easier to see definitely than to smell definitely, that the poor, slow-going olfactory nerves get very little careful, specific training.

These senses can be trained, however, for it is said that professional tea-tasters can distinguish as many as fifty different varieties of tea. This is accomplished after long practice, mostly by means of a well-developed sense of smell. There are, however, different degrees of bitterness to be detected by the taste-sense. To the author there are just two kinds of tea—hot and cold. Unless one has given it much special exercise, the olfactory nerve is easily fatigued. It was noticed that, in the case of the 100 tests referred to above, the sense of smell was oftentimes lost, or partially so, and rest was frequently necessary, after the first half-hour.

**Touch.**—Some evolutionists believe that the sense of touch, accompanied by pleasure or pain, or both, was the primitive one in animal life. There are still found creatures of such low order that their only manifestations of life consist in slightly withdrawing from things that touch them painfully, and in slowly folding themselves around any object that has a pleasurable contact so as to absorb and assimilate it. We do not exemplify such a simple form of life, but we do instinctively recoil from contacts that are painful, such as a piece of dry sandpaper pressed against the side of the face; while we reach forward for a

contact that is pleasurable, such as the warm clasp of a friendly hand.

The nerves of touch are found terminating in the true skin on all parts of the body. They are most numerous at the finger-tips and the end of the tongue and fewest on some parts of the back. To prove this statement, notice that two pencil-points are felt as two, even when placed a small fraction of an inch apart on the finger-tip, and that they cannot be felt as two till they are distant from each other two inches or more on the back. This arrangement is in accordance with utility. The finger-ends, through their acute sense of touch, aid us in a thousand instances in getting the quality of things. Notice, too, that, besides increasing the pleasures of taste, the high sensitiveness of the tip of the tongue enables one to determine much as regards the consistency of the food he is masticating. The tongue is quick to discover any unusual or unwelcome substance in the food.

**Meaning of Pain.**—These nerves of touch are also invaluable guards of the welfare of the body as suggested above. They signal to the brain in times of danger so that the life or health of the body may be preserved, and they report also upon those contacts which may be indulged for the sake of the body's comfort and well-being. Pain, which we despise and fear so much, is a great blessing. We could not get along without it. Every time we abuse the body by any kind of excess or neglect, pain steps in and calls a halt. Were it not for the interference of pain, many people would work their poor bodies to death in their eagerness to accomplish some cherished purpose. Others would cut off their fingers and toes or otherwise mutilate the body just to satisfy an inordinate

curiosity to see how things look on the inside. Again, disease attacks the body, and the attending pain forces one to seek the means of health. If pain could talk, the student would often hear that throbbing headache say, "Quit studying so late at night," or, "Ventilate your room better," or, "Masticate your food more slowly."

While physical pain deters us from acts and conditions that are injurious to the body, pleasure ought to, and in many cases does, incite us to acts that are helpful to the organism. However, the simple utility of bodily pleasure is not so evident as that of pain. For instance, if physical pleasure, such as eating or drinking, is over-indulged, it results sooner or later in suffering. One can get too much even of a good thing. Temperance, or moderation, must be the rule, and all pleasurable practices must be under the guidance of *reason*. Does the pleasure in question contribute to bodily health and future well-being? Opium-eating is said to give temporary pleasure, but its later effects are terribly painful and destructive to health and happiness. Smoking, though painful at first, finally gives a very seductive, though inordinate, form of physical pleasure, but its final results are believed to be positively injurious.

The law of life seems to be that, sooner or later, one must pay for every excessive physical indulgence with his own suffering.

**The Temperature Sense.**—It can now be demonstrated pretty clearly that there are separate nerves for sensing temperature. Heat a steel point and pass it over the back of the hand: only at certain fixed points do you feel the heat of the instrument. Pass an ice-cold steel point over the hand in the same way, and you find other

points that respond to the low temperature of the steel. By marking the "hot spots" and "cold spots" with ink of different colors, you may get an idea of their number and location. At points between these, merely the contact of the instrument is felt, but no sense of temperature.

**The Special Senses Co-operate.**—I hand you a piece of unfamiliar material. You look it over carefully; and then perhaps you feel of it, and smell it and taste it, and heft it and strike it against something to get the sound. At last you decide that the object is a piece of dry cypress. But before reaching the decision you have really brought out the testimony of every one of the special senses. Thus the senses aid one another in getting our knowledge of things. We always perceive concrete, familiar objects in terms of two or more of the senses. What is an apple but an object that tastes and smells and feels and sounds (when tapped lightly) and appears to the eyes in a certain peculiar way?

The absence of any one of the special senses would give you a peculiar notion of things. A blind man would not be able to distinguish a cat from a hat simply by seeing them after first enjoying the sense of sight. Actual tests have proven such to be the case after surgical operations resulting in the restoration of sight to adult blind persons. When you think of your friend, the sound of his voice comes to mind, but to the deaf person this is a world of pantomime. He can think only of his friend's physical appearance, of his gestures and movements, and, perhaps, of how it feels to clasp his hand.

People who are deprived of the use of one or more of the senses often acquire special aptitude in the use of the others. The most notable case of this kind is that of Helen Kellar,

who, though deaf and dumb and blind from infancy, has learned to speak and read two or three languages, and has done, with highest credit, all the work in a college course. Miss Kellar has had to depend on her finger-tips for practically all that she has learned. (See her remarkable article, "A Chat About the Hand," in *The Century* for January, 1905.)

**Value of Clear Perception.**—We are often in too great a hurry or too careless to perceive clearly. On account of poor training in childhood and youth we may have a very confused idea of things that ought to be familiar to us. The nervous system responds to good and bad training with equal readiness while one is young; but after mature years are reached, there is little possibility of changing one's mode of perceiving. The best, and practically the only period, for training the perceptions, then, is the early period of life. It is told of Agassiz, the great naturalist, that he kept a boy shut in a room alone for many hours looking at a little, seemingly uninteresting fish. The boy was thus compelled to make the examination a critical one. He also acquired a practice of very great value—that of seeing all there is in an object of attention.

**Illustrations.**—Five young men from Kansas attended the International Stock Show at Chicago, and carried away a trophy for corn-judging. Clear perception of a peculiar kind gave these young men this special aptitude. One of the highest salaried employés of a great dry-goods house in New York is a man who has been selected on account of his natural and acquired fitness. His keen eye and sensitive finger-ends, after long, persistent practice, have been trained to do the work for him. Every suc-

cessful business man must know one thing thoroughly; that is, his own business. And this implies not merely clear perception of some particular kind, which is absolutely essential, but often a wide knowldege of men and events.

Some day, it is hoped, parents and teachers will become more careful and painstaking in training the young to perceive clearly. The process will consist chiefly in pointing out to the child, incidentally, in his play as well as his work, the specific, detailed characteristics of things seen, and heard, and otherwise sensed.

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## QUESTIONS.

It must be remembered that the chief ingredient of perception is past experience. The mere presence of an object to the senses is no certain evidence that it will be perceived.

1. Conduct two or three children of different families into some place where the view is somewhat panoramic, say, a tract of timber pasture, and note for a half-hour their unguided observations. Will they actually see much that is new to themselves? If the trip is to be made an educational one, what is the peculiar office of their instructor?

2. Set free, unobserved, in a room full of first-grade pupils a considerable quantity of strong perfume, and watch the results. At another time repeat the experiment with something of unpleasant odor, such as asafetida. Will the same pupils be quickest in perceiving both odors?

Will there be some that perceive neither? Can anything be done to arouse the sense of smell if dormant?

3. Most of us, perhaps, lack specific knowledge of ordinary odors, and our vocabularies are without the terms with which to designate them. Cannot there be given some definite, simple instruction to children on this subject? Make a list of familiar odors and suggest a plan for presenting the terms characterizing them.

4. Two six-year-old children enter the first grade together. One has enjoyed the wide liberties of a well-located country home, and the other has always lived in a third-story "flat" of a big, crowded city. Can they be taught well in the same class? Suggest a method of starting them.

5. There are many audible sounds which we never perceive. In some cases it would be an annoyance to do so, but in case of others it is a loss not to do so. Give some examples of the noises that we had better learn to ignore, and of the pleasing, suggestive ones that we might well learn to perceive.

6. Suppose you are spending a day in the woods with some children, and that it is your purpose to develop in them a greater alertness of the sense of hearing. Show specifically how you would proceed to give the instruction.

7. Are you quick at recognizing people at sight? By means of what particular marks or signs do you do so? Analyze your own method, and give suggestions for teaching the young how to acquire this somewhat rare art. One intelligent school superintendent said that he could always recognize people if they would not change their clothes.

8. After the circus has been in town, all the small boys

seem to be in possession of a large fund of new and interesting knowledge, and they all become temporarily acrobats. Some of the older ones run away and secure employment with the show company. Some young people readily acquire the show-attending habit; others are never permitted to attend. How may these entertainments be used intelligently in behalf of real education?

9. There are many intelligent persons that partake of three hearty meals per day, and yet with little consciousness and less memory of what they are eating. Others fairly gloat over the good things set out for them to eat, and can give minute details of the qualities of the meal after it is over. What is the ideal situation in this matter? Does the greedy eater really "get more good out of life" than the absent-minded one?

10. Occasionally you will find a boy who is seemingly almost entirely shut up to all the ordinary things that make their appeal through the senses. Is such a boy necessarily a dullard? How would you proceed to analyze and educate him?

11. Are you, or is any one of your acquaintance, acute in all the sense perceptions? Are we not likely to misjudge people whose senses have been trained very differently from our own? Discover, if possible, the point of greatest weakness, as well as the point of greatest acuteness, in your own sense perceptions. Is it too late to make improvements?

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## CHAPTER III.

### IMAGINATION.

Think deliberately, and in the order named, of each of the things given below:

1. The appearance of your home from the outside.
2. The face of a familiar, absent friend.
3. The voice of this friend.
4. The explosion of a fire-cracker, a bell ringing.
5. A boy whistling "Yankee Doodle."
6. The odor of roses, plum blossoms, onions.
7. The taste of sugar, quinine, salt, lemons, hot coffee, ice-cream.
8. The sensation in the finger-ends when touching fur, sandpaper, a dry brick, a baby's face, a piece of fine silk.
9. The feeling in your hand while it holds a chunk of ice, a hot biscuit.
10. The weight of a chair lifted by your hand.
11. A horse with six legs.
12. Water flowing uphill.

Every one of these objects, if thought of, requires the use of the *imagination*. If this is true, imagination seems to be simply consciousness of things not present to the senses. A little reflection will show, however, that excepting numbers 11 and 12, these images relate to things that have at some past time been present to the senses. Imagination, in the first ten cases above, consists in the formation of a mental copy (image) of the thing seen, the sound, the taste, the odor, etc. Is it not, then, merely.

the act of perception done over again but with fainter effect than the original perception? Here, imagination is a weaker reproduction of perception.

**Two Forms Only.**—But the last two cases are evidently very different from the first ten, for in them we have images of things never present to the senses. No one has ever seen a six-legged horse, or a stream of water flowing uphill, but he has seen all the elements of these objects; *i. e.*, for example, water flowing and an uphill incline. One may think of an object as composed of all sorts of familiar elements, but he can't think of anything having a single element that has not been at some time an actual object of sense perception. Try it. Imagine, if you can, the form and the taste of a *shugroo*. So we have only two forms of imagination: (1) Reproduction (1 to 10 above), and (2) productive or constructive (11 and 12).

Thus far we have been using the word imagination only in its technical or psychological sense. The popular meaning of the word is somewhat different. When we speak of a book, for instance, as being a "work of imagination," we have reference to merely the poetic fancy of the author. Again, we say of a person that he "imagines too many things," meaning that he forms too many hasty, unjust judgments concerning other people's acts and motives.

**Kinds of Imagination.**—Let us get a little clearer understanding of what is meant by the image in psychology. Think of how an absent object, say an apple, appears, and you have a visual image; think of how it tastes, and you have a gustatory image; of how it smells, and you have an olfactory image; of how it feels to the touch,

and you have a tactual image; of how it sounds when you are peeling it, and you have an auditory image; of how it affects you when, ice-cold, it is held in the hand, and you have a thermal image. Although many are in the habit of referring the term image to its visual form only, there are really as many forms of images and imaginative processes as we have senses.

As a matter of fact, the majority of people use the visual form of imagination much more than any of the others, and their visual images are correspondingly clearer. The auditory form stands next in importance. This means simply that people depend more upon their eyes and ears than the other sense organs, in every-day perception, and use them more. I have rather acute auditory perception, and can imagine a tone or sound long after the vibrations have ceased. For instance, the image of the voice of a friend who has been dead for six years is still very clear in my mind. I once knew a student who could not translate German by means of silent reading. He had to hear himself speak the words before he could grasp their meaning in English. For the same reason there are a few persons who find it necessary to read their English aloud in order to get a ready interpretation.

**The Neural Process in Imagination.**—Close your eyes, and see "in your mind's eye" the face of an absent friend; or listen, and imagine you hear a horn blowing. In every such case, there is evidence that the characteristic nerve is stimulated, more faintly of course than in actual perception, from within. An object clearly seen or a sound distinctly heard seems to leave a distinct impress upon the cellular brain structure. It is said by some that the brain is plastic or pliable (especially early in life) similarly to the

record cylinder of a phonograph. The indentations on the cylinder correspond to the original perception. The report, when the machine is in operation, is the image. Others suggest that, when one perceives a new object, there is a tract or "path" of excitation formed in the brain mass, and this imagination is merely a weaker impulse passing through this new "path" of least resistance.

There is a time in the life of nearly every child during which the nerve mechanism is so impressionable that the copy, or image, seems as real to him as the original perception. He is temporarily like Tennyson's Prince, who "could not tell the shadow from the substance." He tells people all sorts of stories, "yarns made out of whole cloth." and his mother is horrified to think that the child has become such a prevaricator, and wonders whom he inherited it from. There is no cause for alarm, however. The thing imagined and the thing originally perceived are seemingly equally vivid to the child, and he mistakes the one for the other. If properly dealt with, the average case will recover in due time.

**An Important Function of the Image.**—What constant use do we make of the image? Let us see. I hold up before you a stick and ask, "How long is it?" "Nearly a yard," you answer. In making the judgment you compare the stick with your mental image of a three-foot measure, a yardstick, perhaps. I then strike a piano-key, and ask you to name the pitch. "F," is your reply. In this case you likely have a clear mental image of the pitch of, say middle C, and you compare the two, hearing one in reality and the other in imagination. So, just as in the case of the yardstick and the pitch middle C, the mind carries a large stock of standard-measure images for practical use.

Going back for a moment to the consideration of perception, we notice an interesting situation. It is this: while the image is in every case a copy of some previous act or acts of perception, every simple act of perception is attended and aided by the imagination. For instance, a pleasant odor strikes your olfactory nerve. What is it? "Clover blossom," you reply, as the image of the familiar odor comes to mind.

**Culture of the Imagination.**—It ought to be evident by this time that a clear, vivid imagination is acquired largely through clear, precise perceptions, of which it makes copies. But the fixing of the image comes from practice. Many are so engrossed with first-hand perceptions that they give little attention to this practice that gives perfection. Especially are the tactual and olfactory images neglected. A little daily exercise of these forms of imagination, however, will bring results that are surprising. For example, arrange in order of smoothness a dozen or more objects; and, after touching each in turn, try to retain the image of the feeling imparted. Then touch each one in quick succession and try to recall the image of each. This is also a good form of memory-training.

There seems to be a great difference in the imaginative ability of people. A difference in amount of training is not the only explanation. One cause doubtless lies in the variation, in different persons, in the constituency of the nerve-structure. A vivid imagination usually accompanies a choleric, emotional temperament. There is no mistaking the fact that the images are much more numerous and vivid when one is in an emotional state of mind. Let one be subjected to great fear on account of a storm that is approaching: visions of a score of dire calamities previously

heard about go thronging through his imagination. Under pressure of intense anger one rapidly imagines his foe in a dozen unfavorable or humiliating situations.

**Moral and Æsthetic Aspects.**—The proverb which says, "As a man thinketh in his heart, so is he," is best interpreted in terms of the imagination, meaning that a man's character is fashioned in accordance with the nature of his dominant thoughts. Let him constantly imagine himself performing acts of charity and giving expressions of sympathy, and his life will soon shape itself in accordance with these sentiments. On the other hand, if all his thoughts are of a criminal nature, criminal acts are pretty sure to follow.

The psychologic explanation of the bad effects of the dime novel and low, vulgar companionships is easily brought out in this connection. No boy hears related an exciting story but that he tries to imagine himself in the place of the hero. After considerable practice this thing becomes a passion. His plastic nervous system yields readily to the new kind of process, and he finds that his silent or solitary hours are completely taken up by contemplation of these degrading conduct-images. The remainder is easy. He slides downward to a level of debauchery and dishonesty as naturally as an icicle from the comb of the roof, and his fall is just about as precipitate.

**Different Effects of City and Country.**—The child that grows up in situations that furnish continuous entertainment through the avenue of the senses does not find it necessary to call up images for his amusement, and he is likely, therefore, to be lacking in imagination of the constructive kind. Here is suggested an element of weakness in the character of the child reared in the city. The coun-

try bumpkin, on the other hand, whose surroundings during most of the time are of a more commonplace character, is likely to entertain himself during much of the time with images of varied forms of the occasional interesting experiences that come into his life. Being thus forced to gain much of his amusement by means of the copies and fictions of his own imagination, he ought naturally to be more inventive, and more able to adjust himself to the new and trying circumstances that are certain to come to him later.

**The Image versus Reality.**—Day-dreaming and building air-castles are bad as every-day practices, but good if indulged occasionally, as developers of the imagination. Fairy tales and other depicted situations that sport with the fixed conditions of reality are a wholesome tonic for the child-mind, but they must not be administered in such large or frequent doses as to destroy his sense of the real. After he has enjoyed the fairy tale for a time he ought to have revealed to him its flimsy character, and thus to be made aware of the solid foundation of actual things. Such treatment is likely to add to the child's make-up a happy mixture of sober sedateness and airy fantasy, and, in time, to lead him to an appreciation of the many-sidedness of the well-developed character.

**A Many-Sided Character.**—Every well-rounded character ought to have a dash of poetic imagination. Such an one is often enabled thereby to tune the discordant harp of life to a much more harmonious key. A vivid imagination, trained along optimistic lines, is a natural enemy of the "blues" and a joy forever to its possessor. The dull, unimaginative character is likely to become stuck in the bog-mire of despond when the concrete situation immediately surrounding gets into an unpleasant tangle. The

pessimistic traveler upon life's dusty pathway suffers excruciatingly on account of the imagined bunions and stone-bruises that are to pester his weary feet. But the rightly trained soul catches in imagination the brightness of the sunshine and the aroma of the flowers along the way ahead of him. The strange thing about it all is that these two typical creatures may often be found jogging along the way together; but they certainly look at matters in a very different light. Which would you be?

**Lonesome People.**—If one shuns his own company, dislikes to be alone,—and such persons are numerous,—it is altogether likely that his constructive imagination is untrained. He is then necessarily lonesome without some one to do this work of thinking for him. Such persons are usually satisfied with a cheap kind of chit-chat in their companions, or if they read, with a story that merely furnishes passing entertainment. It is not by any means one's own fault that he is thus unimaginative. His early training of this character was likely neglected. Children whose spontaneity is crushed out by a too early application to work, and whose play period is therefore omitted, are not likely to be imaginative. Of this matter I hope to have more to say later.

**Self-Training.**—To people who find themselves, at a mature age, lacking in constructive imagination, the author would say, in his judgment, there is still possibility of improvement. A daily period of forced solitude in a quiet place, and at that time of day when the physical organism is in its best state of equilibrium so that sleepiness will not ensue, will accomplish much. Take the suggestion on faith, temporarily, and try this daily practice regularly for two weeks. As you sit, try to construct imaginatively every manner of object that you have not seen. For au-

ditory training, try to hear, in imagination, and to compose, a tune you have never heard. Give the other kinds of sense-images the same sort of manipulation if possible. This practice will be all uphill work at first, and will seem to you to be foolish, at best; but *try it* and *persist in it*, and the results will likely both delight and astonish you.

Henry D. Thoreau, the silent seer of Concord, although scarcely ever visited by human being, often said that he was not alone for a moment while living in that rude cabin in the woods. They who have rich imaginative ability are never alone.

**Further Aspects.**—The man of inventive genius is one whose constructive imagination builds mental copies of a thousand different concrete situations and combinations with reference to some problem that is engaging his attention. Nearly all of these constructions of the imagination are rejected either wholly or in part until the right image is hit upon, and the world of invention is enriched by the seemingly useless hours he has spent in being a recluse and a "crank."

**Dreams.**—Dreaming is a most interesting phenomenon, but, so far as brain processes are concerned, it is explainable on the same grounds as imagination. Day-dreaming, or reverie, would be its waking counterpart. In the latter case the mind processes come and go in a capricious manner, and are little under the direction of the will. Sit down under a shady tree on a warm summer day and just let your mind do as it pleases, and a state of reverie will ensue. In actual dreaming, the ideas are much more incongruous and incoherent. Scenes are shifted rapidly and objects are transformed variously. Seemingly every mode of one's waking experience may be repeated in the

form of dreams. These may be put together in ludicrous combinations.

The nature of dreams has been suggestive of some well-known productions in literature. For examples, Bellamy's "Looking Backward" and Byron's "Pandemonium" might be mentioned. Every shade of emotion may be experienced by the dreamer. Anger, fear, love, hatred, courage, laughter,—these and more are common. During early manhood the author dreamed that he and three other young men were riding side by side on bicycles at the rate of about thirty miles per hour, and that each was plowing a furrow with a corn-lister, while each, together with his lister, furnished his part in the music of a male quartette. This was, in fact, only a curious mixture of the author's early experiences.

**An Investigation of Dreams.**—Mr. James Ralph Jewell made a very interesting study of over 2000 dreams as experienced by more than 800 young people, and he discusses the whole subject at some length in *The American Journal of Psychology.* (Jan. 1905.) The following conclusions are taken, in substance, from his summary.

1. Dreams differ widely with respect to age and locality.
2. They may be prevented by suggestion, but not so initiated.
3. They are often confused with reality.
4. Dreams are most frequent during the period of puberty and adolescence.
5. One never dreams the inexperienced, but every kind of waking experience may be repeated.
6. One may, while sound asleep, know that he is dreaming; while at other times he assures himself that "this is not a dream."

7. Children often suffer from morbid fears engendered by dreams.

8. There is no conclusive evidence that dreams foretell actual events, but there is much to indicate that they have a wide influence on real life.

There is no gainsaying the fact that the imagination may have much influence on the body in the case of some people. Imagined disappointments and calamities, if habitual, are likely to weaken the blood circulation or otherwise interfere with the healthy functioning of the bodily organs, making the organism more susceptible to disease. Images of pleasurable experiences and of the successful outcome of one's serious purposes, on the other hand, are merely other names for these joyful anticipations which by practice tend to heighten the bodily functions and to give the whole organism a healthier tone and greater buoyancy.

A further treatment of imagination will frequently come up incidentally in the discussion of a number of other forms of mental activity.

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## QUESTIONS.

There are countless ways of using the imagination. It is likely, however, that visual and auditory images are by far the most common in the case of ordinary persons.

1. Make a test of your own case. What is your predominant type of image? Auditory? Visual? Olfactory? Gustatory? Tactual?

2. Are gustatory images common in your case? What would you say of a person who was constantly thinking

about the taste of things good to eat? What of his intelligence? What of his appetite?

3. Suppose that during the hour preceding dinner you witness an interesting demonstration in cooking; you hear detailed explanations of how certain excellent articles of diet are to be prepared for the table, also see and smell a number of them. To what extent would this affect your appetite for the meal? As a result would your body be any better prepared for the food?

4. It can be shown that one's hand will expand somewhat if he will simply fix his gaze upon it for a few minutes and imagine persistently that the blood is flowing into it. If this be true, what would you say of the practicability of warming one's hands and feet when they are cold, by the same method?

5. Find out in some small measure the extent to which one's imagination tends to run in fixed grooves and upon a peculiar type of content, and then show, if possible, how this fact helps to explain the conduct and dispositions of people.

6. The dream consciousness is usually a matter of fantastical imagination. If one should arise at morning with a fresh memory of pleasant dreams, how would this affect his disposition toward others as compared with the memory of some very unpleasant dream?

7. Is there any rule whereby one may "lie down to pleasant dreams"? It is said that horrifying dreams are accompaniments of disordered conditions of the body, and that during perfectly restful sleep no dreaming whatever occurs. This would seem to indicate that even peaceful dreams detract from bodily recreation during sleep.

8. Can it not be more easily shown that the dream con

sciousness is like the waking imagination in that it is directed largely by habit? One may have fallen into a habit of dreaming either pleasant or unpleasant things, but these dream habits are allied in general characters to that of the waking consciousness. Investigation has shown that many people often repeat the same dream. For example, the author dreams about once a month of being able to fly somewhat like a bird.

9. "One's fondest anticipations never become real," says a well-known maxim. This refers, of course, to the imagination. But, is this a valid argument against fond anticipations? Do not these hopeful mental attitudes tend to beget conduct that would bring about their own fulfillment? And do they not tend to give their possessor better physical health? And are they not in and of themselves satisfying to a rather high degree?

10. The vagarist, or visionary person, so-called, is one who has highly imaginative schemes of conduct for individuals singly and in groups. His ideas are ordinarily considered both impractical and impracticable. He is also prone to ignore the methods of science. Are we always fair in our judgment of these persons? Has not history proven many of these dreamers to be seers and prophets? How can we, in training the young, guard against an over-production of this peculiar class?

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## CHAPTER IV.

### MEMORY.

"Where were you at this hour on the first day of the month?" you are asked. "Let me see," you reply; "oh, yes, the 1st came on Sunday; I was in Kansas City that day, visiting a friend. It is now five o'clock. Well, at that precise hour I was waiting at the Union Station to take my train for home, which was due to leave at 5:10. My friend and I met a mutual acquaintance there, and we were trying to recall a previous New Year's Day that would equal the present one in mildness."

This conversation involves a typical illustration of the act of memory. After some little preliminary effort the day of the week was recalled, and the fact that the first day of the month in question was New Year's Day. This done, and the entire situation came back with a rush. The recollection and recognition of things seen and heard and felt quickly come to consciousness.

**Definition.**—Memory is an act of the mind whereby one recalls some previous experience and recognizes it as such. By some means the mind retains what it has once experienced, then recalls it to consciousness, then recognizes it as previous experience. There is a further possible step, viz., a reference to the particular time and place in which it occurred. One can readily understand how closely perception, imagination and memory are united. The feature that distinguishes memory from imagination

is recognition. Of course, perception is the beginning of them both. But without the recognitive element, the imagination might go on reproducing the former experience for any length of time and yet no such thing as memory would be possible.

There is a kind of memory which, if it operates at all, often seems to require no effort. For instance, the answer to the question, "When was America discovered?" appears in consciousness quick as a flash. This has been called desultory memory. If the memory act is that of recalling an exact quotation of some length, it is sometimes difficult to start it. After that the remainder is easy.

**The Brain Processes in Memory.**—In some way, we know not how, the thing perceived impresses itself upon the brain cells. The author once saw twin brothers of striking appearance on a steamboat. Accompanying this act of seeing these men there was evidently some kind of process in the brain tissue. Their peculiar appearance, the place of meeting them and many minor conditions were naturally thought of. Two years later I again saw these twins, in Chicago, conducting a gospel meeting, and immediately recognized them,—recalling the circumstances of the first meeting. The sight of the men brought it all back. Why and how? The theory is that at the first perception there were "paths" of excitation opened up through the brain, and that, as they were all united by the one act of perception, the recalling of any one of the elements of the perception would bring the others to memory. The law is that objects once associated in the mind always tend to come back to consciousness together; the excitation once again being started in the brain "path"

made by the one, naturally flows over into that made by the other. It is worth while noting here that the more objects or facts one can associate in consciousness with a given object, the easier it may be recalled.

**The Nature of Association.**—Just sit still for a minute or two and let your mind wander whithersoever it pleases. Then try to trace back the path of your consciousness to the point of beginning, and note the vast number of ideas that have occupied a place in your mind during the brief interval of time. It may be possible during this short time for one's thoughts to encircle the globe and to take cognizance of events accredited to prehistoric ages. It is more likely, however, under such conditions, that the course of one's thoughts will be more suggestive of a zig-zag path; and that the list of topics entertained, if written down one after the other, would form "a ridiculous array of conglomerate incongruities."

**Consciousness Under Direction.**—Now, try the experiment of directing your thoughts toward some proposed end. Let us say that you try to make out carefully a program of the work you expect to undertake tomorrow. It is evident that in this case the span of your consciousness is much narrower than it was in that above, and that there is a closer connection or relation between the several steps in the process. The incongruous ideas, such as constituted the whole of consciousness in the first experiment, are observed to have a very dim aspect in the second one. But these irrelevant ideas were present in the latter nevertheless, and many of them would have doubtless become more prominent had the purpose of the thinking been suddenly dismissed.

**The Cerebral Law.**—The best authorities are agreed that the law underlying association is that of neural habit. In reverie, one's thoughts take the course they do because of the fact that the neural excitation seems to run through the brain paths in the order of their closest and most frequent association in past experience. The factors of recency and vividness, the latter being in some way connected with emotional preference, must also be considered as partially determining association. Under vividness there would have to be classed those insignificant experiences of childhood which seem to pop into consciousness upon the slightest invitation. For example: A moment ago, the author glanced up from his writing and noticed the title of a song, "Oh, Come With Me." Immediately there came to him a little old rhyme learned at school when a small boy. It was in McGuffey's Second Reader, and ran like this:

"Oh, come with me
And we will go
And try the winter's cold, sir;
It freezes now
And soon will snow,
But we are tough and bold, sir."

Again, there were repeated to him the lines from Shelley's "Cloud":

"I bring fresh showers for the thirsty flowers
From the seas and the streams;
I bear light shade for the leaves when laid
In their noonday dreams."

At once there occurred the memory of a paternal admonition often heard during boyhood at about the noon-hour in the summer-time, and which was usually expressed in the words, "We have no time for noonday dreams."

Now, these two examples seem to furnish a suggestion

for further explanation of association. In either case there is an overlapping of the two expressions associated. Hence, this might be called the law of partial identity. The brain process excited by the line from Shelley and that of the admonition to work run together on "noonday dreams." The one thus calls up the other. And thus all so-called associated ideas seem to be linked together, and to be likely to come up together in consciousness. Their neural paths are either identical for a brief space, or they at least cross one another.

The meaning of association as related to memory will become apparent in the discussion that follows.

**Memory Culture.**—The retentiveness of memory varies with age. During early life the brain is said to be more plastic and more suspectible to permanent impressions. Early life is pre-eminently the time for memorizing, especially in a desultory manner. It is especially important that one form good memory habits and practice good methods of remembering while he is in the growing period of life.

It may be said that there are as many different kinds of memory as there are classes of sense perceptions, but one usually remembers best in terms of the sense he uses best and most. One says, "I remember the appearance of the man's face but can't recall the sound of his voice." Another makes a statement directly the converse. And then, there are memories of persons and places and names, each operating in its own peculiar way. In fact, nearly every one has a good memory for something. It usually depends, among other things, on what one is interested in and what he devotes his attention to most earnestly. A certain young woman of about 21 years could name at

sight about 1000 students (nearly every one in college), and yet she was such a failure as a student that she had to be dismissed. Her memory for text-book work was very defective.

**Attention a Factor.**—One of the greatest factors in memorizing is *attention.* He who carefully concentrates his consciousness upon one and only one object of consideration at a time, has the memory problem pretty well solved. The young woman referred to above had a *method* of learning names. This practice seemed to fascinate her. She would stand in the hall as the students filed by and have some friend tell her as many names as possible. Then, she would be seen later operating at another place in one of the buildings with a different "helper." She threw her whole soul into the task, and for that reason success was easily attained.

I have in mind one of the greatest of living philosophers. His memory for the historical facts and the theories in connection with his own subject seems to draw upon an inexhaustible source of supply. Yet this great man scarcely ever pretends to learn the names of any of his students. A long-standing habit of non-attention to the names and peculiarities of persons probably accounts for this fact.

One soon becomes confirmed in certain fixed habits of memory. The writer of these lines early in life formed the habit of trying to solve all ordinary arithmetical problems mentally. The favorite time and place for this work was at early morning before getting out of bed. His memory for long strings of figures is still very active. But another early habit of paying no attention to the names of persons with whom he became acquainted has always been a source of annoyance and embarrassment to him.

**A Systematic Mind.**—A person's type of memory is really one of his traits of character; and, to him of poor memory for names of people, let us say, there is some consolation in the thought that such may be inherited. It is small business, however, for one to blame his ancestors for all his weaknesses and to claim personal credit for all his strong points of character. Those poor ancestors doubtless had troubles enough of their own. The fact is, one can, if he will persist in trying to do so, largely overcome the bad-memory habit,—especially if he takes hold of the matter in time. How so?

Determined, persistent, conscious effort, coupled with a systematic method of procedure, does the work every time. Try it, and you will be surprised at your success. A certain high-school principal determined at thirty years of age to try to strengthen his supposedly poor memory for literary quotations: thirty minutes devoted every evening regularly for about one month to this work enabled him to commit an entire stanza of Shelley's "Cloud," after two or three readings.

**Memorizing Literature.**—In memorizing a literary selection one should, if possible, read it entirely through each time *without hesitation* till the whole piece begins to come to view in the memory. The story of the boy who tried to recite "Marco Bozzaris" and stuck at "Greece her knee," could have very good psychological foundation in fact. The ordinary boy, in reading the piece, would stop just at that place in order to make out the meaning and pronunciation of the word "suppliance," that follows. A little observation will show that the memory "balks" at the place where a break of any kind is made in the committing of the selection. If one commits the piece in parts and then

puts the parts together, the memory scarcely ever runs smoothly over the places of uniting.

**Forgetting.**—Too many students try to prepare their lessons on the run. Such a practice is both destructive to memory and disheartening. It pays better in the end to take less work and do it better. Hurry and rush in the daily lesson preparations is a sure method of training one to forget. In case of the ordinary lesson, there are only a few points worth remembering. The many trivial facts and incidents ought to slip through the mind and be forgotten at once. The few important points might well be marked with a pencil, or put into an outline and related to one another and to the whole treatment of facts in a logical manner.

It is the bane of some people's lives (and yours, too, if you are compelled to listen to them), that they cannot forget trivialities. They undertake to relate an incident and soon run off on a tangent of little insignificant trifles, never to return to the main thread of the story. "Bore" is the proper name for such persons.

**Logical Arrangement.**—So long as one regards the mind as a storehouse in which facts and figures are to be laid away for ready reference, he is missing sight of the proper goal of memory. Every fact remembered ought to have a logical place in a system of facts. It ought to be related by some form of logical association, to the greatest possible number of other facts, so that there will be a great number of "cues" for its recall.

If one is to have a retentive memory, he ought, in every case possible, to put theory into practice. Think how long it would take one to learn how to build a house by merely reading descriptions of how it is to be done. It is almost

impossible to learn retentively from mere abstract discussions and descriptions. Fortunately, our modern laboratory methods are obviating the necessity of continuing the old-time practice of abstract teaching. Under this practical kind of realization of theory the work of memorizing is reduced to a minimum. Instead of the mental labor and strain of retaining a bare theory or explanation, the hands and feet and muscles of the body are put through the process of doing the work so often that they do the remembering.

**A Clear Understanding.**—So, often, a defect in memory is traceable to a lack of understanding of the meaning and concrete application of the thing to be learned. Take the algebraic rule for multiplication: The product of the sum and difference of two quantities equals the difference of their squares. This rule is easily retained in the degree that its application is understood. The arithmetic student who remembers best the rule for finding the area of a triangle (take one-half the product of the base and altitude) is thoroughly familiar with the reasons why such a rule applies. Many a young student of German fails to grasp the full meaning of the definition of a transitive verb. So he goes on blundering, depending merely on his verbal memory.

The true inference from the last paragraph above is that the best form of memory-training is obtained through a full and complete understanding of the rule or proposition—as the case may be—to be memorized. Many young teachers, and some older ones, err at this very point, and then charge the deficit up to the "poor memory" of the pupil. Illustration, example, application,—these should be the most familiar words in the vocabulary of the teacher. How

often might the small boy appropriately say, "You never teached me!" while the vague, abstract discussion given by the teacher goes sauntering out at the back door of his memory. If there is anything that the average boy grows mentally lean on, it is the merely abstract form of teaching.

**Emotion and Memory.**—How well you older readers remember that old playground of your childhood where—

> "The sportive winds had called you
> To chase the butterflies,
> And the white clouds floated o'er you
> Like dream-ship in the skies!"

You enjoyed it so, and you remember, ah! so well, that soft, sweet musical note—

> "When the brown-thrush sung of the summer dawn
> To the bee in the billowy clover,
> Or down by the mill the whippoorwill
> Echoed his night-song over."

It thrilled your soul. And you recall so vividly that scene in later life when that spirit so much higher and diviner than your own touched you so gently, and in substance—

> "Told to you the story
> Of the mystery of the years,
> And when you turned to answer,
> How your eyes were filled with tears."

There was such deep sympathy and compassion in it all.

Here memory finds another ally in emotional interest. To feel a glowing wave of enthusiasm for the task at hand, to engender in yourself a passionate fondness for following the ins and outs of a complex mathematical problem, to feel repeatedly a thrill of satisfaction and delight at the revelations of the science you are pursuing, to get into such close and sympathetic touch with the spirit of growth and development that you can perceive "Tongues in trees,

books in running brooks, sermons in stones, and good in everything,"—all these bespeak such an emotional attitude toward the various objects of experience and learning that good memory is an easy and natural consequence.

**Memory and Nerve Energy.**—Let me reinforce this whole argument with another cross-reference to the nervous organism. To have a retentive memory means to be in good physical health and to possess a large fund of surplus nerve-energy. Lassitude, depleted health, or "weariness of the flesh" of any other kind, on the contrary means loss of memory. Too many students are neglectful of their health, that is, of the perfect health that might be theirs and that would contribute so much to their permanent stock of learning. "Midnight oil," late carousing, and the use of such stimulants as tobacco may be satisfying in a way, but they are deadly foes of a good memory. And then, one needs only to visit a dozen students' study-rooms to be made aware of the great amount of carelessness in ventilation. From this evil the system suffers on account of lack of the oxygen supply and there is languor and sluggishness in the blood circulation. Again memory is a heavy loser.

**"Cramming."**—The question of cramming for examination ought to be mentioned in this connection, for the student who "wastes his substance in riotous living" is the one most likely to try to prepare himself for the final examinations during the last two days (and nights) of the term. A serious, careful review of a subject before trying to pass it, is praiseworthy. But notice the exact meaning of the word "review." The student who "crams" is not reviewing, but is often trying to acquire a first knowledge of the subject in too brief a time. As a consequence, there

is a great strain on the nervous system, while the mind is being overburdened with a mass of undigested material. Such hasty work gives no time to assimilate mentally the points to be learned, and so they are usually forgotten within a week or two after examination.

The student who resorts to this unworthy method of preparation may "get through" the subject, but it can be pretty safely predicted that the future holds some kind of punishment in reserve for him. It is often pathetic to witness the efforts of such a student later in life while he is vainly trying to secure or hold a position wherein nothing but true worth and merit will suffice. Nothing but an orderly, every-day pursuit of a subject will give to each new point acquired time to take its logical place among the facts already known, and enable the student to develop a masterful memory of the subject-matter.

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## QUESTIONS.

1. Examine your own memory and make a list of things in respect to which it is good, also poor. How is it related in these respects to the acuteness of your perception?

2. Was not the foundation of your memory laid in early youth, and is it not still most active with reference to the conditions of your early environments? Will this account for the shortcomings of your memory, also?

3. In what particular respects has your memory really improved in mature years? Has it not been chiefly a matter of detailed acquaintance with the thing remembered, together with much repetition?

4. One may observe casually that a certain child who "forgets" was not really giving attention to the matter when it was presented. Would it not be well to investigate this aspect of remembering, and to determine clearly the extent to which non-attention interferes with it?

5. This would suggest the necessity of forming good habits of attention-giving. Would it not be advisable to try to discover precisely what is holding the child's attention while you are trying to secure it, and why? It might be either mere dullness or bodily discomfort, or genius.

6. Instances of mere dullness are comparatively rare, but bodily discomfort is very common. A chilled body, fatigue in some obscure part, nervousness from want of exercise, an ailment in one of the sense organs, especially that of sight or hearing,—these are some of the conditions that interfere with attention, and, hence, render good memory impossible. How can one who is interested in teaching the young acquire a closer knowledge of these physical obstacles to good memory?

7. Pronounced genius is also rare, but there are apparently many cases of tendency in this direction, all of which should have due consideration. There is in every such case a predisposition, more or less pronounced, in favor of some specific kind of activity. Correlated with this there are doubtless brain structures that make the condition more permanent. Can one ever hope to develop good attention to things in general in cases of this nature?

8. How early in their school career can young people be led to acquire a conscious plan of developing a good memory for themselves? Is it too much to urge that the teacher may take definite steps to assist the pupil in this matter by specific example and precept? The young must

be shown precisely how to give attention, and how, in respect to conditions of bodily health, to make good memory possible. Imitation will then do much in their favor.

9. The reader's attention is called to the fact that the whole nervous mechanism is the seat of memory. That is, it performs in definite ways many acts which for a time required conscious memory as to how they were done. Does this not indicate the meaning of "holding things in the memory" if such is ever necessary? In many cases this "holding" by conscious effort is necessary only for the time during which one is becoming thoroughly familiar with the object or act. After that the nerves do the rest.

10. The close student of human conduct will observe how much we deceive ourselves in matters relating to memory. For example, visit the public school for a while and observe how much the ordinary recitation depends upon the recency of the study period. Pupils come to their class exercises with the books open and are questioned upon topics that they have just been pursuing. Is there not some self-deception by teachers in regard to this matter? Not only this, but is it not really true that pupils are often examined by means of questions upon which the teacher has more or less "primed" them during the entire term?

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## CHAPTER V.

### HABIT—ITS NATURE.

Fold a sheet of letter-paper carefully, as if to insert it into an envelope. Now unfold it and smooth it out, if possible, as it was at first. "Impossible!" you say; "the creases persist in showing themselves." Very well. Let those creases represent habits, and good habits, too, for they are symmetrical and serve a good purpose,—that of preparing the sheet to fit into the envelope nicely. Now fold another sheet very irregularly—any way, just so it is folded. Here you have more creases, other habits represented, but bad ones this time, for the form will not fit into the envelope. You will find, moreover, that these irregular creases are just as persistent as the others. That is, good habits and bad habits have the same natural tendency—they tend to stay just what they are, and to resist any change in their forms.

**Definition.**—A habit is any act, mental or physical, that, as a result of repetition, tends to go on in a certain fixed form. This fact is accounted for by reference to the nature of the nervous system. If one performs a physical act of any kind, it is accompanied by a nerve-act, or a brain-act, which opens a "pathway" for the discharge of nerve-energy. The next performance of the physical act is easier, as the channel is now open for the flow of the nerve-energy. Later performances will require even less effort, for the channel, to speak figuratively, is all the time being worn smoother. The longer a habit

goes on unchecked the more natural it becomes and the greater the difficulty in changing it.

**Further Definition of Habit.**—"Life is a bundle of habits." Habit is ten times nature. "As the twig is bent, the tree is inclined." These are familiar quotations which refer to the nature of habit. Rosenkranz has defined it, rather abstractly, as "A feeling of the identity of the self with the special character of anything done or endured by it." It seems scarcely necessary to try to give another one-sentence definition of the subject. It is well, however, before proceeding further, to note three important characteristics: (1) Habit is something *acquired* by practice; (2) It tends to persist in going on in the way in which it has been started; (3) It is indifferent as to its subject-matter.

The last statement, that habit is indifferent as to its subject-matter, needs explanation. The first paragraph of this chapter illustrates the meaning here intended. The sheet of paper, in so far as its own nature is concerned, may be folded in the wrong way or the right way with equal facility. It is indifferent as to the manner of folding. So with habit. In so far as its nature is concerned, —that is, the nature of the nervous mechanism,—a good habit or a bad one may be formed with equal ease and readiness.

**The Question of Interest.**—Just as soon, however, as an intelligent being becomes interested in forming one kind of habit in preference to another kind, this indifference disappears. One sees that a certain form of conduct will be advantageous, will help him in accomplishing his purposes; so he helps that form to become habitual. He believes, on the contrary, that a certain other form of

conduct, if allowed to go on, will develop into a bad or disadvantageous habit; so he hinders it.

It appears then, other things being equal, that habits of conduct and of thinking will develop along the line of one's interests; and that all that needs to be done is to have his interest directed in the right way and his character ("bundle of habits") will be formed accordingly. But character formation, either fortunately or unfortunately, is not nearly so simple a matter. Other things are *not* equal. Some habits gain a great advantage over others on account of inheritance.

**The Question of Inheritance.**—People are by no means all alike at birth, but are born with predispositions to form habits of one kind more readily than another. This is perhaps more readily seen in the case of animals. The offspring of the heavy draught-horse is never expected to develop readily into habits of movement that belong to the horse of pacing or trotting strain. It is not in accordance with his nature. But he will easily and naturally take up habits that pertain to drawing heavy loads. The young bulldog early falls into habits of surliness and pugnacity, while his young companion of the shepherd-dog variety takes more readily to acts suggesting a kind and gentle disposition. It is the nature of the brute, in each case, that is asserting itself; and this nature is inherited. Many more such examples could be given.

So it is with man. The child is likely to inherit not only much that is peculiar in the physical form and movement of its parents and more remote ancestors, but also many of the mental traits. "A child's education begins two hundred years before he is born," says Dr. Holmes. "Like

father, like son," is another familiar quotation. "Blood will tell," is another. Often a peculiar mark of a man's character will crop out in a grandchild or a great-grandchild in a manner just as pronounced.

**Jukes — Edwards.** — Dr. A. E. Winship has written a book that every thoughtful young person ought to read. It is entitled "Jukes—Edwards," and in it he traces the histories of two families for several generations. The Jukes family has contained many members, all of whom were directly descended from a very vicious woman who lived some two centuries ago. Of these, some were hanged, many more imprisoned for life, and a much greater number have served shorter sentences. It has cost the various municipalities vast sums of money to prosecute these criminals. They have brought untold suffering on those whom they have wronged. The Edwards family is about the same age as that of the Jukes, but the record is of a directly opposite nature. Ministers, philanthropists and public men of note have predominated in this case.

**Estimate the Situation.**—No wide diversion from the subject of this chapter is intended here. It is meant to indicate, by reference to these family records, the fact that inheritance is a very large factor in the development of character, as its influence makes the formation of certain habits so much easier and more natural than others. A proper understanding of the matter will give the youth an idea of the nature of some of the battles he is likely to have to fight in his own character formation. If the matter is judiciously presented by those in charge of his education, he will be inspired to victory, too.

**Forms of Habit.**—As to form, habit is (*a*) active, (*b*) passive. Every manner of dexterity, readiness of skill

and of information would be classed as active, while such acquired attitudes as stateliness of bodily posture and composure of mind might be given as examples of the passive kind. The acquisition of the so-called active habits belongs distinctively to the time of childhood and youth. Some forms of passive habit are both later and slower taking form. For instance, poise of mind, serenity, and the like, are characteristics of the mature, scholarly person.

**Automatisms.**—There are many little idiosyncrasies that might be enumerated here, such as biting the fingernails, toying with the watch-chain, as examples of the active form; and day-dreaming, and staring into vacancy, of the passive form. These are sometimes called "automatisms," as they take place more or less automatically and, as a rule, unconsciously. These automatisms serve as an outlet for the overflow of nervous energy. In fact, they often do more than that: they become a means of draining off and depleting the nervous energy that ought to be used in carrying on some more valuable work of a mental or physical character.

As more concrete illustrations of these peculiar types there might be mentioned a well-known society woman who, in her own language, was "partial to a rocker," and who would sit and rock while sewing or reading or talking, and that in a manner so vigorous as to wear away more nervous energy than a hard day's physical labor would require. A second case of my personal observation was that of a young man, a college student, who would sit and whistle and hum a tune alternately, and tap with his fingers and toes while trying to study his geometry lesson (and doubtless other lessons). A third instance was that of a young woman who would stand or sit and stare va-

cantly in a sort of spellbound manner, for a half-hour at a time. All of these, and many similar automatisms that might be named, are merely forms of dissipation and waste of nerve energy. They are simply bad habits that ought to be broken.

**Unconscious Nature of Habits.**—So far very little has been said as to the unconscious nature of habit, except by implication. It is desired to emphasize that fact here. Every thoroughly acquired habit is more or less unconscious, and it goes on so quietly and with such slight friction that we are not likely to be aware of it. For instance, I wind my watch every night before retiring, and am scarcely ever aware of the act. Nearly every one puts on a certain shoe first and draws on some garment in a fixed manner, unconsciously. The steps we take in walking and the words we use in conversation are really forms of well-fixed habit.

**Physical Nature of Habit.**—Habit may be developed in any animal that can be trained. Because of having been halted once or twice at a certain ravine crossing, a horse formed the habit of balking at this place. A herd of cattle that were salted regularly every Sunday afternoon at a fixed location, soon manifested a knowledge of the day of the week by assembling at that place at the appointed time without being called. Force yourself to take a drink of water every morning immediately after rising, and in a short time your system will crave it. You are likely accustomed to eating three meals a day at regular intervals. Change this to either two or four meals per day taken at regular intervals, and after ten days' practice you will become hungry at the newly appointed hours.

In the case of every habit, the character of the organism seems to be modified to suit the new conditions. As stated above, figuratively speaking there is a new pathway of discharge formed in the nerve-cells. This seems to become a "path of least resistance" in case the act is repeated so that it continues naturally and easily. This discussion suggests a curious thing with reference to some forms of disease. That is, by suffering from a certain disease once, one becomes more liable to a second attack. Such an ailment, as in the case of habit, seems to open up a path of least resistance. For instance, persons who suffer from a cold are usually afflicted in a certain manner: some in the head or nose, others in the throat, still others in the lungs. If pneumonia once results there is much greater probability of its return. Some physician has suggested that children ought especially to be kept from taking cold, so that such resulting ailments as croup and tonsilitis might not become a matter of habit.

**Life a System of Habits.**—Attention might be called to the fact here that character is not so much a bundle of habits as a *system* of habits. As one grows more mature his conduct in life tends to become more and more orderly and rhythmical. That is, his whole round of daily life becomes more habitual. A little observation will show that in this he is really obeying a law of much wider application, namely, a law of all nature. In the systole and diastole of the human heart, the ceaseless ebb and flow of the ocean tide, the regularly alternating seasons of the year, and the harmonious revolutions of the heavenly bodies, one sees suggestions of one great rhythmic law whose Maker is the Ruler of the Universe.

## QUESTIONS.

1. Follow the acts of a two-year-old child during the course of a day and observe that he has already specific ways of doing many particular things.

2. Now let an adult become the object of your occasional attention for a few days. He has fixed habits of doing hundreds of acts, great and small, and differs from the child in being less awkward and in the greater complexity of his own acts.

3. Observe that the habit that is well acquired by any one will not permit of too much watching on his own part. For this reason introspection of habit is difficult. If one tries to observe how skillfully his own fingers run over the key-board of a piano, confusion is almost certain to result.

4. Make careful inquiry and learn how extensively habit leads people to overwork some parts of the body and underwork other parts. One, for example, may use his right hand and arm too much while the left are suffering for exercise. He may also chew altogether with one jaw and see with one eye, the other member being good in each case.

5. A man living in a well-furnished rural home visits his brother in the latter's office on one of the noisiest streets of a great city. "I wouldn't work in here if you would give me the whole block," said the former; "the noise would kill me." Upon returning the visit the latter exclaimed: "I wouldn't live out here for your whole farm and all that joins it. Too quiet; I should perish from lonesomeness." Is this a credible story? Why?

6. Look about you for instances of persons who are always "going to" make some particular change in their lives. One man is planning to retire from business when

he reaches a certain goal, but he keeps moving the goal farther on. Another will go abroad and see the world after he reaches a certain age. Still another is agreeing with himself and his wife that he will "quit his drinking and brace up when New Year's day arrives." But, are not few of these matters ever carried out? Few indeed, on account of the fixedness and momentum of habit.

7. Contrast with these cases of mature persons those of children. Two small neighbor boys play together all summer in a rather routine fashion. At autumn they are widely separated and brought into new environments with new games. "How they will mourn the loss of each other's company," one is heard to say. But, not so. They will likely be all over it in three days and happy as larks in the new situations. So much for a plastic, readjustable nervous system.

8. It is said that consciousness first arose out of a problem of adjustment to the environment. Mere automatism could not meet the requirement, hence the higher developed from a fortuitous variation. Be that as it may, is it not possible that the life of a shiftless, lazy person may lapse approximately back into that of an unconscious automaton? That is, of course, provided all his physical wants be supplied without his effort, and his daily round of experience become one of fixed routine and habit.

9. There are instincts which are said to run their course and wane. Find out, if possible, whether or not this be the case with some habits. That is, organic changes due to natural processes of growth and decay of the physical organism may interfere. It is certainly true that some habits are closely related to certain organic functions that are periodic and rhythmic.

10. The reader's attention is called to the fact that habit, by its nature, does a vast service by way of rendering the conduct of the individual rhythmic and the movements of society groups free from friction. Observe the actions of the crowd and note that people turn in and out and make scores of other little responses to their kind in accordance with the laws of habit. One cannot help being impressed by the comparative quietness that attends the commingling of the dense throng of human beings that may be seen on a special occasion in such a place, for example, as Boston Common.

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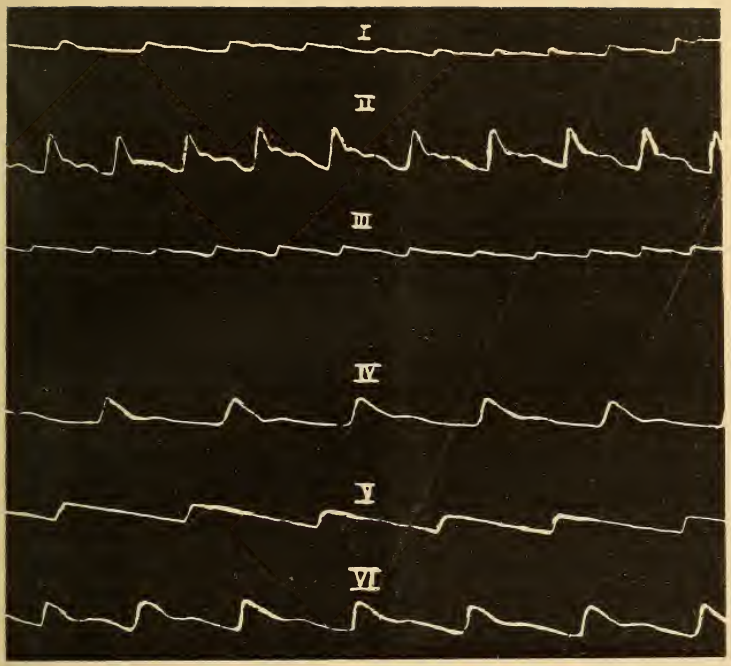
## CHAPTER VI.

### HABIT—ITS CULTURE.

**The Story of A. B.**—It was once my privilege to witness a great battle, a fierce hand-to-hand fight between two, and it lasted for a long time before a fatal blow ended it forever. The two contestants were—who do you suppose?—a bright, energetic young man and a ferocious cigarette habit that had seized him by the throat. Yes, literally by the throat, and it was badly ulcerated. The story is a pathetic one, but as it is also representative of a certain type of boys, I will outline it here.

A. B., as I shall call him, when about eight years old fell in with a "back-alley gang" of boys, who taught him the art of cigarette-smoking. Being quick in the acquisition of new learning, A. B. was soon an adept at this new art. He was visibly proud of it, too, and thoroughly enjoyed the new companionships and the new experiences it brought him. Of course this new practice was kept secret from his parents—for why should it concern them? But there came a day of reckoning. At the age of about fourteen, this boy, who had led his classes so easily, began to show signs of indifference to his studies, and of moroseness. He had a bad color and a glassy look in his eyes, and often betrayed uneasiness of mind. There came then a crisis in his life, for his parents became aware of his true condition. So did the boy come to himself.

The battle was on, fierce and furious. For over six years the fiend had been tightening his clutches. A. B.




**SPHYGMOGRAPH RECORDS THE ACTION OF THE CIGARETTE SMOKER'S HEART.**

I. Record taken just before smoking. Heart-beat too fast and too weak.

II. Record taken while smoking. Heart greatly excited.

III. Taken 20 minutes after smoking. Indicates narcotic effect. Heart-beat very weak and very rapid. Attended by weak, shallow respiration, lowered temperature.

IV. Heart record of a strong, healthy non-smoker of same age and temperament (choleric) as the cigarette-smoker recorded in I, II, III.

V. Record of non-smoker of phlegmatic temperament.

VI. Record of strong, healthy young woman, choleric temperament.

still claimed with feigned indifference, while among the boys, that "he could quit if he wanted to, but he didn't want to." But I saw clearly that he couldn't, and he knew it. He came into my office and implored for help, while he prayed and cried and swore by turns; and then went out and—smoked again to drown his misery. Shortly after this he left school on account of failure in his studies, and drifted about for three years, occupying the time mostly with smoking and having the "blues" and fighting the fiend in a sort of feeble, despairing way. No method of reform known to this poor victim seemed to avail anything. It seemed almost as if an act of kind Providence were at work when this boy was suddenly killed in a railway accident.

It would be an exaggeration to say that the average case of the youthful cigarette-smoking habit turns out as seriously as that of A. B., but there is much authority for saying that every boy who becomes thoroughly addicted to this habit is, in some way, permanently injured.

**A Matter of Temperament.**—The fact that people vary so in temperament makes it practically impossible to deal with them by rule. Each one is likely to respond in his own peculiar way to attractions of good and allurements of evil. Habits therefore attach themselves to different people, even after equal amounts of practice, with varying degrees of tenacity. There are sometimes recognized four classes of temperament. Professor Titchener characterizes them about as follows:

1. *Choleric,* or "nervous," characterized by quickness of thought and depth of emotion.

2. *Sanguine,* quick in thought and weak or slow in emotional response.

3. *Phlegmatic,* which thinks slowly and deliberately and feels weakly.

4. *Melancholic,* thinks deliberately and feels deeply.

It is usually the person of choleric temperament, so mentally alert, and so easily intoxicated with emotionalism, that runs quickly to extremes in the direction of either good or bad habits, whichever he may chance to take up. He does nothing by halves.

The sanguine temperament is characteristic of a cool, calculating type of mind, which renders decisions merely on intellectual grounds, and sticks to them. Such an one is not likely to take up habits of excessive conduct of any kind.

The phlegmatic temperament belongs to the slow-going plodder, who pursues an even course of life. The habits he acquires are such as happen to come his way. His character becomes fixed at an early period, and after that his mode of conduct is likely to change very little.

The person of melancholic temperament is subject to "distractions." Being slow at thinking, he jumps at conclusions, allowing his imagination to take the place of logical judgment. Hence he is often wrong in his inferences and difficult to convince of his error. His characteristic habit is likely to be that of having a "fad" for every change of the season.

**Habit and Society.**—The unvarying nature of habit in people accounts for the relatively fixed character of society. By becoming acquainted with the type of character and the vocation of a people, one can make a fair estimate of how they will conduct themselves on a given occasion. If it were not for this tendency in people to continue in a fixed course of action, one would never

know, when in a crowd, whether a pitched battle or a prayer-meeting might break out. But, under actual circumstances, one may estimate, for example, just about what he would find if he called at a country town or village on Saturday afternoon in summer.

On this occasion one would find farmers and farmers' wives standing about in small groups chatting in their characteristic way, while their sons and daughters would be doing a little bashful "sparking" on the side. The sprightly town lad and miss, who happened to be passing by, could be distinguished from their country cousins by a score of different mannerisms. So it is with various society groups. Each has characteristics peculiar to itself, and, under given circumstances, each will manifest a type of conduct that can be forecasted with considerable accuracy.

**Consciously Acquired Habits.**—It should be remembered here, and left for a later discussion, that nearly all the habits and mannerisms of society, such as have been described above, may be merely the result of imitation, and that of a more or less unconscious nature. It is now time to say something about the *conscious* acquisition of habit with reference to one's own character in an ideal way. The wise youth is the one who is conscious of the necessity of giving attention to the formation of those habits which may be to his advantage, and to the discontinuance of those that are of an opposite nature.

**The Early Foundation.**—The foundation of character is laid in infancy and early childhood. The little, seemingly insignificant acts are the materials of this foundation. So great is the amount of skill, tact and patience required for this work that only experience will lead to an appreci-

ation of it. The average child is so plastic that new habits may be formed and afterwards broken in a comparatively brief time. The spoiled child usually results in a spoiled man. Try to satisfy every little desire or whim of the child, "because it's too soon to try to train him, you know," and the chances are that he will be a slave to some kind of animal passion when he becomes a man. But the child that is trained in the performance of such little acts as laying away his playthings before going to bed, taking his meals at regular intervals, and saving a part of the pennies that are given him,—this child will have a decided advantage in the experiences of mature life.

**Experience a Necessary School.**—The experiences of the little child ought to be as varied as possible. Experience is the only school in which he can learn. Many of the little acts of skill and dexterity he acquired during his play period may of necessity be dropped for years, but the nerve-impress remains, and it will be there all ready to guide some act of a similar nature later in life. Let me explain by example just what I mean. Give a little four-year-old boy a toy hammer and let him have free use of it for a few weeks, till he is skillful in driving nails in soft wood; then take the tool from him till he is twenty, or even older. My point is that his dexterity will come back to him much more readily than it would come to the twenty-year-old youth who has never had any early experience in the use of the hammer.

**Storing Up Habits.**—This hammer story illustrates the whole range of childhood experiences. They are adaptations which will prove useful in future life, and which seem to be somehow stored away in the form of nerve-cell connections. The only caution that needs to

be uttered here is that against too rapid development and too early training in some of the finer movements involving the use of the secondary muscles. Either of these is likely to result in nervousness and permanent injury to the child. For instance, writing is a very complex act, necessitating much nervous strain. Very little of it should be required of the child before about the eighth year.

**Breaking Old Habits.**—In the usual case the breaking of an old habit involves the formation of a new one, for a new mode of response of some kind is likely required. Heroic effort is often necessary. "Tapering off" will not suffice. Even a slight indulgence of a habit once thoroughly formed will keep it alive. So the breaking away from an old habit should be abrupt and should be accompanied by all the determination one can muster for the occasion.

**No Exceptions.**—Allow no exceptions to occur under any circumstances. When one is quitting an old habit, he is so much inclined to say to himself, "Just once more won't hurt." But it *does* hurt, for it keeps the old desire alive, and, what is worse, it brings discouragement and loss of confidence. The despondent self-reformer is already on the backsliding road, for he is naturally filled with thoughts of "drowning his sorrow" by means of a returning to the old way.

**Guard the Thoughts.**—Keep the old habit out of mind and you are saved. Thoughts beget deeds, so the only way to eradicate the old habit is to chase every thought of it out of the mind. No ordinary man can succeed in breaking the smoking habit if he sits around thinking how good the old pipe tastes. One should avoid every suggestion of the old error. I once watched, with interest,

the efforts of a man about thirty-two years old to quit chewing tobacco. He carried a small plug in his pocket and would take it out and look at it and smell it occasionally, which "made his mouth water." This was kept up for about two weeks, when one day the poor victim took "just a little to taper off on." That settled the matter. In a very few days he was chewing harder than ever, to make up for lost time.

**A Call for Evidence.**—It is the author's belief that the tobacco habit, when once thoroughly acquired, can never be absolutely broken. He hereby makes a call for reports of well-authenticated cases. So often, if the practice is dropped, there is some other habit equally as obnoxious substituted for it. But this is not a fair case of *quitting*. If a man quits chewing tobacco and takes up smoking, he has not reformed or really broken off a habit. He has simply modified it. If he discontinues the use of tobacco and acquires the use of some intoxicant, he has not really done anything heroic. Both these indulgences are in the interest of relieving that same uneasy feeling which he experiences when without either.

Many a man, in his desperate effort to reform, has found it necessary to change his vocation and his environment in order to get away from the old temptation. This is an excellent method, but often a very inconvenient one. It stimulates new thoughts and makes it easier to forget the old mode of life. One had better run away from the old scenes if he can.

**Fleeing from Temptation.**—A temperance lecturer of scholarly attainments and charming personality spent nearly a decade in different parts of Kansas, lecturing and preaching. He secured many temperance pledges

and organized many a "band of hope" among the young. But he had a long early record of drunkenness and debauchery behind him, and he was going about and preaching temperance reform as the best means of keeping off the old tempter. At the age of about forty-five he went back to St. Joseph, Missouri, the scene of his former degradation, thinking himself strong enough to withstand temptation. Once again in the old familiar place, however, the old passion came back with terrible power and suddenness. It overmastered him. At last accounts he was a miserable drunken wretch, too weak ever to rise again, and he had also wrecked the lives of a beautiful wife and daughter.

And so the highway of life is strewn with the wrecks of men, and women too, who thought they would reform after they had "sown their wild oats," or who "could quit any time they wanted to."

**Forming New Habits.**—There is a saying that "It is impossible to teach an old dog new tricks." So with old people—they are scarcely ever able to change their habits of their own accord, and often a forced change is fatal. It may be that your aged parents are "still working themselves to death when they have a competence and ought to retire," but unless they have had considerable practice in quiet living along with strenuous affairs of life, it is altogether likely that retirement would bring neither happiness nor contentment. The shock resulting from the change often hastens the end of life.

**Time of Formation.**—Personal habits are probably nearly all formed by the time one reaches twenty. Intellectual ones continue to take form until thirty or thirty-five is reached, depending on many circumstances, chief

of which is the vocation one follows. Professor Angell, of Chicago, says that some persons seem to be able to develop new brain cells as late as forty. Another writer declares that it is practically impossible for a man to have a new idea or to regard any subject from a new point of view after he is thirty years of age. This statement would likely apply to those who engage in industrial or commercial pursuits of a routine nature, but the person of studious habits doubtless continues to develop to a later age.

**Precocious Development.**—The precocious child is likely to form all his intellectual habits very young. In the end, he is pretty sure to be a "runt" both in body and intellect, with shallowness and superficiality for further marks of distinction. The best intellect will develop slowly and compactly, acquiring each form of mental habit in its logical order. To begin the fundamental subjects of education too late is also a serious error. Many instances of this kind have proven the futility of such procedure. It is pathetic to see a man of thirty vainly striving to master the rudiments of the common branches. By this time the mental habits of such a man are too thoroughly fixed for any such accomplishment, and he has to give up in despair.

**Self-Conscious Training.**—Suppose one has determined to acquire a new habit in the interest of better character or work: how should he proceed? The first essential is to *plan the beginning carefully;* then make it a matter of serious concern and *bend every effort* toward success. Speak often and enthusiastically about the new habit. Think much about it. Fill the mind with the idea of it, and by all means permit no deviation from it to

occur while it is new. Keep the mind busy constructing arguments in its behalf and contemplating the best results of its operation. On the other hand, belittle the old habit which it is crowding out.

**An Illustration.**—Nothing is better than a concrete illustration. Here is one: Suppose a college student has shiftless habits of study and has determined to form the new habit of applying his mind vigorously. His thoughts would run enthusiastically (part of the time audibly) about as follows: "I can and will accomplish this work! I fully expect to study hard and faithfully, following my written program! Nothing shall stand in the way of my purpose! This task will grow easier as I proceed, and its accomplishment will bring me a certain reward. My instructors and my fellow-students will respect me more highly, and my relatives will be proud of the record I will make!"

Let the dilatory student who is convinced of his error write out or think out some such series of statements as appears above and then act upon it with the enthusiasm of a fire-fighter, warding off every allurement to dissipation of energy. He is pretty certain to make the new habit stick. Some find an additional device helpful, such as studying with an open timepiece before one, or planning beforehand to give each subject a certain amount of time, or preparing a pencil outline of each lesson as it is studied.

**Thought Habits and Entertainment.**—One of the chief arguments for higher education (aside from the practical one that it helps to make a living) is that it supplies the mind with such a complex variety of thought, thereby conducing to greater length of mental life and better entertainment. After the student period is passed

the mind of the average person tends to narrow down to a few of the most interesting subjects of thought, and to a fixed manner of entertaining these subjects. If the course of study has not been somewhat broad and varied, the little monotonous round of ideas is likely to become nauseating.

**Illiteracy.**—The illiterate ignoramus has few ideas. Fortunately, however, he is growing ever scarcer in this country, where he is confined almost exclusively to the "backwoods district." During the time he is at work his thoughts run around in a little circle of very narrow compass. He thinks over the scenes of last Saturday night when he took his girl to the dance, then of the prospect of trading his old brown mare for a pair of roan ponies in the neighborhood, then of the Sunday-school picnic to be held in Johnson's grove a week from Wednesday, then of what he will probably have for dinner two hours hence, and then his thoughts swing back around to the scenes of last Saturday night and his girl, thus completing their little orbit. The next trip around is practically the same thing. Thus his trivial thoughts continue all day long, the monotony broken only by some more monotonous little jingling rhyme-tune, which keeps sort of whistling itself through his breath and keeping time to the rhythmic movements of the buck-saw or the axe:

"All my feelin's in the spring
Git so blamed contrary,
I can't think of anything
Only me and Mary."

This story may be exaggerated, but I am sure that it illustrates roughly the tendency of mind of many a manual laborer. While he is guiding his hands in their work his

thoughts are running at large and naturally traveling the brain paths of the very least resistance. Now, if a great multitude of these paths have been opened up thoroughly by a broad education, and are kept open by good reading, his thoughts continue to function in an interesting variety of ways.

**Conclusion.**—In conclusion, what shall we decide upon as the ideal condition with reference to habit? Probably it is something like this: (1) One should own and control his personal and intellectual habits to the extent that not one of them shall ever become so firmly fixed that he cannot modify it when the occasion demands. (2) In the interest of the condition named in number 1, a person should practice daily some little act that "goes against the grain" as we say. Thus does one make an ally of his entire nervous organism, and demonstrate beautifully the fact that truly to live is both a science and an art.

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## QUESTIONS.

1. At what age should a child be taught to obey? As soon as he can understand your instructions, or not until he is old enough to know *why* such orders should be given?

2. Professor James recommends that a desirable new habit be begun with all the force and suddenness possible, and an undesirable one be broken with complete abruptness. Is this rule applicable with children?

3. Is it not better in the case of a child to develop the habit by slow degrees? The child is really acquiring a new set of nervous reactions, a process which often re-

quires much time. The reader may easily observe a common error in the one who is training children, viz., a lack of persistence until the child's habit is fixed.

4. The family moves to town from the country. The parents have reached the half-century mark and use such expressions as "them things," "haint saw," and "busted." The young sons and daughters are in high school and college, and take pride in their dress and manners. But why do they succeed so poorly in their efforts to reform the parents in these matters, especially since the latter are willing to learn? Twenty-five years later, if living, they will be found continuing in the good, old-fashioned way.

5. A revivalist comes to town and scores of sinners are "soundly converted." Six months later likely finds the flock scattered and the majority of them back in the old ruts of evil. This is not intended as an argument against religion as such, but it may reflect adversely upon the methods of some of those who teach and preach in its name. How would the student of psychology account for and obviate this wholesale backsliding?

6. Psychologists have recorded several inexplainable cases of multiple personality—people who suddenly lose all knowledge of their past and become, to all appearances, another normal personage with a very different set of habits. But how would the reader explain, from the standpoint of habit, the youth who is a blatant swaggerer among a crowd of other boys, a perfect little gentleman in the company of the girl he likes best, and an example of demure circumspection when his father is at hand?

7. Those who have the direction of children are often

impatient with the latter because they do not transform their habits more readily. But it is well to remember that the habits objected to by a child's director may seem good and attractive to the former, while the better habit may have the opposite aspect. If the reader be one of these child directors (teacher or parent), he is asked to search himself for a habit that is stubbornly persistent, but admittedly undesirable.

8. Those who are interested in transforming the characters of children are cautioned against attempting to force their reforms upon the young, but it is recommended that if practicable, the latter be enticed away from their evil practices by means of desirable ones made still more attractive. The abstract maxim "duty for duty's sake" has no attractions for a child or youth, and little enough for a grown person.

9. Those who are interested in habit reformation either in behalf of self or others are asked to consider the desperation of the undertaking when the old habit is supported by a set of thoroughly habitual nerve-responses, and the new, desirable one is backed up only by an occasional period of emotionalism artificially brought about. By the thoughtful and experienced it will likely be admitted that an ounce of pre-formation is worth a ton of reformation.

10. The would-be trainer and reformer of character is urged to make a detailed study of the organism and its mode of functioning as well as any interferences there may be of its failures to function normally. Some minor ailment, a lack of attention to the digestive and excretive functions of the body, an avoidable irritation in some peripheral part, a slight impairment of one of the sense organs

—any one of these may be the underlying cause and accompaniment of an undesirable habit that might be avoided if seen in time.

11. Finally, the student of human character is asked to come into touch with a new movement that is beginning to gain a foothold in many parts of the country. That is, a movement that attempts to aid children that are mentally retarded and otherwise eccentric by means of a detailed study of their physical conditions. At the University of Pennsylvania there is a so-called "Psychological Clinic" and a magazine publication of the same name. Similar work is being done at many of the other universities in this country and Europe, especially at Paris.

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## CHAPTER VII.

### SOME SIMPLE INVESTIGATIONS.

The simple investigations recorded below are, of course, not far-reaching enough to be considered as scientific. Yet they were conducted with considerable care, and they are doubtless indicative of real conditions that are widely prevalent. For this reason, and for the further reason that they may be the means of aiding the young student in correctly estimating his ability to apply his mind and hand in study and work, they may be considered as possessing some worth. It was observed that, in many cases, the students considered in these tests had never before been made conscious of their weaknesses. The tests were all made at the Kansas Agricultural College.

**I. A Test of Method.**—It is now proposed to show the results of an investigation of the methods of study of over one hundred students. The test was planned carefully by myself, the instructor; and the members of the psychology class who secured the data were given detailed instructions as to methods of procedure. Especial effort was made to remove every incentive for deception on the part of those questioned. It is believed that a fair measure of truth was secured in every case.

In making this test fifty-eight young men and fifty-three young women, one hundred eleven in all, were selected at random and asked the questions given below.

Among the number were thirty-two seniors, twenty-nine juniors, twenty-six sophomores, and twenty-three freshmen. The questions follow:

1. *Do you follow any definite program of study and work during the average college day?*

To this question twenty-three young men and twenty young women gave affirmative answers; twenty-five of the former and twenty-six of the latter gave negative answers; and ten of the former and seven of the latter gave doubtful answers. The doubtful ones could only show that they were pursuing an indefinite sort of method, and that intermittently.

2. *If you have a definite method, how is the time allotted to your several studies? Do you have a regular and fixed hour for each?*

Of the forty-three answering the first question affirmatively, all prepared their lessons in a regular order, and seventeen divided the time, attempting to take up a certain study at the same hour each day. Ten studied the most difficult lesson first, seven the easiest or most enjoyable first, and eight followed the order of the recitations. One young woman devoted her time chiefly to the lesson on which she would probably have to recite the next day, and slighted the others.

3. *What advantage is there in your method?*

On this question those having a method were almost uniformly of the opinion that there resulted much better and more efficient work and a great saving of time. Only one answered "Not much." One of the members of the class making the investigation said in his summary: "I noticed that the students who have a regular routine do

much better work than those who do not." Others gave practically the same report.

4. *How do you deal with visitors who call during study hours?*

The answers to this question were sometimes amusing. Fifteen young men and seven young women testified in substance that they gave such visitors a "cold reception," while twenty-three of the former and thirty-seven of the latter "laid aside work and treated them cordially." Various other answers were given. Seven young men were "not bothered with callers." One young woman said, "I turn them out and say good-night;" another, "I bring them in and treat them right."

The question dealing with callers is rather a serious one for the average student. There are always located in the vicinity, loafers, who may be expected to call during the busiest hours. Such intruders are amateur highwaymen, and should be summarily dealt with. There are a dozen tactful ways of forcing them out. Right here comes a test of character. To yield at this point, to a temptation to "lay aside work and be cordial," is indicative of weakness.

5. *Have you given this question of method of study any particular attention?*

The answers here were somewhat surprising. Only seventeen of the one hundred eleven (eight men and nine women) answered "yes," while seventy-three answered "no." The remaining twenty-one were either doubtful or undecided. There was much evidence in the answers that very few had put forth any conscious effort to solve this problem. Many of those who had an orderly plan

of study were found to have developed it more of less unconsciously. Below is a summary:

| | Male. | Female. | Total. |
|---|---|---|---|
| QUESTION 1.—*Definite Program.* | | | |
| 1. Yes | 23 | 20 | 43 |
| 2. No | 25 | 26 | 51 |
| 3. Doubtful | 10 | 7 | 17 |
| QUESTION 2.—*Order of Study.* | | | |
| 1. Regular order | 23 | 20 | 43 |
| 2. Attempt to divide time* | 9 | 8 | 17 |
| 3. Most difficult lesson first | ..... | ..... | 10 |
| 4. Easiest lesson first | ..... | ..... | 7 |
| 5. Order of recitation followed | ..... | ..... | 8 |
| QUESTION 3.—*Advantage of Method.* | | | |
| 1. Saving of time, better work, and the like | 22 | 20 | 42 |
| 2. Not much | 1 | ..... | 1 |
| QUESTION 4.—*Dealing with Visitors.* | | | |
| 1. Cold reception | 15 | 7 | 22 |
| 2. Cordial reception, lay aside work | 23 | 37 | 60 |
| 3. Not bothered | 7 | ..... | 7 |
| QUESTION 5.—*Previous Serious Thought on the Subject.* | | | |
| 1. Yes | 8 | 9 | 17 |
| 2. No | 37 | 36 | 73 |
| 3. Doubtful | 13 | 8 | 21 |

*Numbers two, three, four and five are, of course, modifications of number one, question two.

The students of this college, as a rule, are remarkably diligent and faithful in the performance of duty, but they lack greatly in method of study, and herein results a tremendous waste of time and energy. This investigation shows that the seniors average little or no better than the freshmen in point of method. Unless some unusual influence is brought to bear upon them, the habits of study formed during the first year are continued throughout the course.

It will be noted that over forty-five per cent. of those questioned had no regular method of study, while an additional fifteen per cent. followed almost no plan. Only fif-

teen per cent. had given the matter any definite attention, the others pursuing a plan having stumbled upon it unconsciously.

Statistics will show that a majority of those who fail in life are industrious and enthusiastic enough, but they are lacking in a definite plan or method of procedure.

To have forethought, to plan the work carefully before undertaking it, to be able to expend all one's energies day by day in the direction of effective effort, is to possess one of the highest qualifications for success. Here is the point at which many students are weakest.

**II. A Test of Attention.**—Certain members of a class in psychology were directed each to take a suitable position in the library, and, by means of a watch concealed behind an open book, to keep a careful record of some student who pretended to be studying. An effort was made to mark on a sheet of paper the exact length of time occupied by the student in his successive efforts to study and the interruptions thereto. The investigators were urged to try to be unprejudiced in making the test and to make the situation the ordinary one.

The problem was that of securing some estimate of the concentrative powers of the average student of the Kansas State Agricultural College. The subjects were selected at random, and there happened to be represented among them all the classes, from preparatory to graduate students. While these figures may not be exactly true to the second, they are sufficiently accurate to become a pretty fair index to the character of the work being done in the library, and they seem to indicate that the average student of this college has not got very far beyond

the reflex stage of attention. The results are tabulated below:

TABLE SHOWING THE RESULTS OF THE EFFORTS OF TWELVE STUDENTS TO READ IN THE LIBRARY.

| SUBJECT. | Total Length of Test. | | Total Time Studied. | | Total Time Lost. | | Efforts to Study. | | | Interruptions. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | No. | Av. Lgth. | | No. | Av. Lgth. | |
| Number and Sex. | Min. | Sec. | Min. | Sec. | Min. | Sec. | | Min. | Sec. | | Min. | Sec. |
| 1. M..... | 31 | 52 | 25 | 55 | 5 | 57 | 46 | 0 | 34 | 45 | 0 | 8 |
| 2. M..... | 31 | 15 | 21 | 10 | 7 | 5 | 18 | 1 | 10 | 18 | 0 | 23 |
| 3. F..... | 45 | 0 | 30 | 0 | 15 | 0 | 8 | 3 | 45 | 8 | 1 | 52 |
| 4. M ..... | 33 | 0 | 18 | 30 | 14 | 30 | 7 | 2 | 40 | 6 | 1 | 25 |
| 5. M..... | 18 | 59 | 12 | 15 | 6 | 44 | 11 | 1 | 5 | 11 | 0 | 37 |
| 6. M..... | 28 | 41 | 21 | 36 | 7 | 5 | 18 | 1 | 12 | 17 | 0 | 23 |
| 7. M..... | 22 | 5 | 19 | 40 | 2 | 25 | 6 | 3 | 16 | 6 | 0 | 25 |
| 8. F..... | 23 | 49 | 20 | 42 | 3 | 7 | 26 | 0 | 48 | 25 | 0 | 8 |
| 9. M..... | 10 | 15 | 8 | 45 | 1 | 30 | 8 | 1 | 6 | 8 | 0 | 13 |
| 10. M..... | 23 | 45 | 17 | 45 | 6 | 0 | 12 | 1 | 29 | 11 | 0 | 33 |
| 11. M..... | 34 | 51 | 31 | 50 | 3 | 1 | 16 | 1 | 59 | 15 | 0 | 12 |
| 12. M..... | 22 | 4 | 15 | 30 | 6 | 34 | 12 | 1 | 19 | 11 | 0 | 36 |

The table is self-explanatory. It shows for example, that during a period of about thirty-two minutes subject number one looked up from his book forty-five times and made forty-six separate efforts to get his mind on the lesson, the average length of time of the efforts being thirty-four seconds. In the majority of instances the subject looked up from the page in order to see who was passing. It is easy to see that the mind would not get a very clear idea of the subject treated, by this method of procedure This is the worst case in the list; but there is much room for improvement in the best of them.

The two most significant facts emphasized by this test are: (1) The frequent break in the continuity of the thought of the student, and the necessary repetitions and stumblings in an effort to get the meaning of the printed page; and (2) the existence of a habit that becomes more fixed and more difficult to change the longer it is indulged.

While this condition is very unfortunate, the students of this college are not necessarily to be censured, for very few of them have ever had an opportunity for any specific instruction in the matter of voluntary attention. It is the opinion of the writer of this article that some very valuable instruction of this kind can be given the student early in his college course and during the regular recitation hours. Who will suggest a method?

**III. Some Perception Tests.**—1. *Color Perception.*—How much more valuable our knowledge would be if the simple little affairs of every-day experience had been learned more definitely and systematically in our childhood. It is said that there is a time for all things. To this rule the matter of sense-perception culture is no exception, for it is generally conceded that the period of childhood and youth is the proper time for such culture.

We mature people continue day after day to make the same old errors in observation and judgment as a result of defective sense-training in early years. Moreover, we frequently find ourselves without words to express our feelings simply because of the fact that we have no definite names for our sense impressions. Imagine the difficulty of an effort to describe the splendors of the cloud tints and shades frequently seen at sunset, or the variegated colors of the autumn leaves, if one's color perception is as defective as that of many of the persons considered in this test. And yet I believe that this table fairly represents the young people who have been educated in the rural schools of the country. Is it any wonder that there is not more music and poetry in our souls?

During the last year I have selected at random and called into my office fifty each of the young men and young

women of this college and asked them to try to name the colors listed below. In the case of the mixed colors the students were given the benefit of any doubt, but they were given no credit for any variation from the correct naming of the primary colors. The third column represents the per cent. of correct answers as well as the total, as there were exactly one hundred tests. Very few of these failures were a result of so-called "color-blindness." The usual case was simply one of color ignorance. The summary follows:

| Colors. | Number correct. | | Total and per cent. |
|---|---|---|---|
| | 50 Male. | 50 Female. | |
| Violet | 13 | 15 | 28 |
| Blue | 42 | 44 | 86 |
| Green | 20 | 29 | 49 |
| Yellow | 30 | 46 | 82 |
| Orange | 41 | 48 | 89 |
| Red | 19 | 25 | 44 |
| Black | 49 | 50 | 99 |
| Pink | 30 | 46 | 86 |
| Scarlet | 15 | 19 | 34 |
| Navy Blue | 16 | 24 | 40 |
| Crimson | 4 | 14 | 18 |
| Brown | 41 | 43 | 84 |
| Slate | 19 | 28 | 47 |
| Magenta | 10 | 22 | 32 |
| Purple | 26 | 34 | 60 |
| Drab | 22 | 23 | 45 |
| Garnet | 14 | 24 | 38 |
| Terra Cotta | 8 | 15 | 23 |

2. *Odor Perception.*—The results of this test are not wholly satisfactory, but they will be given for what they are worth. The odors were placed each in a closely corked vial and passed to the observer one at a time. Notwithstanding the precautions taken, there was doubtless some mixing of the odors, but not enough in most cases to interfere seriously with the introspection.

The experiment brought out two minor results of some interest: (1) During the average test, which required about

a half-hour, the olfactory nerves became considerably prostrated after a lapse of some fifteen or twenty minutes, but a decided reaction was noticeable before the close of the experiment. (2) It was indicated that the nose is a very dependent organ. It is better at verifying judgments than at making original ones. The part it takes in judgment would be illustrated about as follows: Nose, "I smell something pleasant; what is it?" Eyes, "That is a rose, for I see it." Nose, "Yes, it's a rose." But when thrown upon their own resources, as in this test, the olfactories are very much undecided. Nearly every observer was heard to make some such remark as this: "I know perfectly well what that odor is, but I can't think of it now."

The small number of correct answers given was somewhat surprising. Twenty-five young men and twenty-five young women were called in. The table of results follows:

| Odors. | Number correct. | | Total. |
|---|---|---|---|
| | 25 Male. | 25 Female. | |
| Violet | 6 | 5 | 11 |
| Red Clover | 1 | 0 | 1 |
| White Rose | 4 | 4 | 8 |
| Lilac | 1 | 3 | 4 |
| Apple Blossom | 1 | 0 | 1 |
| Geranium | 2 | 1 | 3 |
| Oil of Cloves | 14 | 9 | 23 |
| Oil of Peppermint | 17 | 18 | 35 |
| Vanilla | 9 | 10 | 19 |
| Oil of Pennyroyal | 2 | 2 | 4 |
| Nutmeg | 13 | 14 | 27 |
| Oil of Almond | 3 | 2 | 5 |
| Oil of Catnip | 0 | 3 | 3 |
| Alcohol | 5 | 1 | 6 |
| Turpentine | 14 | 16 | 30 |
| Oil of Sassafras | 2 | 1 | 3 |
| Tar | 22 | 16 | 38 |
| Oil of Wintergreen | 4 | 10 | 14 |
| Oil of Cinnamon | 9 | 13 | 22 |
| Asafœtida | 18 | 17 | 35 |

The point to the whole story is this: Children ought to be aided and directed in their sense perceptions. For them merely to get a general effect is not enough. Specific names ought to be learned for colors, tastes and odors as they are perceived, so that fine discriminations can be made and more valuable observations can become possible. It would be almost as easy for the average child to learn to distinguish the eighteen colors named in this list as to learn the alphabet; and yet, out of the one hundred tested one only was able to recognize them all. By the aid of a few simple materials, such as color charts and odorous flowers, the average primary teacher could easily give this important instruction in sense perception and thereby equip the mind of the child for richer and fuller sense experience in mature life.

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## CHAPTER VIII.

### THINKING.

It would be a serious error to convey the impression that the various mental activities—such as perception, imagination, memory, and thought—go on independently of one another. Such is not the case. They develop together. During mental growth, however, it seems that there is a period during which each of these is somewhat more actively at work than any of the others. This at least partially justifies the expressions, "Sense-perception stage," and "Imaginative stage," of mental growth. During early years the child is engaged chiefly in getting the simple meaning of things by means of the special senses. Hence the sense-perception epoch. A little later his imagination seems to predominate for a while—the imaginative epoch. Still later, for a time, he finds especial delight in tracing out relations between things. This period is called the logical epoch.

**What is Thinking?**—Thinking deals with the relations of things in a methodical, purposeful way. Before proceeding further we should make a clear distinction between real thinking and merely having thoughts. The thing that distinguishes thinking from the various other processes of consciousness is its *purposive* nature. Real thinking is directed at some goal or end of its activity; that is, a *conclusion* is sought. Such, at least, is the definition to be had in mind during this discussion.

**Two Views of Purposiveness.**—There are really two divergent views extant with reference to the possibility of purposive thought. There is a school of psychologists sometimes called "Associationists," who say that the course of one's thoughts, even when he is reasoning, is directed by circumstances that are in no wise under his control. It is a kind of fatalistic theory. We are accordingly merely conscious automata. That object which is most capable of holding our attention directs our thoughts, and thus becomes a factor in our destiny. "We think as we do, not because we choose to, but because chance association of ideas or objects happens so to occasion it."

The one advocating the opposite view is sometimes called an "apperceptionist." He holds that *attention* is the great factor in thinking, and that one is capable, at all times, of choosing or selecting the course of his thought from a variety of possible courses. Rather than accept the theory of fatalism the apperceptionist would incline to say that a person is, or may be, the master of his own destiny, and that this work is accomplished through purposive thinking which is often done in spite of the behests of chance association.

**A Compromise Preferable.**—It is doubtless true of children and of adults undeveloped mentally, that their mind processes are directed by influences wholly from without; but in the case of persons mentally mature it seems very different. They seem to manifest unmistakable evidences of being able to change the course and nature of their thinking at will, and to accomplish purposes of their own designing. While a dozen different objects of attention may be pressing their claims for respect, the trained thinker is able to select and entertain

as the subject of his thought some matter that at first seemed to have no chance against the other twelve. This, it seems, is the distinguishing feature of the person who is able to *achieve* success in the face of obstacles, while the condition described by the associationist would be represented by that poor creature of circumstances, the tramp.

**Mind Activities Interrelated.**—We should notice here how closely all the mental activities thus far described are linked together. Perception gives us the first-hand meanings of things. Imagination makes copies of the perceptions; memory retains and recognizes the images, and thinking makes use of all the other three. While in the act of making comparisons in order to discover likenesses and differences, the thinker is very likely to exercise all these other activities in a rapid, complex mental movement. Suppose I want to decide which of two proposed building sites would be the more desirable: while looking at (perceiving) one of them, I image and remember the general appearance of the other, and thus by a complex mental act, containing many other elements not named, I arrive at a conclusion.

**Logical Thinking.**—The thinker should proceed in a logical manner. That is, his thought should have a clear and well-defined starting-point, or basis, and the conclusion should be reached by means of a series of logically related steps. It was Socrates, the great philosopher of ancient Greece, who was the first to secure a solid basis for thinking and argument. The opponents of Socrates were the Sophists, who based their teachings on a certain maxim: "Man is the measure of all things." These Sophists were teachers of rhetoric and argumentation, and they advocated the use of any kind of trick or device

for the sake of winning one's point. "For," said their chief exponent, interpreting the foregoing maxim, "Whatever *seems* true to you *is* true, and whatever seems false is false." "Very well," replied Socrates; "suppose I say that what you are just now stating seems false to me. What then?"

**The Socratic Method.**—Thus the Sophist was caught in his own net, and Socrates went on to develop one of his pet theories, viz., that there is a universal basis of truth. By this he meant, in substance, that if two or more persons wished to discuss a question, they could by effort find a statement upon which all would agree, for the starting-point of their argument. Plato, in his dialogues, has given us a full and exceedingly interesting account of the manner in which Socrates always aided his opponent in arriving at this fundamental statement. Anyone of fairly mature mind will find both profit and entertainment in reading these dialogues.

Briefly speaking, the method of Socrates' argument was two-fold: he either kept going back with his opponent till they found a statement upon which both could agree as a starting-point, or he took the opponent's boastful statement and by assuming it true slowly wound the latter up in his own argument.

**Historical Statement.**—Historically, logical argument, or inquiry, has taken two very pronounced forms.

(1) Aristotle (384–322 B. C.) developed and perfected what is known as deductive or formal logic. He is the author of the so-called syllogism, the "dictum of Aristotle," which proceeds as follows:

All men are mortal, (major premise.)

Socrates is a man, (minor premise;) therefore,

Socrates is mortal, (conclusion.) It will be noticed the syllogism begins with a general or universal statement, and concludes with a particular one.

(2) Lord Bacon (1561–1626) is usually given chief credit for originating the so-called inductive method of reasoning. This method is the converse of the deductive, beginning with a particular and concluding with a universal statement. The inductive method is characteristic of the modern scientist, who takes particular, apparent facts as he finds them and traces out their relations until he reaches a larger, more general truth, of which they are a part.

**Thinking Develops Knowledge.**—Thinking is the mental activity by means of which one builds up his system of knowledge. The simplest act of thought whereby this knowledge is obtained is called a judgment. The judgment unites, or if negative, separates two ideas or concepts. For example, we have the judgment, "Ice is frozen water," which consists of three elements: "Ice," the subject; "frozen water," the predicate; and "is," the copula. In the judgment, "Iron is not combustible," we have an example of the negative form in which the non-agreement or separation of subject and predicate is asserted.

An act of judgment, if complex, often implies analysis (a separation into parts) and synthesis (putting together the parts) of objects. These acts of analysis and synthesis, in the case of material things, must go on separately; but in the case of mental acts, they are combined in one. That is, one can't perceive how a complex object is taken apart without at the same time perceiving how it is put together.

What does the world mean to you? It means just what you have made it by your own thinking; and if your judgments have on certain occasions been erroneous or wholly wanting, just to that extent has the world failed to come into the grasp of your knowledge. Now, let us inquire into the question of forming judgments and see what can be done by way of aiding the process.

**Aids to Thinking.**—(1) One ought to acquire the habit of forming clear, logical judgments, such as are warranted by the facts already at hand. This would mean a careful examination of the evidence and a resulting conclusion in which one could have a high degree of confidence. Now this very confidence encourages a person to put more force and energy into his statements, and develops him into what is called a positive character. The negative, unassertive character, who is always uncertain and thinks "it may be so," is likely to be left far in the rear in the race for the best things of life. Be positive, then.

(2) Hasty judgments are the bane of many a one's exisence. The person who jumps at conclusions before sufficient evidence is in, is constantly undergoing the embarrassing necessity of changing his mind or reversing himself. Such a one is likely "unstable in all his ways," and his fellow-beings soon learn to regard him as visionary or superficial, and consequently they lose confidence in him. Of course every thinking person will frequently change his mind with reference to some matter, but this ought to be necessary only in the event of *new* evidence.

(3) One of the worst enemies of clear, sober judgment is the habit of gossip. The gossip soon acquires a morbid appetite for the cheap stuff upon which his mind feeds, and

because of his (or her) practice of forming trifling, distorted judgments of people, his mind is rendered unfit for any considerable amount of solid thinking. Gossiping is a bad habit into which a good many respectable people fall, and it soon makes the life of the gossiper mean and sordid. This habit, if eradicated, has to be fought on the same principles as other evil practices, such as drinking or swearing.

(4) No mental asset is of more worth to a man in mature life than the habit, early formed, of judging carefully and reasoning deliberately. This, of course, might be traced back to those early years when the original brain connections were being made,—perhaps at a time when the child made an extravagant statement and had the bare reality pointed out to him by parent or teacher; or when he reached a hasty or unwarranted inference by means of the imagination and was taken over the ground of the argument by careful steps in order that he might discover the true conclusion.

(5) Clear thinking and systematic work are twin brothers in the family of good habits. Let one but look carefully about him in all that he undertakes, and devise a method of procedure that will involve the least possible waste of time and energy and yet prove effective. In short, let him have a well-devised plan for the performance of every task that is before him, and his subsequent development into a logical, systematic thinker is practically assured.

**The Study of Logic.**—If the student can, at some time in the course, take up the formal study of logic, he will be enabled to accomplish much toward systematizing his thinking. It also gives a more wholesome regard for log-

ical sequence in any oral or written discussion. The connected expressions of the average person are, at best, full of irrelevancies. The illogical mind is also prone to attach undue importance to the superficialities of popular opinion. Wherefore, the greater is the necessity of acquiring logical habits of thinking.

**Logic Historically.**—The Greeks were the first great thinkers among Europeans. Shut up in their narrow domain, with considerable leisure and a disposition toward mental gymnastics, they naturally developed remarkable brain power. Their love of disputation, and the necessity for it, too,—for every freeman was likely to be called upon to defend his property by means of his own skill in debate,—easily gave this development a decidedly logical trend. It is not at all strange, then, that these conditions produced the great and profound logician, Aristotle, who was the founder of deductive logic and the author of the syllogism as it is used to-day. In this work, and his writings setting forth the laws to which all valid reasoning must conform, he set a pattern for the thinking ages.

Although they seem to have wasted the greater portion of their time, the schoolmen, during the Middle Ages, undoubtedly contributed much to the world's progress by reason of their efforts to secure clear and exact definitions and in their analysis of all possible kinds of argument. Scholasticism also taught the world much indirectly by the failure of its claim that logic could furnish a complete instrument of knowledge as well as an infallible standard for distinguishing error from truth.

Scholasticism and its various offspring, all teaching by authority and promulgating a multitude of forms of doctrinal dogma, prepared the way for Bacon and his inductive

method of reasoning. Although his great work was accomplished at about the close of the sixteenth century, thinking men were slow to get his point of view. Locke, Newton and Herschel caught his idea and developed it further. Finally, John Stuart Mill came forward with the first text-book on logic (1843), which is a pretty good authority on induction to-day. These formulated methods as given by Bacon and Mill have become substantially the methods of modern research; and as a result, we are now living in a remarkable scientific age.

**Viewed Practically.**—But what claims can reasonably be made as to the benefits to be derived from the study of logic in the collegiate course? It seems to me that those given below are not extravagant.

1. The study of logic should enable the student to think more clearly and to express his thought, whether oral or written, in a more lucid manner.

2. It should enable him more readily to detect the erroneous statements of others, whether made by design or through ignorance.

3. It should imbue him more fully with the scientific spirit, which is the guiding principle of human progress to-day.

4. It should, above all, lead him into habits of systematic, scientific method of work of whatever character he may undertake, and thereby aid his success and further his material interests generally.

## QUESTIONS.

1. How long can the reader really think on an interesting subject?

2. Make a list of personal acquaintances who are regarded as thinkers, and find out, if possible, just how they proceed while thinking.

3. Do successful people have set times for deliberation alone, or do they do their important thinking while walking or at work?

4. Can you find any marked examples of people who always think too late? Can this habit be corrected if taken in time? If so, how?

5. Is it safe to say that a young person can learn to plan his work beforehand only after he has suffered the evil consequences of not doing so?

6. Or, on the other hand, can the youth be taught gradually, by means of caution and of pointing out the way, to deliberate and plan before he acts?

7. Which is more conducive to wholesome thinking on the part of a youth, country or city life? Make out an ideal environment for such purpose suitable for each sex.

8. "Yon Cassius has a lean and hungry look; he thinks too much." Is there any truth in this implication that thinkers are lean, and that corpulent persons are not thinkers?

9. If you could actually follow the path of consciousness of the ablest thinker, is it not altogether likely that you would find many detours and byways? Reasoning directly to a conclusion without any waste of effort is probably a myth. The ablest thinker is apparently conscious of the greatest number of associated ideas while reaching his conclusion.

10. The clear, logical reasoner, among other characteristics, certainly possesses these: (1) the ability to define terms and to state his problem; (2) the power of sustained effort while striving for a conclusion; (3) knowledge of the best time and place to think, and of the means whereby to render his physical condition most helpful to the task.

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## CHAPTER IX.

### EMOTION.

Notice the flushed cheeks of the bashful high-school girl when she hears remarks about her personal appearance, or the pallor on the face of a timid person during a thunder-storm, or the clenched fists and firmly set jaws of a man "white with rage," or the loud ha-ha's and bodily convulsions of one who is highly amused. In all such cases we have instances of the expression of what is called emotion. These expressions are not confined to man alone. Take the emotion of anger, for example, and observe the snarling, defiant attitude of the savage dog, the receding ears of the vicious horse, the arched neck of the raging bull, and the frothing mouth of the fighting boar. In all these instances of men and animals, there seems to be an outer manifestation of an inner nervous or mental condition.

**What is Emotion?**—James defines emotion as "a tendency to feel characteristically when in the presence of a certain object in the environment." Angell speaks of it as "a phenomenon of interrupted conscious action." To understand emotion rightly, one needs to assume successively about three different points of view; *i. e.*, (1) experience emotion in himself and get the feeling; (2) observe it in others and note the expression that goes with it; (3) observe, if possible in either case, what may have caused the emotion.

When one is undergoing deep emotion, he doubtless experiences feelings of a pronounced character. In fear, he has that chilly, drawn-up feeling in the stomach; in anger, a warm feeling of physical comfort about the bowels and chest; in embarrassment, a dry, uncomfortable feeling about the mouth and throat. Other emotions have their peculiar kind of feeling. The one who is experiencing the emotion is not likely to take very close account of the physical expressions accompanying. An outside observer can do this to better advantage, as has been implied in the first paragraph of this chapter.

**An Explosive Effect.**—In the case of emotion there is something that reminds one of the explosion of a gun. Take, for illustration, laughter, and note what occurs. The mind is usually following a tolerably even course of thought until the "funny place" in the story is reached. At this point there is a break in the continuity of thought, and for an instant a pent-up condition is present. Then comes the explosion of laughter and the tension is relieved. It is the sudden, unexpected turn in the course of the story that brings about the emotion. Witness the fact that a joke is scarcely ever laughed at heartily a second time. To one who knows the drift of the story, the course of his thought no longer experiences the break or interruption. Hence, there is no "pent-up" feeling to explode in form of laughter.

**Emotion and Health.**—Much of the satisfaction of the pleasurable emotion must certainly come through the relief brought about by this explosion. And then the pleasurable emotion, no doubt, increases the tonicity of the whole organism. The general well-being is enhanced. "Laughter is a good sauce," says the proverb. It is quite

probable that the physical agitation during laughter serves to heighten those vital processes which are most closely related to digestion and assimilation. Painful emotions seem to have an effect of a directly contrary nature. It is a well-known fact that sudden grief will effectually stop the process of digestion for hours.

"Laugh and grow fat" is a pretty sound psychologic maxim. Good health and happiness are twin sisters. So are ill-health and melancholy. Long-continued grief depresses the vital organs and takes away the relish for food. The person who grieves long becomes pale and emaciated, and renders his body more susceptible to pain and disease.

**May be Overdone.**—The person who understands best the source and keeping of good health will try to govern his emotions as well as his appetite. Anger is said to have a sort of poisoning effect on the system. Physicians say that anger on the part of a mother who is nursing is likely to render her milk unfit for the child. Dairymen declare that a cow that is subjected to nervous fright during the milking will thereby suffer a reduction both in quantity and quality of milk. Even a good emotion may be overdone. One may "laugh till his sides ache," or until he becomes hysterical; or sympathize until his own heart action is weakened. Excessive emotion also debilitates the nervous system. The writer of these lines knows a number of persons who are frequently on the verge of nervous prostration as a result of too much emotion.

**Emotionalism Attractive.**—Emotional people are nearly always attractive and interesting. We like to be in their company, if not too long at a time. They "laugh with those who laugh and weep with those who weep,"

and are caught up and carried away with every wave of enthusiasm. Heaven bless the emotional ones, even if they are likely to run into excesses of conduct, for they stir up our dull wits and reawaken our slumbering emotions. Such persons are also doubtless the producers of much of the best that is in art and literature. Many a masterpiece is the result of the outflaming of a burning emotion. Statistics show that many of our best writers work best under high pressure of emotion.

**Inspiration in Literature.**—Inquire of the brilliant writer and he will likely tell you that emotionalism is a great factor in the production of certain kinds of literature. "Inspiration" he will call it. An analysis of inspiration shows that it is attended by an unusual flow of blood to the brain, and that as a result the thought processes occur with great vividness and rapidity. The ideas fairly flash into the writer's mind, while with rapidly moving pen he tries to write them down before they escape.

There is a peculiar thing about these so-called inspired writings, and that is that one needs to be somewhat inspired in order to appreciate them. It is necessary to enter into the author's feeling if one would fully comprehend the meaning of the production. This reminds us again of the fact that the greatest phase of art is the subjective one. While you are admiring a beautiful, classic poem, a warm wave of pleasurable appreciation surges through your whole frame. As a matter of fact, the real poem is in *you*, and the mechanical features of the production are merely the occasion of it.

**Æsthetic Appreciation.**—It is a lamentable fact that not a few persons fail to find the really æsthetic element of poetry as well as of other forms of art. If I enter into

the true spirit of a poem it will touch me vitally and stir up my feelings and emotions. It ought to "put a new song into my mouth" and an exuberance of joy into my soul. The true poem ought to make me feel, at least temporarily, that any adverse conditions that may be pressing in upon me are really contributive to my highest spiritual well-being. It ought also to move me to the performance of the deed most appropriate to its sentiment. Then I shall be satisfied.

A mechanical aid to the fuller appreciation of good literature is found by some people to consist in reading aloud with the tone and inflections of voice best adapted to the nature of the selection.

**Emotion and Music.**—Music is a fine art, and like all others of its class it requires emotionalism for both its production and interpretation. It is a mighty factor in civilization by virtue of the fact that, swayed by its magic spell, the appreciative mind tempororily transcends every troublesome and perplexing condition, and finds easy access to the domain of ideas that are most inspiring and satisfying. Music is pre-eminently the fine art that separates the people into two classes of the emotional and non-emotional, claiming as it does only the former as its votaries. To the latter, there is no music in the true sense of the word.

A list of the great masters in musical composition will show, in all cases, men who were capable of unusual depth of emotional experience; and, in not a few cases, abnormalities in this respect.

**Great Musical Composers.**—Stirred by an insuppressible passion for music in fancy, Händel, the master organist, soon ripened into a prodigy, turning out half a

hundred operas, a score of oratorios and many cantatas. His oratorio, "The Messiah," unsurpassed in grandeur and sublimity, has reigned triumphantly in the hearts of music-lovers ever since its first presentation in 1741. By this composition the whole life-story of the "Prince of Peace" has been given a new touch of sacredness and beauty.

"The Creation" was perhaps the greatest musical composition of Haydn. This beautiful production came as the ripe fruitage of sixty-five years of passionate soul-growth, and its harmonies are pervaded with all the fire of buoyant youth. When this brilliant author brought out his twelve great symphonies on the English stage the large audiences were moved to the extreme of enthusiasm.

Mozart, the prodigy so emotional that his soul literally burned out at thirty-five, was playing the piano at three and rendering programs of his own music at six years of age. He never had to *learn* music, but seemed to find it necessary only to give out of an infinite store of musical genius. For finish and perfection of style his operas have, as many critics believe, never been surpassed.

Deaf at the age of thirty-one, Beethoven retired the more devotedly to the inner recesses of his own emotional nature, and there discovered those profound musical conceptions and mysterious harmonies which his compositions reveal. His magnificent and powerful orchestral works —symphonies, overtures, etc.—are fully accessible only to those of finished technique and deepest emotional experience.

The romantic imagination, graceful sentiment and intense poetic feeling so apparent in the splendid musical compositions of Mendelssohn could have emanated only from a soul made beautiful by a rich experience of emo-

tionalism. Recall, for instance, how the ideal, poetic overture to "The Midsummer Night's Dream," though one of the author's youthful productions, appeals to one's sense of the sublime. It is little wonder that he was idolized in a foreign land.

Such, too, is the testimony concerning Chopin, the Pole, a master musician at nineteen and "the boldest, proudest spirit of his times," whose compositions are so strong and exquisite, so original in rhythm, and so rich in tone color. His fits of impulsiveness and furious anger, intensified, no doubt, by what his beloved country was suffering, seemed to invest his music with a melancholy undertone.

Our own Richard Wagner, that modern master of instrumentation, was sensitive in the extreme, and often fairly glowed with emotionalism. His forceful, dramatic style of musical art is at all times suggestive of these soul-stirring experiences.

**Evolution and Emotion.**—The thoroughgoing evolutionist argues pretty convincingly that at some time every emotion has had its specific use in the life-and-death struggle that the race has been undergoing. For instance, the dog in expressing anger, bristles up his hair and tail and shows his teeth, at the same time barking and growling. All these make him look larger and fiercer and tend to intimidate an enemy. So with an angry man. During the exercise of this emotion he braces his body, clenches his fists, sets his jaws firm, and makes extravagant claims as to his prowess. All this seems to send the blood tingling through his arteries and to give him a feeling that he possesses unusual size and strength.

The dog such as described above possessed an advantage over his enemy of less expressive ability; and, in the days

when might made right, the man who could display all those signs of the emotion of anger likely bluffed his less apt brother into submission without a fight and carried away captive some important prize, probably a wife. Fear, too, the evolutionist would say, has operated in a similar way, causing the victim to flee from real danger at the right moment and thus to save his life. For a full discussion of this matter, see Darwin's *Expression of Emotion in Men and Animals.*

**The Individual.**—During the lifetime of the average person his emotions gradually undergo processes of evolution or modification. As is said to have been the case with the primitive race, the individual while young manifests only selfish or egoistic emotions. The unselfish or altruistic ones develop after a long period of schooling. Many of the coarse emotions of childhood and youth finally become transformed into various expressions which we call "good breeding." Thus the fear of people in the child may in time develop into the well-known reserved manner of the adult. His childish outburst of anger at others may at last become transformed into a sharp witticism directed at one whose remarks are somewhat stirring. In every instance of development of race or individual, the tendency is always from the coarser toward the more refined forms of emotion. The wrath and the curses of such frequent mention in the Old Testament are fully displaced by the expressions of forgiveness and the benedictions of the New.

**Emotional Habits.**—Take a rattle away from a little child and he will be very likely to cry. You have broken up his free, easy-going mode of getting experience. He swells up, so to speak, with emotion, which finally breaks out at the weakest point, in form of crying. Somewhat

later, circumstances develop more fully his ability to laugh, and this becomes another possible point of outbreak of emotional energy. For a period during his little life you scarcely know whether to expect a laugh or a cry when you "break into his game," for these two forms of expression are pretty well balanced.

It is interesting to notice that these modes of expressing emotion soon become habits, which are broken up or transformed as the child gradually secures more complex meanings through experience. That tense, pent-up feeling which broke out into a cry in the child, finds expression in the clenched fists, the set jaws, the defiant look, and the angry exclamations of the enraged man. And that other form of expression of exuberant joy, *i. e.*, laughter, develops into the beneficent smile, the kindly exclamation, and the many other expressions of approval or good feeling in the mature person.

**An Illustration.**—The person who has a good set of emotional habits is to be envied, yet such a thing is altogether possible for the one who persists in the practice of self-culture. It is believed by many that it is often possible to turn the undesirable expression of emotion into a better channel of escape. To illustrate: Many a man who mashes his thumb utters an exclamation that looks better in print if written thus: "——!" But the author knows personally at least one profane man who decided to reform. So, on such occasions as that of a mashed thumb, he would say "Praise the Lord!" instead of "blankety-blank." He said that the new mode of expression was a little awkward at first, but that in time it became as satisfying as the old.

As a matter of fact, the one who would refine his character must do some such thing as the man referred to above.

The primitive form of response must be, by effort, transformed into that which is more pleasing to others and which more nearly satisfies the demands of his own ideal of character.

**Mechanical Emotional Training.**—But suppose one very much desires to be able to experience every form of emotional feeling as the occasion demands: simply wishing it were so will not make it so. Can this thing be acquired? To this question the theatrical performer always answers affirmatively, saying in substance: *Simply acquire and hold persistently the attitudes of body and mind best suited to the emotion you wish to experience, and the appropriate feeling will in time become full and natural.*

Practice a while the following: Imagine some one a mortal enemy. Grate your teeth, clench and shake your fists at him, and in a gruff, defiant tone, denounce him in the severest terms. Determine for yourself whether or not the emotion of anger or rage results. The writer cannot answer this from personal experience, but he can so testify as regards a better form of emotion. While engaged in giving a public address, he has often found it possible to engender in himself a pronounced emotion of sympathy by means of lowering and softening his tone of voice, and by entertaining in quick, secret thought the most compassionate sentiment of which he is capable.

Go to the one for whom you do not have sufficient affection, when he is ailing somewhat, show by every little act and expression possible the kindliest sympathy, and then notice as a result how your heart is softened and your love rekindled. It seems to be an unfailing law that one in time takes on the precise nature of that character which he persistently represents. It is reported on highest au-

thority that those who take part in the Passion play at Oberammergau become more and more like the characters they represent. The man acting the part of Judas Iscariot in time becomes a traitorous villain, and the one who impersonates Jesus Christ grows constantly more like that perfect character. But in ordinary life, off the stage, it is often the greatest difficulty to persist in acting the character that one might hope to realize.

**Early Emotional Training.**—Thus much, at least, ought to be said with reference to early emotional culture: The child ought always to have an opportunity to express the better emotion as soon as it comes to him, in form of some kind of appropriate act. If he is just now filled with an emotion that suggests manly courage, guide him at once, if possible, into the performance of an act that is appropriate. If he is all aglow with the emotion of sympathy for some needy or suffering one, by all means direct the child in the performance of some little act that will tend to relieve the distress. This important matter is too often overlooked by those who have the care of children. The rule is, in every case possible see that the child performs the act prompted by the good emotion, otherwise he may become a mere *dreamer about* the good when he might be made a *doer of* the good.

**Emotion an Art.**—So it would seem that the one who learns to order his life according to an ideal pattern will, in time, acquire emotional experience and its appropriate expression as he would acquire the mastery of a fine art. On proper occasion, he will be capable of experiencing just enough anger ("righteous indignation") to give him energy for the performance of an unpleasant duty. He can stir up

in his own breast sufficient sympathy to spur him on to a deed of mercy or compassion. He will be able to express a passionate fondness for Beauty as she is presented to him in her various forms. In short, such a person will find it possible on all fitting occasions to bring himself up to that warm glow of emotionalism which is most satisfying to those who are in his company, and which supplies him with an unfailing source of enjoyment.

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## QUESTIONS.

1. Observe closely a child that is deeply enraged. Is he really red in the face?

2. There are children that seem to need to cry before they can sleep soundly. Can you justify this statement physiologically?

3. Other children must invariably have a good cry upon waking out of a nap before they are normal in their conduct. Can you explain this on similar grounds?

4. Does anger assist you in getting any kind of work done? If so, just how? In what particular respect is your anger a detriment to you?

5. Can you force out a smile that you have any confidence in when you really feel more like expressing displeasure? If such thing be possible, is it not a form of deception?

6. Suppose you are called upon to officiate in an information bureau in a big union railway station. Is there any way whereby you could make preparations beforehand for preserving at least an appearance of amiability throughout the day?

7. Examine yourself again, this time for the presence of the emotion of fear. Are you entirely free from this depressing emotion? If not, how would you rid yourself of it? Do you observe it to be, to any considerable extent, an exhilarant or a deterrent of the conduct of others?

8. Look about you for those who are cast down with sorrow, and observe, if possible, their physical condition. A scriptural proverb says that mourning is better than feasting. Is this true from a standpoint of health? Give what you consider to be the legitimate function of sorrow.

9. In the methods of some revivalists referred to in a previous chapter, emotionalism was obviously depended upon to "melt the heart of stone." Now, after all, is this not the greatest factor in reform? Unless there be some strong emotion, resolution has little force and effect. Is not the problem rather one of keeping the emotion alive so that it may aid until the new mode of conduct becomes a habit?

10. The student of human nature will, of course, not fail to observe the great variety of emotionalism among people. Some will appreciate music and poetry and tints in the sunset sky as possessing the highest reality, while others will insist that only such material things as brick and mortar and money have any existence in fact. The difference is constitutional, and can never be overcome. There is room in this big world for both these extremes and all who come between them. They make up the great variety of character without which human-kind would be less interesting.

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## CHAPTER X.

### THE DEVELOPMENT OF CONSCIOUSNESS.

About the most helpless thing in the whole animal kingdom is the human infant, while the creature which possesses above all others the greatest self-control and the greatest mastery over his environment is the fully matured man. What a miracle that one of these should finally develop into the other! And yet, strange to say, there are in the world many who keep calling loudly for an outward "sign" of man's divine nature.

There is every reason to believe that every human being begins his earthly career absolutely without knowledge. Innate ideas are now considered out of the question. The child at birth seems merely to have a nervous mechanism already primed and strung up for use. Upon this the environment begins at once to act, while the reactions from within are immediately forthcoming; and thus the little being is fairly launched upon his voyage of discovery of the world.

**Forms of Infant Activity.**—There are three modes of activity, or reaction, possible to the new-born infant, viz.: reflex, instinctive, and impulsive; and in the last named lies his promise of intellectual reward. The reflex acts are such as afford immediate protection to some part of the body that is threatened with injury. Withdrawing the hand or foot when it is touched or pricked, and winking the eyes to avoid outside contact with the sensitive parts, are examples. These acts go on as well

at first as they ever do, and the child seems to learn nothing from them, as they are more or less unconscious. Nursing is the best example of the child's instinctive activity. Again, the instinctive act is so definite in its progress that there is necessarily little consciousness attending.

**Impulsive Action Peculiar.**—But it is impulsive action, the kind manifested by the child's kicking and striking indefinitely into the air, that seems to mean most for the growth of consciousness. The impulse is, strictly speaking, a sort of reaction. A simple illustration would be this: Nature somehow causes the infant's little body to fill up with nervous energy, which must have a means of escape. The freest channel of overflow for this energy is usually in form of kicking and squirming, but in the process of these movements there occur all sorts of variations, some of which result in contacts and entanglements with the bed-covers and other objects in the immediate environment.

Now, every one of these contacts and interferences with the impulsive activities has its peculiar quality of feeling and adds its mite to the growing complexity of consciousness. While these acts are going on in process of training his sense of touch, the other senses are being played upon in various manners. Images of moving objects are crossing his retinas and sound vibrations are coming in over the auditory tracts. A flash of bright light or an unusually loud sound will likely give his nerves such a shock as to cause the child to break into a cry. This crying itself involves a large complex of impulsive activities both within and without. Consequently, the blood goes to certain parts of the body in fuller supply while

the accompanying contortions and writhings set up a whole set of new feelings.

**Alternating Quiet and Unrest.**—Thus consciousness becomes enriched, and, the nervous equilibrium having been restored, there follows a refreshing sleep during which more nervous energy accumulates in preparation for the next period of activity. This alternating principle of unrest and quiet seems to be a rhythmic law of nature. Hunger and satiety, work and rest, mind activity and repose, are familiar illustrations of this law. But the significant thing for us to note here is the fact that each recurring period of activity, in the case of the infant, means another set of impulsive movements and further additions to conscious experience.

**The Simplest Law.**—I believe that the primary law of earliest development of consciousness in the child is that of *change, or variation.* His first awareness of things present to sight is of objects moving, and thus causing a change of position of the retinal image. He becomes aware of stationary objects only after he is able to move his head, and thus cause a moving retinal image. His first consciousness of things heard is of sounds that come intermittently, as in the case of the human voice, or any sound of uneven vibrations. Even a mature person soon ceases to hear a noise that is continued with unbroken monotony. These changes in the amount and character of the nervous stimuli impart to the brain cortex the many nervous shocks, each with its peculiar quality of feeling. In some such way as this, I believe, the child gets his first idea of a "this and that" and of "this different from that."

**Further Advancement.**—Granting this *beginning* of

consciousness, the further differentiation of it is more easily explained. During his impulsive arm-swinging, the little thumb accidentally slips into the mouth; result, a new, rich morsel of consciousness, one for which he will likely *strive* indefinitely after this. Volition is budding. As the child grows in physical strength the number and variety of physical acts become greater and more complex. He can now grasp things in the hand, turn over in bed, sit up, roll over on the floor, and bump and punish himself in a variety of new ways.

The youngster is now a regular attendant at the school of experience, and he is learning rapidly. Let him wallow in the coal-box, burn his fingers, fall and bump his nose, tumble down cellar, and do every other conceivable thing; *provided only*, that he can come out of the experience with his skin fairly intact. In all this he is getting, first-hand, information that is essential to his later conduct. He is ten times better off than the child which is tied in his crib long after he ought to be in rapid action, "for fear he might get hurt."

**Meaning of Self-Activity.**—Ideal conditions of soil, moisture, atmosphere, etc., would not suffice to make an artificial plant grow. The life-germ must be present, and then these conditions will bring about development. This growth is the inner nature of the plant in process of asserting itself. It is the *self-activity* of the plant. So with animal beings. Given the life principle and the conditions of growth and development, and these life processes go on in a manner determined by the inner nature of the creature. The tree has simple digestive and assimilative processes. The higher animal forms have more complex ones, with the additional power of locomotion.

The tree, for instance, shows some pronounced reactions. It reaches out with branch and leaf for the sunlight and the rain, and downward with root and fiber for the moisture and the other nutriments in the soil. The horse is capable of obtaining all his necessary nourishment with more highly specialized forms of activity, and of appropriating them to the uses of a much more complex organism. He has two marked advantages over the tree, viz., that of a nervous mechanism, and that of the power of locomotion. So his self-activity manifests itself in a complex way, but strictly in accordance with his horse nature.

**Man's Peculiarity.**—The human being possesses all the powers and advantages belonging to the tree and the horse, together with a thousand others. He can reason, choose among alternatives, plan for the future, have ideals, can love, hate, sympathize, and the like, in a manner peculiarly and well-nigh exclusively his own. And yet all these acts are but instances of his inner nature forcing itself outward to expression. In other words, these are manifold manifestations of his *self-activity*, and they continue without his effort; yes, almost in spite of his effort.

This brief discussion of self-activity is made here with a double purpose, namely: (1) To indicate the significance of the fact that consciousness *forces* itself upon the individual as time passes. He learns, not so much because he desires to, but because he must. (2) It is proper to show that, while it is not within man's power to prevent his conscious experiences, it is entirely possible for him to *modify* and *direct* them, as we shall try to indicate in the chapter on volition, to follow.

**Imitation.**—From the very beginning there is prominent a social phase of conscious activity, and we call it

imitation. If the term were not so nearly self-contradictory we might call it unconscious volition. From the child's own standpoint he is *not* imitating; he is merely defining his spontaneous activities in such terms as his environment offers, and in all such acts he continues to widen the scope of his consciousness. There are two important aspects of imitation that might well be noted. The first is imitation of others, and the second, that of the self. Give a three-year-old lad a small hammer and some nails and a piece of soft lumber, and observe his efforts. He will wield the hammer in fair imitation of what he has seen others do; but this does not aid him much in striking the nail on the head. The latter feat must be accomplished by means of self-imitation. So he begins in earnest pounding away, hit or miss (mostly miss), and finally accidentally strikes the nail square on the head. This last blow gives the boy the thrill that he has been vaguely striving for, and it gives him an image (that is, a fresh memory-copy of how it feels to strike the nail) by means of which he can soon hit it again. This random hammer-swinging is kept up until accurate aim means simply measuring off mentally, beforehand, the amount of muscular effort necessary for each coming blow. But this case, or a similar one, can be discussed to better advantage in the next chapter.

**Imitation in Language.**—But imitation is not to be treated as a distinct kind of conscious activity, such as perception and memory. It is present to some degree in practically all of the experiences that develop new types of consciousness in the unfolding mind. It is better, therefore, to call it an *aspect* of the growing consciousness. If the reader will take the trouble to observe the acts of

children and young people of various ages he will discover the imitative side of these acts in all cases. That language is acquired by means of imitation is indicated by the fact that deaf people are dumb simply as a result of not being able to hear. Their vocal organs are usually normal. Peculiarities of tone, accent, articulation, and many other mannerisms of speech, both good and bad, are clearly the result of imitation of others modified by imitation of the self.

**Imitation in Movements.**—As language is the result of continued effort to make copies of expressions heard with the ear, and feelings experienced in the vocal organs, so are bodily postures, attitude, movements and the like, given their peculiar form as a result of imitation of these same things seen with the eye in others, and of feelings experienced in various parts of one's own organism. A man who has been blind from birth is never seen making gestures, grimaces, becks and nods in any such manner as normal persons do. So he is not only lacking in consciousness of things as seen by the normal eye, but also in the special kinds of consciousness that would come to him as a result of imitation of the various bodily attitudes, movements, etc., referred to above.

We will close the discussion by briefly reminding the reader of the fact that we are all imitators. In dress, bodily attitudes, modulation of voice, gesture, and a thousand-and-one other acts of greater or less significance. We are prone to copy more or less accurately the conduct of our fellow-beings. Those persons of highest reputed respectability and those who most nearly exemplify our ideals will be our chief exemplars. Again, let it be remembered that in every case of imitation, whether of self

or of others, and whether successful in accomplishing the end aimed at or not, there is being brought about that same continuous enrichment and specialization of conscious experience which was referred to above a number of times.

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## QUESTIONS.

1. Can a child's mother be relied upon to report accurately its first conscious acts?

2. To what extent is precocity an accompaniment of under-size and a very nervous temperament?

3. Some parents are careful to have their young child, say two years old, take sixteen hours sleep out of the twenty-four; other children are given only ten. How are these matters related to mental and physical growth?

4. While attempting to aid a child in the unfoldment of consciousness one may well observe how the latter gives his attention. Some children attend readily to any prominent object in their environment: others only to certain specific things.

5. The pronounced genius never becomes aware of the affairs of the world in general. His consciousness is unalterably fixed upon the object of his narrow interest. Is it worth while, then, to try to educate a genius?

6. To what extent are you reading your own consciousness in your effort to interpret the child's? Your consciousness of the world of fact and affairs is made up wholly out of your experience. The same statement is true of the child. Do not overrate him.

7. People who describe so minutely the ideas and senti-

ments of a poodle dog or a tabby cat are reading off their own imaginations. Such statements doubtless have a legitimate place in a make-believe story for children, but they are out of place as records of fact.

8. What is the function of instinct in the development of consciousness? Observe how an instinct often comes for the first time suddenly into action and leads a child or youth to do a number of definite things whereby he acquires new experience.

9. If the reader will undertake for a day the care of a child one to three years of age, he will easily observe a hundred instances of the function of impulse in knowledge-getting. During the time the youngster will meet with a constant series of mishaps. That is, his efforts to accomplish impossible things will always come out in ways entirely unforeseen by him, but in every such case his consciousness will be enriched with so much new material.

10. But what of instincts in the case of a mature person? Has he not already drained them of all the new experience they hold for him? And, as to impulses, if he be "well educated," as we say, he already takes pride in the fact that he no longer acts on impulse. So this great source of new conscious experience is closed to him. The reader is asked to outline an ideal case of open-mindedness suitable for a mature person, such that will allow for the maximum power of growth.

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## CHAPTER XI.

### VOLITION.

Why can't one always do just what his judgment tells him is best? A student was overheard saying to a friend, "I ought to stay at home and study my lessons to-night, but if you are going to the theatre I will go with you." Another person says, "I ought to quit this work and take a month's rest and recuperation, but somehow I can't persuade myself to do it." Still another reasons with himself this way, "I ought to go out this evening and call on my sick friend A, but the weather is so cold and it is so dark." The penitent thief declares, "I am going to brace up and be a man, and have stolen for the last time," but likely he is in the toils a month later for the same old crime.

The voluntary act is purposive. It has in view a more or less remote end, and usually the means to the attainment of this end are somewhat clearly in mind. There are, roughly speaking, two general classes of voluntary acts: those that result from deliberation, and those that require none.

**Two Classes of Volitional Acts.**—My fountain pen runs dry. Immediately I seize the ink-bottle and the dropper and refill it. At another time the room is discovered to be uncomfortably cold. Without any thought of deliberation I go below at once and heave some coal into the furnace. While in my office at the college, the bell signals the recitation period. Unhesitatingly I put away my other work and appear before the class, ready for business.

A little reflection reveals the fact that much of my time is taken up by just this kind of activity. The act is no sooner thought of than its performance begins. The majority of such acts, however, are of a routine nature, and they have no very apparent alternative, under the given circumstances.

Further reflection shows me that many of my acts, especially those which have more remote and more important consequences, are performed only after hesitation and deliberation. What kind of coal shall I stow away in my furnace-room for the winter's supply? Will it be advisable to build an addition to my house in the spring? How shall I spend the coming summer—in the mountains, or at the seaside, or at home in an effort to save a little money, and perhaps to make a little more "on the side"? These are examples of questions that require deliberation as a preparation for action.

**Past Experience and Volition.**—One can't will a new act. All the determination I could possibly muster would not enable me to play even a simple tune on the violin. I have never learned to play that instrument. Select some man of mighty courage and will-power and set him astride a bicycle for the first time. The probability is that there will be a crash before he has ridden ten yards, in spite of his strong determination. He lacks one thing—past experience.

Set a little creeping child down in the middle of the room, and the chances are that, before you can turn around, he will be in the coal-scuttle begriming himself with the coal-dust. How did he do it? The simple sight of that coal-scuttle brought back memory images of the fun he had there on a previous occasion—possibly he stumbled upon

the thing by accident, the first time—and now the situation looks good to him, so he takes a "bee line" for the bucket. Tell the same child to stand or walk, and, although old and strong enough, he dosen't obey, not knowing how. He can't form an idea of the sensible effects of walking, of how it *feels* to execute the necessary movements.

**How the Image Aids.**—It becomes evident, then, that before one performs any act he must first in some way image himself in its performance. I decide to go down and throw some coal into the furnace. Quick as a flash, I have a visual image of the way down, the furnace-doors opening, the coal-heap, and muscular and tactual images of myself in the act of seizing the shovel, heaving the coal, closing the furnace-doors, and the like. There are also possibly auditory images of the coal rattling under the shovel, the furnace-door slamming, etc. Now, this rapid imaging together with the fact that there are no other images just then standing in the way, and possibly the further fact that my first thought of the act was that it was necessary,—these seem to be the only preconditions of the performance of the act.

Thus one projects himself into the future by means of imagination, before he carries out any voluntary act. The thing must be done in thought before being done in deed, calling upon memory; the performer then images as nearly as possible what is to happen, and rushes forward. The performance of the act itself likely brings out many experiences that were not in the image; that is, the environment may give him many impressions that are actually new, but these will become available in imaging other acts in the future. Consciousness in form of memory and imagination has been that much enriched.

**Muscular Control.**—All ideas are motor in tendency, but there are many reasons why a definite movement of the body does not always take place after the idea of acting enters the mind. For instance, there may be in the mind during a minute's time a score of ideas presenting many conflicts in tendency to act, and then, the question of muscular control is an important one. This does not prove to be so simple a matter as one would at first expect to find it; for it is necessary, while causing certain muscles to act, to keep certain others from acting. Let us take an example.

Observe a little boy in the act of learning to write with a pen, and this matter will be illustrated. He grasps the penholder too tightly, stiffens his arm, contorts his face, and runs his tongue out,—thus bringing into use many muscles that ought to be in a state of relaxation. The action of these he must learn to inhibit, that is, prevent. Gradually, as the lessons proceed, the boy's tongue ceases to wag, his face to contort, and the other unnecessary muscles to act. The task of writing is then easier and much less fatiguing. The case of an adult learning bicycle-riding is another good illustration of education in motor control. The learner strains a great many muscles unnecessarily, while those that aid him in balancing and guiding the machine are perhaps inactive. At the end of a half-hour he is quite bruised and worn out—more fatigued than a day's riding would make the expert. After every effort, however, the weary victim is able to image the adjustments and movements in a clearer form than ever, until finally he can initiate action in the muscles actually needed for the work and inhibit the action of others that would interfere.

**Effort Pleasurable.**—Fortunately, especially in case

of the child, this struggling over unfamiliar ground (for instance, in learning to walk) is pleasurable. It furnishes an outlet for his buoyant nervous energies, and thus gives him that perseverance which finally brings success. These instances of the child learning to walk, the boy learning to write, and the man learning to ride a bicycle, are all alike in principle. They represent efforts to define experience more accurately by means of selecting out of the mass of feeling-images only those that rightfully belong to and precede the perfected act. In other words, the special task is to secure the necessary inhibitions and to set up the proper coördinations of mind-act and body-act for any given accomplishment.

**Mental Control.**—It has now become apparent that, so far as this discussion has gone, motor and mental control are the two aspects of the same coördination, for to gain control of the muscles necessary for any act is to secure the images—visual, tactual, etc.,—that must precede that act. But the whole subject of volition becomes more complex as we proceed. To act in a simple manner, when there is no serious obstacle in the way, is easy and natural. What shall we do, however, when two or more modes of action are strongly suggested to us at the same time?

**Deliberation.**—In such situations as that last stated above, deliberation is necessary for wise and prudent conduct. To choose wisely among alternatives is a sort of art in itself. To decide too quickly may mean error and final dissatisfaction with the choice. To deliberate too long may mean loss of ability to act at all. Of the two extremes, I consider the former the more desirable, for it is more easily corrected, if it becomes habitual.

Undue haste in decision is usually characteristic of im-

mature minds, and sometimes its consequences are very serious. Witness, for instance, the number of human lives that are wrecked as a result of lack of proper deliberation in choosing a life vocation, or a life partner. Only yesterday a youth of nineteen years, a freshman student, came and revealed to me his plans for the future. This is to be his last term in college. He is "getting too old" to stay in school. Has prospect of a position at $40 per month, which now looks big to him, as he has never before earned such a salary. There is a girl in the case. They will marry and settle down, and, let us hope, make a success of life.

**Value of Slow Development.**—Three and a half years hence, this young man's classmate, possessing a better, maturer judgment, will go forth with his diploma and a character so broadened and rounded out by education and experience that he will have a ten-to-one advantage over the other in at least two important respects: (1) In opportunities for more lucrative employment, and (2) in point of equipment for becoming a more useful citizen in any community and for getting out of life those higher values that are likely to be secured only by the educated.

The full bearing of deliberation upon volition cannot be made evident at this time. Its meaning will be brought out more clearly further on.

**Organic Obstacles to Volition.**—Man is a creature of appetites and desires. He is forever craving something to satisfy his temporal wants. His natural cravings for food and drink are alone strong enough to make him a creature of caprice. His moods and sentiments vary in proportion as these bodily needs are supplied. Mr. A. hungry and Mr. A. full-fed may be as divergent in character as

the celebrated Dr. Jekyll and Mr. Hyde. A deliberated act well-nigh impossible under the first condition may become easy of performance under the second. The lower animal instincts and impulses become dominant in the hungry man. His higher, more spiritual nature becomes self-assertive after he has eaten to the point of moderate satiety.

Fortunate indeed it would be if these natural cravings of hunger and thirst were the most serious ones that man has to deal with. But they are not. He is capable of acquiring a whole series of abnormal appetites that are many times more acute in their cravings than the natural ones. Here is where the human being, above all other living creatures, gets into trouble with himself when he attempts to realize his ideals of conduct. But let one of these abnormal appetites develop into a thoroughgoing habit and its power to preserve and assert itself may be the means of breaking the strongest resolution that its victim is capable of forming.

**An Example.**—As an illustration of this abnormality let us consider the use of tobacco, which has the peculiar effect of soothing the nerves and inducing sleep. The habitual smoker finds it practically impossible to perform his ordinary duties satisfactorily if the indulgence is suddenly cut off. He is likely to be nervous or flighty, or stupid, and, withal, uncertain in his conduct. Through the bodily pains and dire distress of mind thus brought on, the habit calls vehemently and uninterruptedly for its continuance. It forces itself upon the attention of its victim to the exclusion of his higher interests and thereby secures its own reinstatement.

The example given above is typical of the experience of a large class of smokers, if their own testimonies can be accepted for anything. Three days ago a young sophomore student related to me his own case in almost exactly these same terms. He smokes a pipe six or eight times each day, and it is telling upon his physical health and mental ability. Like many young men of his class, he finds himself growing weaker in ability to stick to his purposes, and especially to get clear conceptions of his subjects of study, on account of despondency and mind-wandering. But a week's trial at swearing off "convinced him that such a course made matters ten times worse," for he then could neither sleep nor study.

**Attention and Volition.**—It now becomes evident that volition is largely a question of attention. *That which can command and hold the attention most persistently determines conduct.* Now, action is in all cases equal to reaction. If a certain monstrous appetite or craving has gained exclusive possession of the attention, it can only be fought off satisfactorily by turning the attention *passionately* to some desirable mode of conduct that will effectually inhibit the undesirable act. This effort, if successful, is often a most desperate one.

**Interest and Attention.**—It is a mistake to think that attention can be given to any matter or can be developed in any subject simply by means of some kind of strain of mind or body. It cannot be forced, as some teachers seem to believe. I may hold a rod over the head of a schoolboy and threaten him with severe punishment if he does not give attention to the lesson forthwith, and by this means cause him to stare vacantly at a printed page. This process, however, in no way aids him in giving attention.

Attention simply *can't* be *given*. It must be *drawn out* by something that is changing. There must be something *doing*. The object of attention must present some familiar and interesting phases before it can possibly be attended to.

Let one stare for a few moments, fixedly, at a changeless object, and he will either go to sleep or become hypnotized. Many tests have proven this to be true. It is estimated by the best authorities that no one can attend longer than a very few seconds at an object that presents absolutely no change in aspect. It might be added that unbroken, effective attention can be expected only when the observer finds something that is interesting to him in the object observed. In every such case the act of attending is free and easy. Now, if we are going to argue that volition is largely a question of giving attention (as many writers do), and that attention depends upon interest, we had better go straight to the root of the matter at once and ask ourselves:

**What is Interest?**—What is its essence? How can it be induced? Watch a little child playing with a rattle, and note that his attention is absorbed in the act. This activity *appeals* to him, because it gives an outlet to his buoyant energy, and because it ever gives *wider and more definite meaning to his experience.* It would be useless to try to interest such a child by reading to him from a Latin classic, and yet this is only a slight exaggeration of what the old-style instructor tried to do. Interest is said to be (1) native, that is, the object makes a direct appeal to the observer in terms of present experience, as in the case of the child referred to above; and (2) borrowed, in which case the object makes its appeal by reinterpreting past experience, or in terms of imagined future experience.

The inefficiency of the uneducated man in the matter of volition now becomes explainable. He is short on borrowed interest. That is, the objects and conditions in his environment do not have enough vital, interrupting relations to his past or possible future to interest him deeply and widely. He therefore cannot attend closely to them, not having learned how, and consequently he cannot embody these things in his volitional acts. We call him weak-willed.

**Training and Volition.**—It is possible that one's conduct may always be above criticism in a moral sense, and yet that he may be weak in volition. Such a person might simply have been trained dogmatically to respond in a fixed manner in reference to the temptations that came into his early life till his character became thoroughly set. It is perfectly obvious that such a character might be very narrow and practically incapable of responding in new ways. Such a man would say: "My father always taught me to keep my mouth shut whenever anyone spoke ill to me, and so I do it."

**Two Classic Views.**—There are two celebrated views of volition, which are almost directly opposed to each other. Socrates, the Greek philosopher, said, in substance, that doing what we ought consisted in *insight; i. e.*, in knowing what ought to be done in any given case. Rousseau, the French reformer, on the contrary, said that he knew the right but always did the opposite; he was good in theory but evil in his practices. The Socratic "insight," expanded a little, could be made to conform to the theory of volition as a result of attention which has been made possible through interest borrowed from personal experience, as we suggested above. The only way to account for the character of Rousseau is to say that during

the early years of his life he became thoroughly habituated in *not* responding to the suggestion of a moral act.

**Volition and Reform.**—We now see the situation in which this discussion places the self-reformer. He is habituated to certain objectionable forms of conduct, and his problem is solely that of directing his attention into new and better channels so that the old type of thought will be counteracted by the new. Some opposing thought that appeals to him through emotional interest is the only thing that will do the work. One great trouble with the weak-willed man is, that he cannot image himself persistently in enough new and interesting situations. He is practically incapable of getting a new view of himself unless some outside assistance is offered.

Jean Valjean, the criminal, had been imaging himself in criminal attitudes and acts so long that any such thing as a wholesome, uplifting thought was, to him, out of the question. So it came as a nervous shock and as a unique self-revelation to him when the good Bishop said, "Jean Valjean, you belong no longer unto evil but unto good! I have bought your soul to-day and given it unto the good!" This is the only true principle of reform. The reformer's *attention* must be called out habitually to a better and more inspiring image of himself.

**Will as Character.**—The ideal condition as regards volition is not that of being able merely to respond in a relatively fixed set of ways under varying conditions. It consists more particularly in being able to see the correct meaning and implication of every situation in which one's experience may place him, and in being able to act in the highest manner suggested by this situation. Every object of thought has its interesting side if one can only find it,

and he who can deliberate longest and most thoroughly is the one most likely to make this discovery. He is rich in thought resources.

Successful volition is its own reward. There is pleasurable sense of power from within in store for him who can make every trying situation contribute to his higher character-development and thus realize his ideals. For him, there is a zest in every new experience, and life is a joy unto him forever.

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## QUESTIONS.

1. What is meant by "breaking the will" of a child? Is stubbornness synonymous with will power?

2. Inquire definitely into the character of a reputed, weak-willed man. Note the specific acts that manifest this weakness.

3. Observe a reputed, strong-willed man similarly. Which of the two seems to put forth the greater amount of effort to accomplish his aims?

4. Some children while at play rush headlong into situations that often prove painful. Others show an opposite tendency to hang back or to proceed with extreme caution. How develop will power in each case?

5. Suppose the case of an educated inebriate who turned reformer at 35 and afterwards gained wide distinction as a temperance lecturer and platform orator, but who "backslid" at 49 and died a drunkard. What lessons would you draw from his life in reference to volitional training?

6. How much to help a child in order to give him encouragement, and how much to hinder him in order to aid his persistence, is always a complex problem. The over-

aided child may become weak and dependent and the under-aided one may lack in courage and enthusiasm. Just what is the happy mean?

7. In a preceding chapter it was urged that volition is aided by emotion, but that was said in reference to cases of attempted reform. If one be trained carefully until his habits become synonymous with his duties is there any place left for volitional effort? If you take all the struggle and heroic effort out of a life, is it not already retrograding?

8. Experience and observation have shown that it is impossible to reduce a good, efficient life to easy-going routine. The world of affairs is so complex that new and trying situations must be met by the wide-awake person practically every day. The problem, then, is rightly to proportion life's activities between the old and the new so that habit may retain its necessary force, and effort its maximum vigor.

9. It is interesting to observe how differently people proceed in making a decision. Some will decide quickly and remain satisfied with their choice; others are extremely deliberative in the matter, and are likely never afterwards certain that they have decided right. Stand aside in a large general store and observe customers in the act of "making up their minds" what style or pattern of an article to buy. Does not long hesitancy here indicate a type of indecision that will make one easily dissatisfied with the object after he has secured it?

10. The day of the pioneer is fast passing in this country. The people are being crowded and jostled together more and more. We are coming to know too many people intimately. Can we expect the one who has grown up in the densely populated centers to view life as other than a

common-place affair? Is this not conducive to a blasé, listless disposition and to a career lacking in strong, volitional effort or heroism?

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## CHAPTER XII.

### SOME NOTES ON SUGGESTION.

A personal account of the way in which the average individual strives to direct his own thought processes would be exceedingly interesting. While it is true that there are many who give little or no effort toward directing the trend of their thoughts, giving themselves up wholly to chance association, there are others whose career in a social, moral or business way can be traced more or less directly to autosuggestion as a factor. It is recognized as a good maxim that "As a man thinketh, so is he." That is to say, one's conduct is a direct expression of his dominant thought. He lives out in mental pictures his characteristic acts before they are performed. But whence come these mental pictures? Are they forced upon us, or do we create them at will? Or, is a compromise between these two contraries nearer the truth? And, if the latter view is the correct one, what can be done to increase the ability to create mental images at will, and thereby direct one's own thought processes and form one's own character?

**The Power of Ideas.**—This really becomes a question of the persuasive power of ideals, and by such is the progress of the world greatly hastened. But perhaps the term suggestion had better be limited to apply to cases in which the one influenced is constrained to take an unusual and unexpected course. When Peter the Hermit

preached the first crusade, declaring "God wills it" in such a forceful manner, his words seemed to have a well-nigh hypnotic effect upon his hearers. The world knows the result. When the doughty Napoleon massed his men for battle under the shadow of the great pyramids and exclaimed to them, "Soldiers! forty centuries look down upon you today," the valor of those battle-scarred heroes was rekindled as if by magic. When General Phil Sheridan dashed in among his retreating troops at Winchester, crying, "Come on, boys; we're going back!" the latter, without knowing why, suddenly exchanged their idea of defeat for one of victory.

**The Crowd.**—The mind of the crowd is different from that of the individual, in that it shows the effect of contagion. The opinion of the individual is temporarily swept away by the force of the unified sentiment of the crowd with which he is acting. The crowd is quick to act upon forceful suggestion. The war-cry, or the watch-word, must be simple, and capable of easy translation into concrete mental images, and the action will be performed with little or no reasoning. Thus, such expressions as, "On to victory!" and "Stand up for the party!" have done wonders in unifying the action of the masses. This is a form of hypnotic suggestion, pure and simple. The ideal condition for mob action is one in which the individuals are not reflecting upon the question at issue. Then let there be presented to their minds with force and suddenness a situation that calls for the execution of a quick vengeance, or speedy relief of some kind. Under such force of circumstances, sober men are often afterwards amazed at their own conduct.

The leader of a mob needs to be a person of a positive,

enthusiastic character, who has a personality somewhat striking, and a good, strong voice; and who can call out some sharp but simple suggestion that will temporarily take possession of the minds of the crowd and incite to unity of action. These suggestions must point to some kind of conduct that can be easily imagined and easily and quickly carried out. The effect, under such circumstances, is often little less than magical.

It is also easily shown that some individuals acting alone are easily moved by hypnotic suggestion. A strong, forceful statement of personal application is made, crowding out of the consciousness of the susceptible person the old image, and creating a new one. As a result, the conduct of such a person is at least temporarily changed. When the priest said to Jean Valjean, "You belong no longer unto evil, but unto good! I have bought your soul today and given it unto the good!" the latter's whole character was transformed. He became a new man. The effectiveness of this method of reforming evil-doers, especially those whose characters are yet in the formative period, is unquestioned.

**Autosuggestion.**—It can be shown also that there is power and efficiency in autosuggestion. The one who is a positive force in the world carries constantly in mind strong suggestions of personal worth. They may never be uttered in words, but the thought is ever present although the person may never have become aware of this fact. Moreover, conscious effort in this direction is also possible and helpful. The one who lacks self-confidence and decision will be helped by making to himself strong affirmations of courage and steadfastness. The one who is nervous and excitable should speak to himself in quiet,

soothing sentences; and the person of sluggish temperament, in such a way as to accelerate his movements. In corroboration, here recall the strong, positive affirmation of the great emperor, Julius Cæsar, "I am fixed as the northern star!" and of the great reformer, Martin Luther, "Here I stand! God being my witness, I cannot do otherwise!" and of the great evangelist, Dwight L. Moody, "I simply take God at his word!" and of the great Saviour of men, Jesus Christ, "I and my Father are one."

It behooves every one who is interested in self-culture to inquire into his own case with reference to autosuggestion, with a view to strengthening his personal character, both by supplying positive aids and by removing possible hindrances.

The self develops in accordance with the nature of the mental food. The man whose mind is centered upon some high ideal draws upon all the available sources of supply for the means of his development. His power is cumulative. He is magnetic. Everything that he touches in his environment adds to his own strength and in turn receives an influx of spiritual light from him. It will be found that in working out his ideal he either intentionally or inadvertently "suggests" to himself in strong, clear statements of personal advantage. In proportion as he does this the ideas that retard and hinder progress will drop out of mind and their evil effects be no longer seen. Herein lies the secret of progress and of power, for the one who has learned to control the factors that enter into his mind unfoldment has found the key to success. All things are at his command.

**An Interesting Experiment.**—Dr. Bernheim, the eminent French expert on hypnotism, and professor in the

University of Nancy, has recently published the results of some valuable experiments in the use of suggestion. He explains how suggestion may be shown to act upon functions independent of consciousness and will, as follows:

"I register the pulse of a subject taken with a Marey spygmograph; at the same time I register the time with a seconds pendulum. I count the pulse out loud, but after a little time I count more pulsations than there really are; for instance, 120 instead of 60. I thus apparently record an acceleration during a certain time. I then find by examining the record that the pulse has really beaten faster by an average of 9 to 10 pulsations per minute, while I have been counting faster, and has returned to its normal figure when I stopped counting.

"In the following form the experiment may be made by anyone on himself. The experimenter walks at an ordinary pace. At a given moment he counts quickly while continuing to walk. The pace quickens automatically and instinctively, following the accelerated rhythm of the count without any intervention of the mind or the will, in accordance with the law of ideo-dynamism that I have formulated and that constitutes the mechanism of suggestion.

"This experiment with the heart shows that the idea governs not only the voluntary life, the life of relation, but also the unconscious and automatic life,—a fact important from the standpoint of therapeutics."*

**Suggestion in Disease.**—It is now pretty generally conceded that mind processes always register their effects upon the body. By means of delicately constructed in-

* From the Literary Digest, Vol. XXX, No. 16.

struments, it is possible to measure many of these effects. Much attention is also being given to the various aspects of mental pathology and therapeutics by some of the leading physicians. Quite a number of the latter are resorting to suggestion as a form of treatment for certain nervous and functional diseases, and with some show of success, too.

In order to make a somewhat careful study of the influence of suggestion as received from the printed page, and from lectures, the author sent printed inquiries to the deans of fifty of the leading medical colleges in the United States. Twenty-four replies were received. The questions, together with a summary of the answers, are given below.

I. *What per cent. of your medical students (estimated) feel decided symptoms of the disease studied early in the course?*

Not all of those replying to the general inquiry made direct answer to this question; but those who did estimated variously from two to one hundred per cent., the average being thirty-three per cent. One very thoughtful physician answered as follows: "Practically none, for the reasons that (1) Medical students are of more than average intelligence. (2) They do not study diseases during the first year, and when they do they have acquired some measure of a feeling of superiority to most forms of disease. (3) They believe that to a doctor, disease in himself is a stigma—a reflection on his knowledge.

II. *Is this effect most noticeable in the case of any special disease?*

Nearly all of those replying to this question gave diseases of the heart, kidneys and nervous system as being most common. One mentioned appendicitis.

III. *Do these cases yield readily to treatment?*

Some of the characteristic replies: "Yes, by suggestion," "Moral support cures," "Usually relieved, as soon as competent authority decides," "Hypnotic suggestion relieves them."

IV. *It is held by some that patent-medicine advertisements are vicious, tending to induce the diseases they are designed to cure. What is your opinion of this matter?*

This question brought out the most interesting replies of all. Some of them follow: "People get the diseases by studying the advertisements." "They frighten people into the notion that they have all sorts of diseases." "They cause much damage to health and happiness." "Descriptions of disease are always harmful to those who do not understand normal conditions."

One member of a medical college faculty, who is now a well-known surgeon in the United States army, wrote: "The patent-medicine advertisement is written by an expert, who studies the weakness of humanity and skillfully plays upon it. The credulous or unreasoning victim reads over the symptons, finding that he really has some of them, and imagining that he has others. Persuaded by a long list of testimonials, he buys and takes one, two or a dozen bottles. Sooner or later he loses faith in the nostrum, but by that time an even more convincing advertisement appears, and another cure is tried. The writer is personally acquainted with people who have taken nearly every patent preparation that is for sale."

The dean of a Southern medical college said: "A theological graduate consulted me concerning a supposed kidney disease. He got the idea that he was afflicted by reading the —— Medical Adviser. He was a perfectly well

man. This is but one of the innumerable cases that every physician meets with." Another says: "A man came into my office recently all doubled up with pain. Pointing to an illustrated advertisement in a paper which he carried, he showed me an exact description of his disease. It was very hard for me to convince him that there was nothing the matter with him, but such was the case."

**Victims of a Delusion.**—The dupes of the patent-medicine advertisement of to-day are innumerable. The author has investigated this matter for some years, having interviewed scores of people on the subject. Many druggists have told him that it is the advertising alone that sells the preparation. Quality has little or nothing to do with the case. A harmless mixture of grape-juice and molasses will find a ready market if properly advertised. Millions are spent every year in getting this business before the public. Before me lies a full page of a daily paper containing the picture and testimonials of forty-two "prominent society women who have been cured." The pictures of many governors, congressmen, and other high officials adorn another page. Another likeness shows the victim writhing in all the agonies of the disease. It seems so real that one can almost hear him groan. People are hypnotized by these pictures and descriptions. The typical advertisement reads about as follows:

"Are you cross and irritable, and conscious of pains in the back and loins at night? Do you have that tired feeling and a bad taste in your mouth in the morning? If so, your system is all run down and you are threatened with appendigripus. A bottle or two of Uneeda-ba-la-hay will cure you. *But there is danger in delay.*"

Many good authorities believe that all descriptions of

disease in ordinary periodicals are detrimental to the public welfare, and that as such they should be prohibited by law. Until such prohibition can be brought about, all who in any way have charge of the education of the young should forewarn them against any possible deception of this nature.*

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## QUESTIONS.

1. Find out to what extent you are subject to suggestion.

2. May we regard every effective perception as being in some measure a suggestion?

3. Can you find examples of adverse natures with whom suggestions work negatively?

4. Much is being said and written of late concerning "suggestive therapeutics." Have you witnessed a fair test of this theory?

5. A youth is observed trying persistently to maintain a reputation for goodness or some other virtue. Would you call this suggestion?

6. In what specific way does the suggestion just mentioned operate? Does the boy hear "voices" commanding him, and also see, in imagination, persons in the attitude of approbation?

7. What is auto-suggestion? Is it not often simply a process whereby one "works himself up" to the point of courage to execute some ideal purpose? What use do you make of this practice?

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* Since this text was written, *Collier's Weekly* and *The Ladies' Home Journal* have raised a vigorous protest against the vendors of these patent medicines.

8. Examine the advertisements in a first-class magazine and discover, if possible, the art whereby they are made to "talk" to people through the imagination. The mere expression "It floats" has influenced thousands.

9. Make careful inquiry regarding the initiation of a new style of dress in Paris. You will not be consulted as to the particular pattern of your clothes for the next season. Must you not submit to this imposition or lose your standing in society?

10. Finally, study hypnotism—an exaggerated form of suggestion—cautiously. Many persons are likely under hypnotic influences without being aware of the fact. Hypnotism in public performances is forbidden by law in many States. Even physicians are not at all in agreement as to its meaning and value.

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## CHAPTER XIII.

### PSYCHOLOGY OF STUDY.

The normal, healthy mind craves experience, and will have it in some form or other. But there is a problem as to the way in which mental activities are to go on. Are they logically related, purposive and persistent? If not, can they be made so? That is, can the method of applying the mind be so improved that it will do more work in a given amount of time and do it better and more easily? A discussion of these questions will, incidentally, lead to a further treatment of the subject of volition. The interest here, however, will have reference to one special aim.

**Physical Conditions.**—For advantageous study, certain conditions of health and environment are presupposed. The thoughtful student will look diligently after these, for they are important mechanical means to efficient mental work.

The first of these is a detailed care of the body. Acuteness of mind varies with the health and vigor of the body. The one who abuses his health wantonly, thereby lowers his self-respect and dulls his sensibilities. Eating to the point of sluggishness, and at irregular hours; denying oneself the recuperation that comes from a good night's rest and a little daily outdoor exercise; the indulgence in stimulants and narcotics,—these would be illustrations in point here. The student who takes a rational care of his health is likely the one who can most successfully convert the starches, carbons, phosphates, etc., into mind-product.

The temperature and ventilation of the study-room are important matters. There should be a thermometer at hand to determine the former, and comparative evenness should be the rule, with the mercury at about 68 or 70 degrees. The ventilation of students' rooms is notoriously bad. Some are never known to open a window during an entire winter. A dull, cadaverous appearance and debilitated health are the sure result. The blood does not, under such conditions, receive enough oxygen to support physical and mental vigor. It is well to keep one window slightly lowered at the top at all times, if the room is a tight one.

**A Good Environment.**—Orderliness and quiet surroundings are also conducive to good mental work. The younger student is often too easily satisfied in these matters. If the room does not have in it some suggestion of taste and refinement, it ought to be rejected. A dingy, disorderly study-room begets uneasiness and despondency, and it may often be held partially accountable for dissipation and recklessness. An additional dollar per month will often secure the more desirable lodging-place. In every college town there are always a few lodging-places that are given over to rowdyism. The thoughtful student will shun such places as dangerous to mental and moral well-doing.

It may seem wholly foreign to the subject under discussion to speak of boarding-houses here, yet it can certainly be shown that even this matter, if rightly looked after, will contribute to the mental improvement. A boarding-table where refined conversation and courteous manners are the rule is much to be desired, even if one considers only the mental tonic that is furnishes. In a co-

educational school there ought to be a mingling of the sexes in the dining-hall. It is often very trying to the backward, awkward young man to be compelled to sit at table with refined and cultured young women, but for the sharpening of his wits and the development of his "nerve" such practice is highly recommended.

**As to Callers.**—If a man steals fifty dollars of my money, he may be apprehended and punished by the law; but if he deliberately robs me of fifty minutes of my time, I have no recourse other than to suffer the loss good-naturedly if the pilferer is to be counted among my friends. But is this the right view to take of this matter? Certainly not! The loafer is always at hand to impose his presence upon those students who are willing to indulge him in his habit. But such indulgence is a real mark of weakness on the part of any student. No self-respecting student will permit his daily routine of work to be broken up in any such way

If the professional loafer comes, let the diligent student first resort to gentle, tactful means to dislodge him. Keep the book in hand and frown on him and "freeze" him till he goes. If this milder method fails to work, as it will in some cases, then express yourself positively in something like this manner to Mr. Loafer: "Please excuse me, my friend, but I am simply overwhelmed with work and can't spare the time to visit. Come in sometime when I am at leisure." Remember, however, the loafer's victim is partly to blame for having permitted the visits to begin.

**How Take Up the Work.**—There has certainly been enough written on the subject of habit to sustain the proposition that a regular method of study is advantageous. Every thoughtful student will plan his work systemati-

cally. He will likely find that at a certain hour in the day his mind is clearest and most vigorous. Accordingly, he will attack the most difficult and abstruse subject at this hour. The order of taking up the subjects ought also to be such that the mind will have a frequent change of kind of application. For instance, after an hour's exercise in logical reasoning, the mind might find a period of pleasing diversion in some study that would call out æsthetic appreciation.

**Use of Dictionary.**—The dictionary habit is one that is acquired by only a few of the best students, and it is a valuable one if not carried to excess. The great majority of the words in one's vocabulary are learned without the use of the dictionary, but the meaning of words infrequently used must be obtained from this reference volume.

**The Masterly Method.**—One will be pardoned for reminding the student again of the necessity of trying to get the general point of view of every connected treatment, and the special thesis of every chapter. This might be called the masterly method, as it gives the student a firmer grasp of the subject, makes it easier for him to retain and relate what he learns, and imbues him with that exhilarating sense of power which is so helpful in the further application of his mind.

As a matter of fact, if the student is rightly adjusted to his work, every subject studied ought to impart to him a pleasurable thrill of satisfaction by virtue of its supplying a felt want. If this form of personal contact between student and subject-matter can be brought about, the question of attention will solve itself. It is not necessary to urge the hungry youth to pay attention to his eating.

**The Right Point of View.**—The reflective student is likely to ask himself frequently the question, What is worth while? What value has this or that subject for me? In answering such questions the average student (and many teachers) is prone to commit a serious error, viz., that of viewing the subject in too practical a sense. "Why should I study algebra, anyway?" he asks; "I never expect to use it." But this statement implies an improper view of what education *means*. It is not a process of storing away and pigeonholing a set of facts and figures for ready reference in the future. This is a mere incident in the real process. The rational view regards education as a process of acquiring mental power and efficiency.

"Knowledge is power," says an old adage. It is power of doing work. If this is true, the student can no longer rightfully say that algebra is impractical, since a knowledge of it certainly increases his power to think and to act. This same erroneous view of the meaning of a general subject of study, this "storehouse" view, is pretty likely to regard merely getting answers to problems as the goal of mathematical study, Such an attitude tends to stunt the growth of the intellect and to reduce all mental work to drudgery.

**Working for Mere Answers.**—What a dull, prosaic world this would be indeed if one should regard life as a process of merely arriving at answers or conclusions which are already foreknown! What if you knew just what is to happen in your life at this time tomorrow, or next week, or next month, or next year? No, answers are not satisfying in and of themselves, or serviceable in any other sense than that they may be used in getting at the next problem.

And it is not the event in your life that you foreknow exactly and await expectantly, but it is the problematic —the answer that is going to depend for its form wholly on your efforts—that interests you most and gives you courage to struggle on. One of the chief values of this point of view is the fact that a *wrong* answer is often as serviceable as a correct one. The failures themselves hereby become serviceable and no serious, honest effort is lost;

> "For men may rise on stepping-stones
> Of their dead selves to higher things."

I dwell at length on this subject only that the student may realize, if possible, the meaning of this *teleological* point of view.

**Studying to Learn.**—This discussion ought to make clear my next point, which is this: Don't prepare a lesson merely to recite it; try to *master* it for yourself. Don't keep asking yourself, Can I tell this in class tomorrow and receive a good grade on it? Ask yourself, rather, What meaning that is vital to *me* does this subject-matter contain? The recitation will then take care of itself, and you will be less nervous in performing your part of it. Every member of the class ought to try to take some part in every recitation, for in this way one's interest in a subject is deepened and he is inspired to further study.

**A Higher Standard of Student Work.**—A little careful investigation will convince one that there is often a wide variation in the standard of work done by schools that are nominally of the same grade. It is my opinion, moreover, that an instructor cannot reasonably expect first-class results from the recitation until the students under his tuition come to regard their work of preparation as serious business. Not that I would make the life of

the average college student more sober and sedate. He must have time for amusements and other forms of recreation, but these diversions ought not to encroach upon the time set apart for study and sleep.

With a view to aiding the student, if possible, in a more systematic and effective method of study, the writer of these lines prepared "Ten Commandments," and had them printed in attractive form on heavy cardboard suitable for hanging in the study-room. These were, during the period of two lecture courses, distributed among nearly 1000 freshmen students. At the top of the card in large type were the words:

HOW TO STUDY.

**1. Have a Program.**—The student who follows the same program of study and work every day thereby calls to his assistance a powerful agency, viz., habit. It is this way: For instance, if you study algebra every day from 2 to 3 P. M. you will soon find the mind better prepared to master algebra at that hour than at any other. Try it!

**2. Have a Method.**—Every paragraph you read has, or ought to have, a central or specific idea. *Find this point and note it carefully.* Before beginning the day's duties, have in mind an ideal standard of excellence, and then strive to reach it. In this way one accumulates mental power, generates his own enthusiasm, and contributes directly to the building of his own character.

**3. Train Your Attention.**—Positively refuse to permit your attention to be drawn away from the task it is engaged upon. Herein lies the secret of power, and of much so-called genius. If the mind wanders, bring it back to the point and hold it there persistently. See that your efforts in this respect are not hindered by sluggishness resulting from insufficient sleep or improper ventilation.

**4. Test Your Strength.**—One of the best tests of mind concentration comes during an effort to study in the library. About half of those who pretend to study there waste their time in the childish habit of gazing at those who are moving about the room. If you can't possibly resist the temptation to stare at others, close the book

and feast your eyes for a few minutes, then study diligently for a while; but don't try to do both at once.

**5. Be Orderly and Systematic.**—Good order and system about the study-room are aids to scholarly work, while disorderliness and untidiness are indicative of incoherent thinking. Moreover, these bad qualities, if allowed to continue, will become a menace to your own success later in life and a great annoyance to some one who will have to live with you. Motto: A place for everything and everything in its place.

**6. Be Punctual.**—Tardiness and irregularity in attendance to duty are two bad habits that may be easily broken if the matter is undertaken in time; but, if permitted to go on unchecked, they are sure to bring about loss of interest, and discouragement. To meet all of one's appointments promptly is an evidence of stability of character, and a good indication of worthy attainment.

**7. Take Exercise.**—To deny yourself time and recreation is to dull and enfeeble the intellect. When sluggish, a brisk five-minute walk may be the means of filling the lungs with fresh air and of accelerating the circulation. This will give increased brain power and clearer thinking. And then, don't neglect to take regularly seven or eight hours of unbroken sleep.

**8. Be Cordial.**—On the proper occasion, always greet others with good cheer and cordiality. Such conduct puts a warm glow into the heart and begets a buoyancy of spirit that tends to refresh and clarify the mind for the work that is before it. The best students are usually active in some form of college society. Loafing, however, is abominable.

**9. Cultivate Pure-Mindedness.**—There is so much that is inspiring and ennobling to think about. Therefore discard at once and forever every unworthy and debasing thought. Plain, simple living, high thinking, and spirituality make up a trio of real virtues, each of which aids the others. Even ten minutes given to some form of soul culture before retiring every night will, in time, bring noticeable results in spiritual growth.

**10. Remember**—Real geniuses are pretty scarce. Perhaps you may never become one. But you can become a member of the great class of faithful, diligent *workers*, and they are the people who are moving the world to-day. Nearly all the students who fail in their classes do so on account of lack of diligence; very few from lack of ability. If you would master a subject easily, pay special attention to its fundamental principles given at the beginning of the term.

FACSIMILE OF PROGRAM TO BE FILLED OUT BY THE STUDENT.

| A. M. | P. M. |
|---|---|
| 6:00 to 7:00.....Study..... | Fifth Hour..... |
| 7:00 to 7:30.....Breakfast. | Sixth Hour..... |
| 7:30 to 8:15..... | 2:45 to 3:30.....Drill. |
| 8:15 to 8:30.....Chapel. | Seventh Hour..... |
| First Hour..... | Eighth Hour..... |
| Second Hour..... | 5:30 to 7:30.....Supper; recreation. |
| Third Hour..... | 7:00 to 8:00.....Study..... |
| Fourth Hour..... | 8:00 to 9:00.....Study..... |
| 11:50 to 1:00.....Dinner. | 9:00 to 10:00.....Study..... |
| | 10:00.....Retire. |

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## CHAPTER XIV.

### PSYCHOLOGY OF WORK.

Work is a virtue, idleness is a vice. Work, rightly carried on, brings happiness and contentment; idleness, prolonged, begets discontent and despondency. Fortunate indeed are the young man and the young woman just entering mature years and assuming the more serious responsibilities of life, if they have been trained to *work* from the time of childhood on. Every little child, even as young as four or five years, ought to be required to do some little task every day that he does not regard in the light of play. The simple task of bringing a book or a broom from another room would suffice.

**Early Perseverance.**—The lad that is expected to develop into a worker must be taught early to persevere. While he is arriving at the age of accountability such a lad needs a sympathetic person to manage him and direct his movements. A parent ought to be the most suitable person for this responsible position, but he needs as a preparation for the task, to add to his own character the entire catalogue of good graces,—patience, temperance, meekness, fatherly-kindness, charity, etc. A part of this oversight of the boy should consist in seeing that the latter actually accomplishes every day some real work that is suitable to his years.

In order that this growing lad may secure proper co-ordinations of hand and brain, he ought to have explained to him, as far as possible, the necessity and purpose of

the work being done. Many a lesson of manly courage may be inculcated at this time if the parent will only see that every failure or defeat is turned into a success or a victory. A superstitious belief among primitive men was that if you kill an enemy his strength is added to that of your own body. This might be modified to the effect that if one overcomes a real obstacle to success, so much courage is added to his mind.

**Overcoming.**—Those who make a profession of training bulldogs to fight are said to begin with the little puppies. Such a trainer first arouses the anger of his charge, then matches him with another of somewhat less fighting ability so that the victory may always be on the side of the former, and he therefore never knows defeat. Some such method must be pursued in training the boy to work. Give him much practice in *overcoming* the difficult situation. Half the problem of teaching the boy to work is solved just as soon as he can be made to believe and afterwards to *know* that he *can* accomplish any reasonable task.

**Work and Manly Courage.**—Not long ago a young man nineteen years of age came to my office for "pointers" on how to acquire courage. He was a six-footer, broad-shouldered and good-looking, but extremely timid, and went about habitually entertaining visions of some one rising up and smiting him in some literal or figurative manner. I felt of his right arm, and was not surprised to find it soft and flabby. This young man was told at once that the first step toward manly courage in his case was to develop the muscles by means of exercise, and that a buck-saw would be a very suitable implement for the work. He resolved upon the more genteel practice of swinging Indian clubs and fighting the punching-bag. If he persists even

in this form of exercise long enough, the desired courage will tend to come to him, for a strong, muscular young man *feels* his strength of body pronouncedly, and that is one of the first essentials to courage.

**Getting Something for Nothing.**—Every young man, while learning to fight his way in this world, seems to go through a period of dishonesty. That is, he becomes for a time very much interested in "snaps" and "luck" and easy short-cuts to success. He answers many advertisements in cheap papers wherein various desirable articles are "absolutely free"—and gets "bit" every time, as he should. He also believes in and invests in prize boxes and lottery tickets (if the law permits it), and confidently expects something "to turn up" that will render hard work unnecessary in his case. The wholesome remarks of Robert J. Burdette are fittingly quoted here under the title, "Advice to Young Men":

"Remember, my son, you have to work. Whether you are handling a pick or a pen, a wheelbarrow or a set of books, digging ditches or editing a paper, ringing an auction-bell or writing funny things, you must work. If you look around you, you will see that the men who are most able to live the rest of their days without work are men who worked the hardest. Don't be afraid of killing yourself with work, my son. It is beyond your power to do that. Men cannot work so hard as that on the sunny side of thirty. They die sometimes, but it is because they quit work at 6 P. M. and don't get home until 2 A. M. It is the interval that kills. The work gives you an appetite for your meals; it lends solidity to your slumbers; it gives you an appreciation of a holiday. There are young men who do not work, my son, but the world is not proud of

them. The great busy world does not even know they are there. So find out what you want to be, and take off your coat and make a dust in the world. The busier you are, the sweeter will be your sleep, the brighter and happier your holidays, and the better satisfied the world will be with you."

**Choosing a Vocation.**—After the young man has come to realize that hard work is health-giving and ennobling and necessary to success and happiness, perhaps he is ready to choose a calling for life. But let us see further. It is a mistake to urge a young man to decide upon a life vocation very long before his general education is finished, and before his character is comparatively well formed. Until this period of relative maturity is reached, it is practically impossible to decide this matter wisely, and it is often hazardous to try to do so.

Look about you and observe the great numbers of men who are engaged in a business that they don't like, and note how mean and sordid and narrow their lives are made for that very reason. Think of the irksomeness of the experience of a man who is bound to some distasteful vocation for a half-century, "merely to make a living out of it," while during all this time his mind and heart are set upon some other kind of occupation so long vainly hoped for. It seems to me that much of this dissatisfaction can be traced back to the error of choosing a vocation too early in life.

**Work Made Easy.**—It is my belief that if a young man be given a broad general course that will cause an awakening of his many-sided possibilities, and if he be taught to assume such an attitude toward work as I have described above, he will find his place in life by means of a kind of natural affinity. It will draw him to itself, and

keep on attracting him as long as he occupies it. Now all this may seem foreign to the subject of the chapter, but it is not. The aim is to show not only how to work, but how one's life-work may be made easy and attractive.

Drudgery kills. But while there are many misfits and disappointments among men of business, there may also be found many who are in love with their work. The latter class is constituted of those whom we may see at all ages of life struggling on unflinchingly, enthusiastically, through stress and want and privation, gloriously overcoming every obstacle and inspiring the race. This is the meaning of a happy adjustment of one's life-work.

**An Avocation.**—In order to relieve the tedium or monotony of too much work of one kind, every man should have an avocation. This diversion should be of a very different nature from the regular work. The one who follows a sedentary life needs some kind of recreative and outdoor activity, such as amateur gardening, floriculture, or an outdoor sport. The manual laborer might well take up a course of study or reading, and thus preserve a zest for his work. The one who works best is able to take his attention entirely off his business during the period of recreation.

**Your Own Master.**—All honorable work is ennobling if *well done.* It is not so much a question of *what* one does, as *how* he does it. The one who begins as a hod-carrier and does that with unusual faithfulness is likely to be called in time to the rank of a skilled workman, and later to the responsible office of a master-builder. It is simply a question of being *absolutely faithful and true* to the situation in which one is placed. This is the first great lesson in business success, yet only a few learn it. Moreover, this attitude of faithfulness toward one's duty

naturally leads to an independent vocation, wherein one may experience the extreme pleasure of gathering the fruit of his own labor, little though it may be. If the young business man can be satisfied with a slow development of his business—drive it but not let it drive him—and at the same time habituate himself to a wholesome kind of moral, intellectual and religious life, he is, by virtue of this fact, the possessor of great riches. But if his over-ambition leads him to strive excitedly to outstrip his competitors, and to seek satisfaction in their overthrow, then is his work vain and the sweetness of toil is turned into bitterness.

**Working and Saving.**—The workman who is honest with himself thinks of the future. He is willing to begin at the bottom at a modest income, and he is disposed to save a portion of that. He forms a habit of saving a little in a systematic way from each month's salary. In estimating the expense account for the month he will take out the amount to be saved *first*, and make the balance do him. This is the beginning of success. The first lesson in saving ought really to occur during childhood, when the little lad may be induced (not forced) to do without some of the things he desires.

**Working and Thinking.**—He who will not think as he works, must do his work twice, says an old proverb. It takes a young man a long while to learn to think for himself. For that reason he ought to be given an opportunity early to do something that will bring him a small return in money or property. The busy father too often overlooks this matter, preferring to save time by *directing* the son in all that the latter does. As a consequence there is wrought into the boy's character a habit of dependence which he will likely be slow in overcoming.

The workman who has a time and a place for everything, who knows where to find every tool that he may need, and who shows method and orderliness in its use, is certain to inspire his fellow-workmen with the highest respect. The laborer who is properly "keyed up" finds that there is a rhythmic movement in it all. Whether the implement used be pick, or shovel, or axe, or hoe, or walking-plow, he will acquire a steady, even stroke or step, as the case may necessitate, and thus keep time to the regular out-and-in movements of his own breathing apparatus.

**As to Parasites.**—Year by year, hard work seems gradually to be gaining a higher degree of respectability in this great land of ours. True, the drones and parasites are still numerous, but their position is gradually being rendered less tenable as well as less respectable by the great wave of sentiment in favor of manual training in the grade schools, industrial training in the higher institutions of learning, and the spirit of work in everything. The writer of these lines longs to see the day when idleness, even among those who have already a competence, will be considered disgraceful and frowned upon by all good people.

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## QUESTIONS.

1. How early does a child show his disposition toward work?

2. Can you determine how a boy will work by the way he plays?

3. Manual laborers are especially good sleepers. Is this true of brain-workers?

4. How would you proceed to train a child to work so that he might be depended upon to do his part willingly?

5. Is there not a sort of genius for work, and a predisposition for avoiding it, both of which are persistent in different characters?

6. What is the psychologic meaning of drudgery? Many fond parents try to avoid requiring their children to do any such work. Is there any suitable substitute?

7. Within every school and college there can be found a group of habitual idlers. Their diligence all consists in studied efforts to avoid work. Would you class these in any sense as degenerates?

8. And, then, there is always with us a large class of professional tramps. How shall we classify these? Have they not many of the marks of degeneracy; *e. g.*, an ill-shaped head, a peculiar eye, a sort of animal cunning, and the like?

9. Our discussions of this subject are chiefly in the interest of teaching the young how to work, but what do we know about *how to quit* working? There are likely as many who overwork as there are who underwork. Make out some real, practical rules for the latter.

10. The world is full of those who have toiled so long and faithfully up the way of life that they are now entirely powerless to cease their work by any other method than complete decrepitude or death. Although perhaps well to do, they miss that "serenity of advancing years" of which the poet speaks. Such cases are often pathetic, and are worthy of the most serious and affectionate consideration of those who can devise a way to bring them gradually to a better poise.

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## CHAPTER XV.

### LANGUAGE.

Language is at once the most wonderful and the most useful instrument in the possession of man; for by means of it he may be enabled to make known every range of feeling, every shade of desire, and every depth of emotion of which he may become aware.

**Language Grows.**—It has required thousands of years for the human race to reach its present high state of perfection in language forms. Various means were devised even by primitive man to make his thoughts known. Gestures, nods, grimaces, written signs, and the like, were used to appeal to the eye. Accompanying these were vocal sounds, each standing for an idea. These primitive words took on a complex development somewhat like the growing branches of a tree, resulting at last in the many languages and dialects spoken today.

The English language has its chief sources in the ancient Latin and Greek and the Anglo-Saxon. Its present-day growth is slow, and consists chiefly of words borrowed from modern languages, the French leading, also of cer tain terms that are being "coined" for scientific purposes, and a few slang expressions that are so fitting as to acquire respectability. Occasionally a word becomes obsolete and drops out of use.

**An Inheritance.**—Man inherits a ready-made mechanism for making vocal sounds. One of his very first acts

on arriving in this world is to set up a yell. This act seems to be purely instinctive or impulsive. The meaningless noises and babblings of the infant gradually differentiate into the speech forms of the full-grown man. Slowly the words that the child utters and the acts that he performs are coördinated, each word finally becoming a sign of an idea, and thus the basis of his language is acquired.

**Imitation.**—We tried to show in a previous chapter that imitation is an important phase of development. This statement applies with unusual force in the act of acquiring language. One by one the juvenile tongue learns to lisp the words heard spoken by others, and the significant fact here to be noted is that the child acquires incorrect word- and sentence-forms just as readily as correct ones. He tries to give a true copy of what he hears. Much of the "baby talk," which some older people enjoy so greatly, however, is probably not a true copy of what the child hears, but it is the best copy his little vocal organs are yet capable of forming.

For various reasons "baby talk" and other imperfect word-forms are retained by many children for some years before there is a noticeable improvement in the language. These forms become habitual, they satisfy the needs of the child, and there is likely for some time no conscious effort on the part of any older person to correct them.

**Correcting "Baby Talk."**—While baby talk is regarded by many as "cute" and entertaining, it cannot go on very long unimproved without seriously interfering with the child's mastery of the language. For at some time, either in school or out, these erroneous

forms all have to be corrected; and the child's effort to correct them may, and often does, cause a hesitancy and an uncertainty that interferes more or less with fluency of speech. When speech is best and freest, it is thoroughly habitual. That is, the image of the word just about to be spoken is not crowded out or interfered with by the image of any other word incorrectly used in this connection.

If, for instance, the child is thoroughly accustomed to use "tooked" for "took," for a long time after he learns better, to use the correct word will require conscious effort; and to that extent a break in the continuity of his thought and in the fluency of his speech will occur. For the reasons given and others that might be given, it is deemed advisable to correct when possible the child's first erroneous pronunciation of a word. Those who have not tried this method may think it ridiculous and impracticable, but they may be surprised to find how easily it is applied after a little careful practice.

Many people articulate poorly in common conversation. For that reason the child hears imperfectly the words spoken. The one who has ever tried to learn to speak a foreign language will appreciate this situation readily. The foreign words simply *must* be spoken clearly and distinctly, in his hearing, or he will never acquire them. And then, imagine if you can the additional obstacle confronting some children in form of such expressions as "fise-zu" for "if I were you," and "dontcherknow," "taint neither," and a hundred other cheap and slangy phrases. Such an unfortunate child will scarcely ever attain elegance and fluency of speech.

**Every-Day Practice.**—It is often a difficult matter to

convince the youth that it is important to use in every-day conversation the very best speech-forms at his command. So he persists in the objectionable modes of expression till the habit is thoroughly fixed and difficult to eradicate. This youth likely has one rule of speech for his chums and school friends, and another (seldom applied) for Sunday when there is "polite company." For this reason, he probably finds it difficult to converse with the polite stranger, as the effort is too self-conscious.

The one, therefore, who would make satisfactory progress in his own language culture, must adopt but one rule, viz., that of using at all times and on all occasions the best expressions of which he is capable. Whether in the home, or in the school, or on the street, he will practice the correct forms of expression until they become thoroughly habitual with him. The only caution necessary here is that the language-student avoid all appearance of pedantry and affectation.

**Word-Imagery.**—Now, notice what occurs just as you are about to utter such an expression as "There is a shower coming." The sound of the words seems to ring in your ears before they are spoken, and the feeling that accompanies the movement of vocal organs in uttering this sentence seems to be present in dim outline before the lips begin to move. This is the word-imagery which seems to run just a little ahead while one is speaking, and without which ordinary speech would not be possible. Until one is thoroughly practiced in vocal expression, he is likely, at certain places, to find himself without an image of the next word, and so there is a halting effect.

These images do not always come in form of single words, but more frequently in form of phrases. In fact,

the one who is a master in the use of the English language has a ready-at-hand, well-committed stock of familiar phrases. These are worked in plentifully with the newer combination of words used on any occasion.

**Improving the Diction.**—In my opinion there has been found no better method of improving the readiness and fluency of one's speech than that adopted by Demosthenes of old and Webster in modern times, namely, the practice of addressing inanimate objects or delivering apostrophes while one is alone on the seashore, or in the hay-field, or under the open canopy of heaven at night. Go out and try this, young man interested in self-culture! Go forth alone at night and direct your speech to

> "The spacious firmament on high
> And all the blue ethereal sky,"

stopping not for the errors and blunders, especially at first, since there is no human ear to hear them. Train yourself, if possible, to become emotional on the occasion of these soliloquies, and your ideas will come more rapidly and the desired expression more easily.

**Refined Companionships.**—Take a youth of, say, sixteen years, who is comparatively apt but unhabituated to a correct form of speech, and place him for a year in refined and cultured society. Unconsciously he will adopt a great many of the better and more elegant words and phrases used in his hearing. A really cultured person has a sort of unintentional way of urging his refined manners upon us. Fall in with him anywhere and you may soon observe yourself striving to conform to his high standards in both speech and morals. After a few years of this kind of companionship during the formative period

it is found that the character of the young man or the young woman is largely molded over, according to the higher patterns.

**Language and Literature.**—What has just been said with regard to companionships will apply with equal force under this head, if slightly modified. If one is impressed with what he reads, the very words and sentences of the dissertation linger long in his memory and are appropriated in his conversation. The high-school pupil who is reading, say, Hawthorne's "House of the Seven Gables," will unintentionally use, in conversation with his schoolmates, many partial quotations from the author's fine phrases.

**A Practical View.**—One of the chief aims of the discussion at this point is to show that one kind of culture aids another. Language culture is very uninteresting and barren of good results if the instruction is merely technical and mechanical and not reinforced by its use of the kind of society that requires it. The author has about concluded that the formal study of grammar and of composition is simply a waste of time unless this study can have practical application in some situation that demands it and makes it interesting. He has seen entirely too much study of grammar merely for the sake of learning grammar—to get a passing grade in it.

Observe the actual conditions with reference to one hundred high-school or junior college students almost anywhere west of New England, and you will find that the majority of them wantonly violate many of the rules of grammar in their every-day conversation. What is the matter? A partial answer to this question is that they have been graded and passed on theory instead of

practice. This method of grading permits the average student to go through the theory of the subject and at the same time retain entirely unbroken the faulty habits of speech.

**Interest in Language.**—It is urged here that the student of language must be interested in something or some one that will furnish an incentive to the practice of good form. For example, the young man who is courting will likely do his best at improving his diction while the excitement attending this particular "pursuit of happiness" is on. During his solitary moments, he will think out many suitable forms of expression to be used in his next conversation with the object of his affections. This is real language culture, for it is carried on while interest is at its height and while its practical application to life is most apparent.

Another form of excellent practice in language culture is found in letter-writing. In such practice one is almost certain of an appreciative reader, and, hence, an incentive to learn. Those who are acquainted with the pleasures of receiving and replying to a cordial letter from a friend or relative, know how much training in careful expression of thought this fact implies. The mind is given exercise in forming statements that are precise, cogent, or elegant, as the case may necessitate. This again, is language culture.

**Letter-Writing.**—Indeed, the value of social correspondence as a form of mind and character culture can scarcely be over-emphasized if it is rightly conducted. The author cannot refrain here from giving some suggestions on the subject. A business letter should be brief and formal. But a social letter, to be interesting, must contain

more than a brief statement about the weather and the condition of the writer's health. Mere news items, of whatever nature, do not constitute the real essence of an interesting letter. It should be also *reflective,* revealing the true state of the writer's mind with reference to something that concerns the reader. To set forth an earnest desire or a profound conviction, or to express a kindly or affectionate interest in the welfare of one's correspondent, is the peculiar privilege of the writer of a social letter. In using this privilege rightly he develops his own powers of expression and also adds a charm to the letter he is writing.

**Sincerity of Speech.**—A great politician once said that speech was given to man in order that he might conceal the true state of his feelings from others. It may be true that "a man may smile and smile and be a villain," but he could be a much more thoroughgoing one without the smiles. It may be that fawning and palavering will pass current for their face value among the uninitiated, but these counterfeits are quickly detected by the true student of human nature. It behooves one, then, for both business and social reasons, to cultivate frankness and sincerity of speech.

To say on all occasions only that which is prompted by one's better self, and to say it forcefully and fervently, and, if possible, affectionately, is to add to conversation such as nothing else can give. The one who has formed this habit will draw around him a host of worthy friends, and will soon find himself in possession of the language necessary for every occasion. "Out of the fullness of the heart the mouth speaketh."

**Language and Business Success.**—"I ain't got no time for that now," a senior college student was heard to say to another. That young man had carelessly permitted

such bad habits of speech, acquired no doubt in childhood, to go on unchecked. He actually knew better, but then one cannot or does not think of the rules of grammar during the course of his conversation. That young man has been given his diploma, but, be it said to the shame of our system of teaching, he bears upon his conversational manners the marks of an illiterate.

Day by day the business world raises its standard of requirement as regards the evidences of culture of its members. Some day the student referred to above, or his like, will make application for a position of responsibility; and, after telling the would-be employer that he "has went" somewhere or other and "has saw" this or that place, he will go away wondering why the latter merely turned him away politely without any employment. Such, too, is likely to be the fate of the young lady applicant who seasons her conversation liberally with such expressions as "Oh, gee!" "Ain't it bum?" and "The swellest time," while she assiduously masticates her chewing-gum.

The gentlemanly, business-like employer might regard the young lady just referred to as capable of taking high rank as a silly girl, but he could not consider her seriously as an applicant for a responsible position. A good salesman or saleswoman is one who can command the very best and most correct forms of speech our language will permit. Nothing less than this will win the highest respect of many customers.

There is a marked disposition among men who are students of the applied sciences to disregard the necessity of language and literature study as well as the pursuit of other subjects that do not pertain directly to their chosen vocation. But such is a serious error, as the events of later

life so often prove. In many a rural district in the Middle West it is often difficult to find a candidate for the legislature who has sufficient command of the English language to give him ability as a statesman. It is one thing to think and quite another thing to express one's views effectually before an audience. Such ability can be acquired only through practice.

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## QUESTIONS.

1. Learn by careful observation how a child acquires the pronunciation of new words.

2. How does the child learn the meaning of words? How much do his eyes assist in the process?

3. At the age of about two years a child is fond of imitating every word pronounced for him. Prove by experiment that this is a good time to correct his errors in pronunciation.

4. At this time of specialization in education, what is a fair and reasonable standard of excellence in language to be required of the college graduate who has completed a course, say, in engineering?

5. Observe that in your own vocabulary there are some words of which you know the meaning reasonably well, yet you would not venture to use one of them in the presence of well-educated hearers. How did you acquire these words?

6. We are constantly urging young students to make free use of the dictionary. But how much of the reader's vocabulary was acquired directly from this volume? Likely comparatively little. What, then, is the true function of the dictionary?

7. The one who daily hears his native language spoken fluently, and who is a habitual reader of well-written books and periodicals, is almost certain to become masterful in the use of this one language at least. The dictionary will be of little service to him.

8. Very few foreign-born persons ever become able to pronounce our English words faultlessly. How do you account for this? This is also usually true of natives of this country who learn to speak a foreign tongue before they do English. Explain this.

9. What is the best period of life for acquiring a large vocabulary? "After thirty," says a psychologist, "one scarcely ever has a really new idea." Does this apply to the meaning of new words, also? Make inquiry of ten studious persons who are thirty years of age, or over.

10. Many of the colleges of agriculture and mechanic arts are now so conditioned as to admit of no study of the ancient classical languages on the part of their students. Yet there is probably no other subject that will substitute for the Latin in giving to education a proper dignity and perspective. What is a satisfactory solution of this matter?

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## CHAPTER XVI.

### SELF-CONFIDENCE.

What opinion should one have of himself? Should one believe that he can accomplish almost anything he cares to undertake? Does one's merely believing that he can do a thing help him in any way? What is self-confidence, anyway? And how is it related to such matters as courage, conceit, egotism, foolhardiness? Is there a really wholesome and helpful attitude of mind toward one's self, which one may learn to assume? These are some of the questions that suggest themselves at this point of the discussion.

The conceited person places an estimate upon his personal appearance or worth such as cannot be accepted by his fellows. It may be a case of too much pride or vanity. The *egotist* is regarded as extremely selfish in some form or other, and to that extent he is an objectionable character. The foolhardy man is lacking in at least one very essential instinct, viz., *fear*, and his life is therefore likely to be cut off. *Courage* is more nearly synonymous with the subject of this chapter, as it suggests self-mastery in trying situations. Self-confidence might be defined tentatively as *the courage to go forward and do one's best under all circumstances.*

**Experience Again.**—It becomes apparent, from all that has been said in previous discussions, that experience is an important prerequisite to self-confidence. Whether, for instance, a young man is for the first time about to enter upon a business career, or to become a school teacher, or to

propose marriage to the one he loves, it is altogether likely that his true courage will be proportionate to the amount of related experience he has had. The self-reliant person pushes into the new field of activity energetically although knowing only a part of this new field. The young business man will profit in the beginning from having learned to converse in a serious way with men, and from having at least a fair theoretic knowledge of the proposed work. The young teacher will find it advantageous to have been much in the company of children, and the young lover will proceed with less fear and trembling if he is accustomed to the every-day society of young women.

**Habit Again.**—The writer is acquainted with two young men, one reared on a farm and the other in the city, both of whom became by necessity thoroughly habituated to work while they were out of school. If a tool or instrument was broken, the farm boy often had to mend it or devise a substitute for it, as his work had to go on. The city boy served in various capacities in a manufacturing establishment wherein carefulness and originality were always rewarded. These two young men thus acquired the very first lesson in self-reliance, the habit of working under trying or perplexing circumstances.

Thus it is seen, that to work faithfully and honestly in the situation in which one is placed, even when the immediate reward is not at all in sight, and to turn the thoughts toward victory when defeat seems already to have come, is to form the beginnings of a self-reliant character.

**The Question of Faith.**—Suppose you and I are taking a carriage-ride together in the country, and I suddenly draw up the reins and say, "Look ahead there, man; the road seems to come to an end a half-mile away. I am not

going any farther." "You are wrong," you would immediately reply; "have faith and go forward, my friend; the road will open up to view as fast as you need it!" Such a conversation would hardly occur, yet something very similar often does occur, to the author's personal knowledge. For, how often there has come to him some young man under twenty with the statement that he is "going to quit college for good," as he has only enough money to take him through the current term.

**Adversity.**—Such a young man is lacking in one of the most essential qualities of sturdy young manhood, viz., faith in himself, self-reliance. To him one might repeat the words above, "Have faith and go forward, my friend; the way will open up as fast as you need it." The cowardly, weak-kneed fellow is simply fixing his attention on the wrong side of the undertaking before him,—the *failure* side. He must shift his eye to the successful goal and *go forward.* I may seem harsh in saying it, but the evidence is unmistakably to the effect that there is many a chicken-hearted youth in this land who is such because he has been brought up too tenderly. Such a boy ought to be kicked and cuffed about for a while. He ought to be taken through a course of "hard knocks," wherein there is smarting and hungering and considerable weariness of the flesh. One year of practical "roughing it" will do more toward developing a self-reliant character than a decade of moralizing on the subject. "Blessed is the school of adversity."

**For Both Sexes.**—I cannot for the life of me see why this lesson of adversity should not be applied in modified form to young women as well as young men. In my opinion, every young girl should have some hard work to do

during her growing years; not so arduous, of course, as to overtax her vitality, but yet, a certain amount of real drudgery. Such experience is essential to self-reliance and healthy-mindedness in the woman-to-be. When two young people become yoked together for life, after having had these lessons in hard work, self-dependence and frugality, it is pretty safe to predict that they will build up a happy, harmonious home.

**The Pioneer.**—Hard conditions bring out sterling qualities of character. Of this fact, there are thousands of shining examples among the pioneers of the West. They went forth without purse or scrip, but with vigorous health and with faces set like flint, and made the desert place blossom like a garden. This is not true of all of those who made the venture. Thousands soon became disheartened and went back, leaving the sturdier race behind. It was a case of the survival of the fittest. Many of these survivors became wealthy in a land where they were expected to starve.

It is a law that persistent effort brings success. These sturdy pioneers soon discovered that, notwithstanding a variety of menacing conditions, in a series of years the successes overbalanced the failures. So the young person, if rightly trained, discovers in time that it is only necessary to be true to the promptings of his better self; for by pressing forward in a confident manner he finds that more than half of his trials are successful.

**The Pessimist.**—The pessimist is a person who is out of tune mentally. Shun him, O happy youth, for he goes about breathing out flame and smoke. Discord and discouragement are in his path. You will meet him in so-

ciety and state gatherings propagating mental disease and disloyalty. Even in religious circles you will find him dealing out moral distemper and disbelief. And yet the pessimist has necessarily only one bad fault—he persists in looking on the dark side of things. He is consequently a disbeliever in himself, and he never begins an undertaking but that he says in substance: "Oh, it will fail; there is no use trying. This thing will never succeed;" and it never does.

**The Optimist.**—The optimist, on the other hand, thoroughly believes in himself. By degrees he comes into an unswerving purpose in life and an unwavering faith that he can carry that purpose out. He has come to realize that a hand mightier than his own is guiding the destinies of men; and that, by the very nature of things, his life is divinely ordered. Unlike the evil-thinker, the optimist sees the bright side of everything, and as a result even the commonplace affairs of life inspire him.

**Confidence in Others.**—The self-confident person of necessity believes in other people. Old as I am, it stirs me up to put forth greater effort to have people believe in me. The ordinary little child will do his utmost to come up to the standard fixed for him by the expressed opinions of his elders. The self-reliant person, therefore, is a benefactor of his associates. It is such an easy matter to drift down to the level of a gossip, and later to that of a defamer of character, and finally to that of the chronic misanthropist.

If one goes about looking for the meanness in other people's character, he can surely find it. So can he find the good—more of it than he can enumerate in a lifetime. Happy indeed is he who has formed the habit of looking for the good. And so in every clime we find the stalwart,

self-reliant character, who, in the language of Senator Ingalls, might say:

> "Master of human destinies am I:
> Fame, love and fortune on my footsteps wait."

**Love and Self-Confidence.**—Another of the great promoters of self-confidence, as well as of long life and happiness, is love. Every one should by all means fall in love with something or somebody, or, better, with everybody. It is impossible to define love. It is too great an attribute of the Divine Being and of the divinely ordered soul to admit of exact definition. The reader is referred to the thirteenth chapter of First Corinthians, revised version, for further definition of the subject. Read it, study it. Meditate much upon it, and then work it out for yourself. Exercise what love you have and it will grow.

Even the selfish love which singles out one individual for its exercise, will transform one's character. How very interesting it is to observe the ever-growing self-confidence of the verdant youth, who, while life's young dream is at its highest, is actively in pursuit of the object of his affections! How ideal the whole world seems to him, indeed! Nothing now appears to him to be able to stand in the way of the realization of his most cherished hopes and desires, especially after he has received that coveted affirmative answer to his proposal of marriage. Here the poet, S. W. Foss, makes him say so expressively:

> "Like a twenty-million orchestra away beyond all counting,
> The bob'links bubbled over in a music waterfall,
> And I felt jest like a-mounting on the meeting-house and shouting
> That Paradise was open, with admission free to all.
> Every grass-blade in the meadow was a string to Nature's fiddle,
> That was played upon by zephyrs with a velvety caress;
> And old Nature's joints were limbered as she sashayed through the middle,
> When Melindy, my Melindy, told me 'Yes'."

The happy, radiant soul is surely in love with somebody or something—with his helpmeet, with his sweetheart, with humanity, or with his occupation. Love is a great force that overcomes one's difficulties and wins his victories for him. It is a soothing balm to offer to one's afflicted friends, and a healing potion for the heart-sick souls that come within the circle of his acquaintance.

**Hope a Factor.**—Another prolific generator of self-confidence is hope, but one of its greatest destroyers is despair. The one who, in the face of reverses, can maintain a hopeful attitude of mind, is already in possession of a part of the capital stock for his next venture, while the despairing soul is defeated for a long time to come. Hope is eternal; despair is infernal. Hope is the sweet-scented dew that kisses the fresh flowers of morning; despair is the biting frost that nips in the bud the promise of a harvest. Hope is the fresh shower of April that woos the tender blade of sprouting grass; despair is the hot wind of August that burns up the field of maturing corn. Hope puts the bright gleam into the eye and kindles the everlasting glow in the soul; despair marks traces of care upon the countenance and smothers out the fires of enthusiasm.

**The Roving Disposition.**—While a youth, the author of these lines spent many days alone herding cattle on the open prairies of Kansas. Early in the spring-time, when the grass was rather short, he noticed a tendency on the part of the cattle to run ahead. A little observation gave the explanation. Being seen at a more acute angle, the grass actually looked greener a few rods on. The cattle were victims of a delusion. And then there occurred the thought that many people are so much like these dumb, driven cattle. This disposition to rove, to give up a po-

sition or undertaking before it is thoroughly tried, to imagine that some other position or station in life is better than one's own,—this tendency is chronic with many people, and it becomes their greatest obstacle to success. "The good is not here, but yonder," they say; and away they go, chasing over mountain and stream and through forest and glade, seeking happiness and contentment in another land and another clime.

How long, O Man, wilt thou continue to commit this folly! How long must this error of the ages be repeated, this error of seeking happiness in some distant place! Roam as thou wilt over deserts and seas and through every land of the globe, and then come back weary and disappointed to thy humble abode, back to thyself, and there learn at last this truth of God: that happiness is not to be found exclusively in the outside world of men and material things, but that its home is in thine own soul, where it must take root and grow ere thou canst enjoy its blessings. Here thou shalt find peace and contentment.

> "The soul, serene in her existence, smiles
> At the drawn dagger and defies its point.
> The stars shall fade away, the sun himself
> Grow dim with age, and nature sink in years:
> But thou shalt flourish in immortal youth,
> Unhurt amid the war of elements,
> The wreck of matter and the crush of worlds."

**Self-Confidence and Riches.**—Self-confidence is a form of mental wealth. But it has been demonstrated frequently that material wealth alone does not bring pleasure in proportion to its amount. Some of the meanest spirited and most discontented people are to be found among the rich as well as among the poor. Happiness cannot be purchased with money. There must be a sense

of unworthiness in the mind of a man who sits down to a sumptuous meal with the thought that he has done nothing to earn it, but that every mouthful he takes represents the honest labor of someone else. On the other hand, it must be deeply gratifying to the eater to partake of a meal, plain and unadorned though it may be, with the consciousness that he has earned it or its equivalent on that day by means of honest work.

It is maintained by those who ought to be able to speak with authority, that the most highly satisfying condition in life is to be able to earn a competence by one's daily work, and along with this to have frequent intervals for rest and recreation and intellectual improvement. They say that wealth consists not so much in the abundance of the material things that one may possess, as in his capacity to enjoy. A millionaire may acquire legal title to a valuable tract of land, but he cannot buy the beauty of the lovely landscape. He may purchase the most beautiful painting in the world, but the appreciation of it cannot be obtained at any pecuniary price. While the capacity to buy rests in the money, the capacity to appreciate must be in the man. A small capacity for buying with a large capacity for enjoying is far preferable to the converse.

The reader has doubtless begun to think that the discussion is becoming somewhat sidetracked. But the intention here is simply to indicate in some measure what constitutes that breadth and healthiness of mind which is most conducive to the fullest self-confidence. And so we are led to conclude that, in addition to being able to do some worthy work day by day, another valuable asset consists in the capacity to turn to one's own good account the commonplace events and experiences of every-day

life. In the highest sense of the word one is owner of all that he can appreciate and enjoy, and no more, and no man can either buy or take it from him.

All things I see and love are mine—
The cattle on a thousand hills,
  The flowers, the trees,
  The lakes, the seas,
The mighty rivers and the rills.

The everlasting worlds are mine—
The planets poised in space on high,
  The suns, the stars,
  The radiant bars
Of light that beam across the sky.

The living power of love is mine,
Forever is my sure defense;
  And in that love
  I live and move,
The expression of Omnipotence.

**Frankness.**—So the self-reliant person soon learns to realize his ability to get good and to give good wherever he goes. He draws out the best side of other people and gives out in return the best that he has within his own higher nature. Others somehow feel assured after an exchange of glances with him that he and they are on intimate relations of good-fellowship.

Another ingredient of the self-reliant, healthy-minded character is *frankness*. This world is full of good people who suffer unnecessarily day by day because they are unable to speak out frankly what they know they ought to say. An illustration from life will be an aid here. A farmer or a merchant, as the case may be, has an employé who does not do things to suit him. But being just a little afraid of giving offense, the employer suffers the annoyance mentally and manages to relieve his dissatisfaction partially by telling *others* how ill-suited to the work this hired assistant is. Likely the latter is con-

sciously doing his best to please, and very likely, too, a frank discussion of the situation with the former would lead to a much better understanding between the two, and to a much more satisfactory adjustment of their relations. But without this frankness, an open rupture must come sooner or later.

There are many women who employ domestic help, and who, instead of pointing out wherein the latter are unsatisfactory, as ought to be done in a frank, affectionate manner, go calling among the neighbor-women and describe every weakness that the domestic may possess. Finally, during a fit of anger on the part of both, the helper is dismissed. There are entirely too many civilized people who cannot speak their minds freely until they become very much provoked, and then the effect is most displeasing both to the speaker (after he "cools off") and the one spoken to.

In college communities in towns and cities where lodging-places are crowded close together, there are students who day after day thoughtlessly consume many precious hours disturbing the peace of others by scuffling, boxing, blowing on horns, and the like. And the pity of it all is that those who are disturbed cannot, as a rule, muster the courage to speak frankly about the matter to the offender until the point of extreme irritation is reached. Then, actual trouble follows and a lifelong estrangement may be the result. Be frank and open in your speech. If you can do so with a sincere motive of helping him, never hesitate to criticise candidly and affectionately one who is your so-called equal or inferior.

**Seeking the Truth.**—If the young student can early become imbued with a love of truth for its own sake, he

thus takes a forward step toward self-reliance. The timid, backward student is always fearful that an investigation will reveal something that will interfere with his preconceived ideas or plans. To be absolutely willing to have the truth laid bare, just as it is, is characteristic of a high order of scientific genius. Many a so-called scientific treatise is rendered practically worthless because of the author's apparent effort to make matters come out in confirmation of his prejudice. The true scientist is willing to sacrifice every preconceived idea at the altar of truth. He acquires a passionate fondness for the facts in any case. This scientific love of truth for its own sake makes one more aggressive in his efforts to know the world.

The tyrannical, despotic ruler, the intolerant religious bigot and the supercilious society dictator are all examples of those who are mentally disturbed lest the particular group of minds over whom they hold sway should suddenly come into possession of a knowledge of matters as they actually exist. But the honest, healthy-minded student of life and the world confidently proceeds with the firm belief that truth is mighty and will prevail, and that each day's revelations will open up a view more wondrous. Such a person cannot help being both self-confident and optimistic.

**A Sense of Unworthiness.**—It is surprising to find, as a result of investigation, such a large number of persons who are held back in life on account of some secret sense of unworthiness, or sin, or self-condemnation. They cringe and creep when they ought to soar aloft into the heavens; they growl and grumble when they might better sing; they complain and curse their station in life,—all this because they are laboring under the delusion that

an evil fate has somehow marked them for some bad end. But if the weary one who is bowed down with a sense of unworthiness will rise up in all his might and take command of himself as a living, breathing soul, clothed in power and majesty, this imagined evil fate will tremble and obey him.

Every living creature has its purpose. "The early bird catches the worm" is an old maxim often quoted to inspire youths to greater effort; and it is a very good one. But there are not a few people who seem disposed to excuse their tardiness of action out of sympathy for the poor worm. This is a serious mistake. The worm was created to be caught just as surely as the bird was created to catch; and it is the worm's business to be on the ground early in order to insure being caught. His whole life has been spent in preparation for this, its culminating point, which rounds out for him a successful career. Go forth, then, early and confidently, and either catch or be caught. If you can't be a bird, be a worm, a fish-worm for bait,—any kind, just so you have a function in life and perform it.

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## QUESTIONS.

Study in connection with this chapter—

1. The self-confident, though erring, judgment of the child one year old.

2. The empty, boasting, though less confident air, of the boy of four. His acts are partly make-believe.

3. The specific conditions, including the manner of training, of the boy who habitually says "can't."

4. The life history and the physical condition of the extremely shy, timid child of six.

5. The mental lassitude and the self-complacency of the little, shriveled-up, pipe-smoking youth of fifteen.

6. The self-confident, extremely optimistic view of the future that characterizes the "sweet girl graduate" of sixteen.

7. The peculiar set of fixed opinions of the illiterate backwoodsman who depends much upon signs and omens, and whose knowledge is to him all-sufficient.

8. The peculiar "double-mindedness" of the strictly orthodox churchman whose ideas on theology are entirely dogmatic, but who is ever ready to accept the new in science.

9. The easy grace and the admirable straight-forwardness of the man or woman who has had the advantages of good birth, and careful home and school training, and well-ordered social experiences in mature life.

10. Finally, the fact that self-confidence and optimism are not only indicative of healthy-mindedness in childhood and youth, but that these characteristics are absolutely essential to knowledge-getting through a long series of trials and errors.

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Hilty,—Happiness, Essay VIII, "The Meaning of Life."

Trine,—What All the World's A-Seeking, Part IV, "The Awaking."

Dresser,—Voices of Hope, Ch. VII, "The Escape from Subjectivity."

Horne,—Philosophy of Education, "The Notion of Self-Development," p. 207 ff.

James,—Talks to Teachers on Psychology and to Students on Some of Life's Ideals, "What Makes a Life Significant," p. 265 ff.

## CHAPTER XVII.

### KNOW THYSELF.

**The Socratic Insight.**—I think it was Goethe who said in substance that it is not given to man to understand the ultimate meaning of life, but he must nevertheless attempt such a solution if he would know what life really has in store for him as he lives it. It was Socrates who bequeathed this perplexing but ever-fascinating problem of self-study to the ages.

Socrates was interested above all things else in the well-being (Eudaimonia) of the individual, and he found the best method of promoting this highest condition of life to consist of insight into one's own nature. This charming old maxim, then, "Know thyself," with its endless depths of suggestion for self-study, I regard as expressive of one of the most fruitful achievements of early Greek philosophy.

It is true that Socrates did not reach a full and complete knowledge of himself (for that matter, what philosopher of to-day can do so?), but he was the first to attack the problem in a serious, methodical manner; and the very fact that he went at the work barehanded, almost without any kind of suggestion as to the meaning of the subject, makes his achievement more glorious. It is also true that, measured by the standard of the average individual character, Socrates' view of the ethical subject was inadequate and one-sided; for he thought that, judging from his own peculiar type of mind, to *know* the right was equivalent to *doing* the right. The practice that must accompany

theory in the usual case was thus overlooked. According to the Socratic definition of ignorance, Rousseau was one of the greatest of ignoramuses. For he said he knew, but could not do, the right.

**Its Significance.**—But this self-searching method of the great philosopher, a half-truth though it may have been, was highly significant from the fact that it has been a great source of inspiration to philosophic thought for twenty-four centuries, and from the further fact that it was the first important step toward the discovery of the inner life. I believe it to be the part of every person today, philosopher or layman, who may hope to develop into even relative maturity of character, to devote some time to serious contemplation of some phase of this same problem of self-examination.

After all, perhaps Socrates *was* right. Perhaps our wrong-doing *is* all a result of ignorance of insight into our own lives. Perhaps, if I had the understanding of Socrates, trained though in evil I may be, this clear insight would simply *impel* me to act rightly in the face of all habits to the contrary. It would not require a very great stretch of the imagination to make a connecting link between the Socratic volition of insight and Professor James's volition of attention.

**Other Philosophers.**—To trace the development of this task of self-scrutiny up to the present time, in any detail, would require an entire volume, but it might be worth while to enumerate some of the high places where its fruits stand out in bold relief.

The one-sided Cynics and Cyrenaics were the first to take up a phase of this problem of the self in their efforts to find out what the good life is. So did the Stoics and the Epicu-

reans attack it in a more rational form. Especially did the later Stoics come into close relation with this subject in their search for a method of overcoming the world by subordinating the self to the divine law of the universe. In the case of the self-oblivious ecstacy of the Neo-Platonists, and of the self-renunciation of the early Christians, not a little attention was given to self-scrutiny as a means of getting closer to God.

And so have the great minds of all ages up to the present day devoted long, silent hours to prayer and meditation, wrestling with the spirit, as it were, in an inspired effort to fathom the depths of the riches of the human soul, in their imagination often coming in sight of the goal set up by Socrates and yet never reaching it. Whether we cite as evidence the spiritual doctrines of Christ, or the self-scrutinizing skepticism of Descartes, or the charming pessimism of Schopenhauer, or the epistemological paradoxes and riddles of Kant, or the transcendental maxims of Emerson, or the cosmic consciousness of Walt Whitman,—in all these, and more besides, we find instances of great men who had implicitly in mind at least the equivalent of the old Socratic watchword, *Know thyself.*

**The Modern Aspect.**—But this subject has a more modern aspect, and, it seems to me, a more scientific one, than these older writers have given it. There has been too much effort to study the mental self, as a merely given, unattached entity, without much reference to bodily growth or conditions. By this I mean to say that the genetic method so characteristic of the biological, evolutionary and physiological aspects of this study have been too much neglected, until recently.

As an essential preparation for immediate self-study one

ought to be well acquainted with the leading facts of a number of the modern sciences; that is, such facts as have contributed most directly to his present physical and mental condition.

1. Note the biological significance of a nervous organism in relation to the ability of the creature to make adaptions to the environment. An understanding of the way in which the possession of the cerebral hemispheres enables the living organism to substitute mental for merely structural adaptions, and thus to rise higher in the scale of existence, is especially important. A further fact of momentous consequences is that of the extremely long period of infancy peculiar to the human being, whereby he is enabled to perfect a nervous organism more complex than that of any other member of the animal kingdom.

2. The anatomical and physiological phases of this question would involve a study of the human organism with special reference to the nervous system, as well as a consideration of the functions of the latter in the maintenance of such great life processes as respiration, digestion, and assimilation.

3. As an evolutionary study, one ought to acquaint himself with the best modern interpretation of such matters as the origin of species, treated under such subdivisions as natural, organic, and mental selection, and fortuitous or chance variation. The question of the inheritance of acquired characters and congenital characters would also force themselves upon the attention.

4. The sociological contributions to this quest of self would also be many. Man as we find him to-day is a naturally social and a highly socialized being, dependent, in a measure, upon his fellow-beings for all that he has and

enjoys. The great significance of such socializing institutions as the family, the state, the church, the school and the special vocation would necessarily demand serious consideration.

5. A serious study of psychology naturally furnishes a fitting climax to this long-continued quest of the self. Herein one is brought, as nearly as is possible, face to face with his own consciousness. By means of various experiments upon his own organism, during which the results are read in terms of the accompanying mental processes, one may obtain a close acquaintance with his perceptive processes. Any good modern text-book of psychology will furnish the method. And then if, supplementary to the foregoing, one will observe carefully, and experiment with, the operations of his own imagination, memory, attention, habit, emotion, and volition, he ought certainly to find a higher way of life.

6. As an addition to the foregoing series of courses in self-study, I would suggest what here might be called *revelation*. My reason for not including it in the formal series is that it is not, strictly speaking, a study. After one has taken these scientific courses of study he cannot help being profoundly impressed with the many manifestations of the "Hand that is divine." This being the case, his final full increment of power comes through simply waiting occasionally, silent and expectant, for the ministrations of the Immanent Spirit.

**A Personal Description.**—In order to direct the mind of the young student toward self-scrutiny, the author makes a practice of requiring each of his students in elementary psychology to supply answers to the questions given below. It has been found that this requirement is often the means

of bringing the student's attention to some hitherto unthought-of fact about his own personality. If a young student is to accomplish anything worth while in an effort to develop his own character, he ought to be aware of his weaknesses as well as his strong points.

Of the hundreds of students thus far required to fill these blanks, many have afterwards stated in substance that they were thereby made more conscious of a specific method of carrying on the work of self-improvement along with their other studies. These questions are printed on a card, and each member of the class is asked to fill out two,—one for himself and one for the instructor's files. A facsimile of the card follows:

1. *Name,* ———.
2. *Age,* ———. *Height,* ———. *Weight,* ———. *Complexion,* ———.
3. *Temperament:*
   (*a*) Choleric (thinks quickly, feels strongly).
   (*b*) Sanguine (thinks quickly, feels weakly).
   (*c*) Phlegmatic (thinks slowly, feels weakly).
   (*d*) Melancholic (thinks slowly, feels deeply).
4. *Sociability.*—Of High degree, Medium, Excessive, Select.
5. *Order.*—Excellent, Good, Medium, Poor.
6. *Punctuality.*—Good, Fair, Careless.
7. *Persistence.*—Strong, Medium, Intermittent, Weak.
8. *Self-Control.*—Strong, Fair, Weak. (Explain) ———.
9. *Favorite Study,* ———. *Most Difficult Study,* ———.
10. *Ideal Vocation,* ———.
11. *Defects* (as a student), ———.
12. *Original Motto or Resolution,* ———.

**Æsthetic Appreciation.**—Under this heading there were printed ten other questions, on the reverse side of the card. The student is required to fill the blanks, giving—

1. The Most Desirable Possession. ———.
2. The Most Beautiful Color. ———.
3. The Most Suggestive Word. ———.

4. The Most Delightful Sound. ———.
5. The Most Beautiful Scene. ———.
6. The Most Delicious Thing to Eat. ———.
7. The Most Fragrant Odor. ———.
8. The Most Pleasing Object, to the Touch. ———.
9. The Most Admirable Character. ———.
10. The Most Beautiful Sentiment. ———.

The following course of reading is suggested as a guide to any who may be in pursuit of a serious study of self:

Rogers,—Student's History of Philosophy
Spencer,—Principles of Biology.
Darwin,—Origin of Species.
Martin,—The Human Body.
Baldwin,—Development and Evolution.
Fiske,—Outlines of Cosmic Philosophy.
Royce,—Outline of Psychology.
James,—Principles of Psychology, Vols. I and II.

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## QUESTIONS.

Study in connection with this chapter—

1. The dawning of self-consciousness in little children

2. The specific ways in which this early self-consciousness modifies conduct.

3. The value of self-consciousness in enriching the experiences of childhood, and in the volitional development of youth.

4. The advisability of training the child to be at all self-conscious before he reaches the adolescent period.

5. The inadequacy of introspection to reveal the knowledge of self without the assistance of a manifold experience.

6. The many ways in which knowledge of others is made to contribute to the understanding of one's self.

7. The morbid and excessive introspection of some nervous, sensitive persons who are constantly on the borderline of mental aberration.

8. Examples of persons who seem to take themselves and all that pertains to them for granted, and who travel the whole journey of life without raising the question as to who they are and what they are here for.

9. The strange awakening of self-consciousness and self-study that one experiences during a religious conversion, or when traveling for the first time in a strange land, or immediately after the loss by death of one near and dear to him.

10. The strange practice of the Hindu priests and of certain religious sects of America and Europe who spend much time sitting in the silence and waiting for the Spirit to commune with them and to reveal to them their own spiritual natures.

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Butler,—The Meaning of Education, "What Knowledge is of the Most Worth?" pp. 37–39.

Thorndike,—The Human Nature Club, Ch. XVIII, "Some Deeper Questions About Human Nature."

Hoffman,—Psychology and Common Life, Ch. VII, "The Relation of Mind to Disease."

Stratton,—Experimental Psychology, and Culture, Ch. IV, "The Evidence for Unconscious Ideas."

Griggs,—The New Humanism, Ch. II, "The Evolution of Personality."

James,—Talks to Teachers and to Students, "The Gospel of Relaxation," pp. 199–229.

Dresser,—Education and the Philosophic Ideal, Ch. III, "Equanimity."

## CHAPTER XVIII.

### SOCIAL SENSITIVENESS.

The most casual observation will convince one that people of all ages are more or less sensitive to the presence of others. The mere child, after arriving at the age of discrimination between persons and things, will indicate this fact by some kind of conduct that relates to the presence of others. It may be a mere look of satisfaction or approval, or it may be a burst of laughter, or a cry of fear. Older people may be observed to indicate this awareness of the presence of others in scores of ways that are merely modifications or refinements of the more primitive, instinctive forms.

Significant as these facts are with reference to any given situation, a closer observation will show, I hope to prove, that these various modes of response to other selves have a far deeper significance in determining the future conduct of the individual.

**Conduct of Animals.**—This sense of other selves seems really to be a deep-seated characteristic of the human race. Moreover, it is not a difficult matter to discover some manifestations of it in some animals of the lower order. It is a race instinct which has at least a kindred characteristic in all the animal species that tend to gregariousness. In an interesting experiment with dogs, for instance, I have been convinced that an ordinary mongrel may be seen to manifest no fewer than five distinct at-

* A paper presented at the University of Chicago for a graduate degree.

titudes toward those of its kind. Let the series range all the way from an innocent, playful puppy to a burly, ill-tempered bulldog, and, especially after he has become acquainted with them, each one will draw out from him a different expression of mood. This fact will be indicated plainly to the close observer by the "pose" of the mongrel; *i. e.*, by the position and arrangement of the ears, tail, nose, mouth, eyes, back, hair, etc. But it is my purpose to treat this subject with more especial reference to the human species. Many of the various forms of the social sensitiveness probably find their origin in one common utilitarian instinct; namely, fear. The instinct to run away from danger helped to preserve the species. As the dangers from without grew less and social bonds within were strengthened, it is only natural that this instinct should differentiate into some refined modifications, such as bashfulness, shame, and the other forms of embarrassment, which, if not utilitarian in the most vital sense, are at least utilitarian in a social sense.

First, let us notice some of the more outward manifestations of social sensitiveness in children.

I. Fear of persons seems to be one of the earliest modes of this emotion. Darwin, Compayre, Preyer, and others, noticed indications of fear in the case of mere infants, ranging from two to six months of age. Fear is likely one of the most primitive instincts. Among savage and barbarous peoples, anyone not a member of the tribe was classed as a mortal enemy. So the child is fearful of any person not a member of his own immediate family. Even in the case of children, it can be shown that during fright many physical reactions new to the organism are likely to occur.

II. Timidity and shyness are manifestations of the instinct of fear, and appear somewhat later than it does. According to Baldwin, their physical manifestations are organic reactions that accompany mental and social attitudes. In such cases many of the normal activities are evidently inhibited, while new forms of movement are carried out. Many of the latter are merely variations of the normal type.

III. Bashfulness is a common and somewhat pronounced form of social reaction. In case of children, Baldwin notes three stages: (*a*) organic, during the first year; (*b*) social toleration, appearing a little later; (*c*) real bashfulness, without fear, third year or later. A well-known manifestation of this emotion is blushing, which is usually noticed first some years later, and which becomes more frequent and more marked during youth. Darwin says that the reddening effect of blushing "is a result of capillary disturbance caused by the attention being directed to that part of the body," *i. e.*, the face; and "Originally self-attention directed to personal appearance in relation to the opinion of others, was the exciting cause." Royce would probably characterize bashfulness as a modification of what he calls "instinctive restlessness."

Here again, inhibitions, approaching in some cases temporary paralysis, are easily noted. Nervous twitchings, trembling, palpitation, and the like, are the usual accompaniments. What I want especially to remark, without discussing the matter here, is that, as a result of this bashfulness, the individual is likely to execute many movements, both mental and physical, that are new to the organism.

IV. Showing off, as a form of emotional response to

other presences, has many variations. But here again in every case, under stress of the embarrassing situation, the organism of the child seems to acquire many adaptations that are comparatively new. It is evident, of course, that in the process of securing these adaptations there will be much of the hit-or-miss, trial-and-error, kind of movement; but it will count as a part of the general experience, enriching the mental life of the individual. From this point of view the errors have as much relative value as the successes. In this connection, I cannot do better than quote freely from an article in the *Pedagogic Seminary*, by G. Stanley Hall and Theodate L. Smith. Of course, many of these acts are more or less imitative, but they are, nevertheless, acts that would not be undertaken if it were not for the consciousness of being observed. In every such case, I think, the conduct would be classed as unnatural, or an intensified form of natural conduct. From the article mentioned above I select the following records of the conduct of children showing off before strangers, and also the cases of several older persons:

1, male, four years old. Being watched at his play, would run as fast as he could, and fall down.

2, male, seven years old. When watched at play, began to hammer the fence. "See! I am moving this fence."

3, male, five years old. First pants. Walked around; then began to kick, laugh, lie down, roll over, etc.

4, female, five years old. New hat. Sits down. Holds the head first on one side, then on the other; . . . will get a book, stand on a chair, "speak pieces," etc. Soon as people leave, she acts natural.

5, female, seven years old. Likes to say things to make

people laugh. Says whatever she thinks of first, whether good or bad.

6, female, fourteen years old. Voice unnatural and her words do not sound like English when a certain boy friend is near. Sometimes the affectation continues after he is gone.

7, female, two years old. Turned summersaults when calling.

8, female, seven years old. Thinking herself watched, tried to walk in a fine way.

9, two boys, aged eight and six years, playing "dares." The older one dared the younger one to put his foot on a chopping-block, which the latter did, and had his foot cut off at the ankle.

10, male, thirteen years old. Servant. Company being present, let the pie slide off the plate on some one's dress.

13, female, five years old. Very bashful before strangers. Face grows red, and she says the opposite of what she means.

14, male, fourteen years old. Much trouble with what was called "swallowers" if he sat in company.

15, female, sixteen years old. Face would flush and heart palpitate if spoken to by a stranger.

16, male, seventeen years old. Good speaker. Feels flush and faint when he faces an audience. Every nerve seems to twitch.

17, female, adult. Often addresses meetings, and presides with great dignity. Says it is a great trial.

18, male, nineteen years old. When talking to a young lady, turns bright red, stammers, smiles, . . . and finally bolts.

**Organic Changes.**—It will be admitted, I think, that all forms of embarrassment are accompanied by pro-

nounced organic changes. Some of these changes, as in the case of blushing, pallor, and the like, are noticed by the most casual observer. Others, of course, are more hidden, and may be located within the visceral or other inner regions of the body. It seems, moreover, that these emotions are productive of a sort of pain, or at least an unpleasantness, and that there is a corresponding sense of unnaturalness or restlessness attending them. The physical reactions are both sudden and unpremeditated. The embarrassed child is likely to rush into acts that are novel to him. His condition is not unlike that of the caged animal of which Professor Royce speaks (Outline of Psychology, p. 315 f.). His previous habits do not furnish a mode of relief; and, seeing no familiar avenue of escape, he begins a *struggle with the environment*, which results in *much new experience.*

**Children Differ.**—If this theory is a fair one, the utilitarian nature of social sensitiveness is easily made out. *It sets up in the individual the tendency to make new adjustments*—a tendency to struggle more or less blindly, but persistently, with the environment—and hereby is rapidly secured the foundation knowledge for future conduct.

Now, it is certainly evident to all that there is a vast difference in the amount of social experience of different growing children. Compare, for instance, the social life of an only child, born and reared in an isolated place in the country, with that of another, born and bred in a large city, and privileged to play daily in the public street with every variety of other children, and having the additional experience of every form of greeting from older people who pass. Even supposing there were a thousand comparisons instead of one, how vastly different, in every case, the two

would behave in the presence of others at any period, say, between the ages of five and twenty-five years.

It is rather singular that in all the works on pedagogy and child-development, there is to be found almost nothing of a definite nature touching this social sensitiveness. Should it be left to chance occasion? Or, is conscious oversight possible and advisable? Is there a best time for this kind of experience? And should it be limited in amount? Such questions as these might be pertinent here.

**Bashfulness may be Good.**—Personally, I believe that this sensitiveness to others is not only a powerful stimulus to various new forms of conduct, but that in a hundred ways it also works itself into the fabric of character; and that *it should have such exercise as will give it a certain degree of permanence until the character is fully formed.* "Sensitiveness means power. All strength of will and of character is developed through the capacity for feeling and for discrimination through feeling," says Paul Tyner. Just how much exercise this emotion should have is a problem, the solution of which will not be attempted here except in bare outline. It is very evident that it depends altogether on the nature of the child. There really seems to be no general rule of exercise in such a case except, perhaps, this very vague one: This social sensitiveness should be kept alive and active during the entire period of character development of the individual, to such an extent that, when full maturity is reached, it may have shaded off into numerous little forms of easy, graceful social conduct.

**Too Much Attention Harmful.**—It is evident, then, that this special kind of experience may be either overdone or underdone. Some children reared in the densely populated part of a city become blasé before they reach ten

years of age. Especially is this true if they are thrown daily into the company of older people of every rank and character, who are constantly twitting and teasing them, and otherwise drawing them out in conversation. The typical hotel child is a good illustration here. So is the child whose fond parents consider him precocious, and foolishly and repeatedly make a public display of his talents. I have carefully kept a record of five such cases as the latter, and will give a brief outline of them, as follows:

1. Boy, twenty-four years old, was considerably celebrated as a "boy orator." Began to "speak pieces" in infancy, and to deliver entire, memorized sermons, with the easy grace of a Beecher, at eight. Regarded by all as a great prodigy. Now a very dull, commonplace citizen, lacking in originality and spontaneity.

2. Boy, twenty years old, dissipated and oblivious to social emotions. Lacks ambition and self-respect. Was once the pride of the town because of early manifestations of future greatness. Recited in public at four, and was tossed and buffeted about by older people to the extent that, at nine or ten, social embarrassment was no longer experienced.

3. Girl, now seventeen. Was a beautiful child, and made to sing and perform otherwise in public from five on. At present, pronounced "listless and comparatively worthless."

4 and 5. Boys, now twenty and twenty-five. Not much unlike 1 and 2, respectively.

**City vs. Country Boy.**—It seems reasonable to say that all children who pass at one rapid bound through the periods of infancy, childhood, and youth, without receiving the emotional development that these periods so richly

supply,—that such children are doomed to an inexorable fate of intellectual mediocrity and general lassitude. In mature life the benumbed sensibilities of such an individual may be played upon and slightly affected by the environment, but such a thing as his struggling strenuously and successfully with the more difficult problems of life is out of the question. It is stated on good authority that practically all the men who, by their unaided efforts, achieved eminent success in commercial, political, and other occupations, have been recruited from the ranks of the boys reared on the farm, or under similar circumstances. "The country boy, in the long run, usually gets ahead of the city boy," says a great financier. "The life of large towns is not favorable to intellectual work. The men who have had great influence on their age have been brought up in solitude; and all the great men of England, and even of London, were brought up in the country." These are the words of Lombroso.

Now, it seems to me that the defeat of the city- or town-bred boy in these undertakings can be attributed largely to the unfortunate conditions in his social environment as set forth above. Certain of his emotional experiences die an untimely death before he is old enough either to reflect intelligently on their meaning, or to imagine adequately for himself a better condition for the future. Long after his quiescent life has begun to drag out its prosaic existence, his country cousin continues alternately to pass through the soul-trying experiences of defeat and embarrassment, and the triumphant experiences of success and higher attainment. In the language of another, the latter is securing "adaptations to the environment such as momentary conditions imperatively call for."

**A Later Period.**—Let us pass now to a somewhat later period, the earliest years of pubescence, for another aspect of this problem. The full period of pubescence comprises the five or ten years immediately following puberty, according to Irving Kind, in his Psychology of Child Development. In a very interesting discussion of the subject, this author says: "It [adolescence] may be characterized as primarily the time when the youth comes to consciousness of the sexual functions, and when the chief problem of coördination is that of adjustment to the values of the social organism in which he lives, . . . and a time of great emotional unstability." A little later, he continues: "It seems that, at this time, all the relatively unorganized forms of experience are peculiarly open to suggestion." At this period the whole situation of life takes on a new and intensely interesting aspect, especially that part of it which has to do with social relations. For the first time, perhaps, the youth takes a serious interest in the future. On this point Professor Dewey says:

"It is a period of tremendous enlargement of the sphere of interests. . . . The youth has an entirely new point of view from which to consider himself. He feels and sees himself with reference to the expanding world about him. . . . Socially and emotionally, he feels himself a part of a larger whole."

It is hardly necessary to say that all this sudden expansion of the youth's mental horizon has an organic basis in the awakening of the sex instinct. In the normal case, the love nature manifests itself in an outgoing search for a response of some kind in one of the opposite sex. There is a marked tendency to pair off among such young people; and the self-conscious acts of each, so far as they relate to

personal conduct, are thought of as referring most particularly to the other member of the pair. The emotional experiences are strong and frequent. Even the thought of the absent loved one is often attended by deep emotion; and it is *during this reflective period* that the youthful lover is *most actively engaged in making over his own character.* Specific results are easily seen in the following forms:

1. The bearing or pose of the body is changed. The youth who is in love is likely to stand and walk more erect, with chest out and shoulders back. He is all the time more or less conscious of how he looks in the presence of others. He also begins to take a new interest in his wearing-apparel. Considerable time is now spent in brushing his clothes and hair and otherwise arranging his toilet. Any lack here is sure to add to his flustration and discomfiture in the presence of the other sex.

2. This youth shows also a decided tendency to improvement in his language. Instead of the former broken, monosyllabic mode of expression, he now tries to round out his sentences. His thought processes are more *rapid* and *intense* than formerly, and require a larger vehicle of expression.

3. These emotional spells soon show their traces in the countenance of the youth. He is conscious of an effort to try to draw his facial expression into better form. The lower lip is drawn up closer, and other of the features are made more expressive of his dominant emotion, until he is finally capable of sending those "speechless messages" of which the poet writes.

**The Teacher's Opportunity.**—Many teachers regard the little love affairs of these youngsters as a serious interference with the progress of education, and try to sup-

press them; but the opposite view would be more nearly correct. To attempt to crush out this love sentiment is to make an assault upon life itself. Wise direction, rather than suppression, is needed here. In fact, when a youth first "falls in love" seriously, he is in ideal condition for instruction. Many a boy never looks at the question of his education seriously until this period arrives. For then his thoughts and feelings are not only novel and intense, but they come and go in more rapid succession.

Let us illustrate concretely the teacher's opportunity and duty here. For instance, concomitant with the awakening of the love nature there comes also a new appreciation of the beautiful. Poetry, art, and æsthetic sentiments of a general nature are now likely to appeal strongly to the young life; and, as he eagerly contemplates the meaning of it all, *it is always with a more or less distinct reference to the one he loves.* He is learning this verse of poetry for *her.* This bit of fine sentiment is for *her* sake, and the beauties of this flower-garden or that piece of architecture are to be described to *her.* It is only necessary for the teacher to help make the situation free and easy here, by supplying the proper materials, and thereby directing the spontaneous growth of the young mind. But how much might well be said in condemnation of the teacher who ignorantly tries to smother out or otherwise antagonize these beautiful young love-dreams, because, forsooth, the young boys and girls are pairing off in their love affairs, and because it is a "mean thing to have break out in a school anyway."

The matter of more serious courtship with reference to people of more advanced age will be considered now, in order to bring out a somewhat different aspect of the subject.

## CHAPTER XIX.

### SOCIAL SENSITIVENESS (Continued).

**Primitive Courtship.**—It seems to be instinctive in the male to press his suit vigorously, and in the female to show disposition to run away. Among primitive tribes of men, the male was expected to secure his mate by the most strenuous means, even at the hazard of his life, and the female was expected to try just as hard to escape, until captured, and then to submit willingly. Such a method of courting, in fact, seems to have become an unwritten law among many of the primitive tribes, and such is the method practiced today among certain uncivilized peoples. So the sentiment, "Faint heart never won fair lady," pervades the social fabric of the present. As these attitudes of the two sexes respectively can be shown to have been an aid in the preservation of the species in primitive times, so do their modifications serve a useful purpose today.

**The Bashful Swain's Experience.**—It is said that the young woman who forgets how to blush loses one of her most valuable charms. I believe that her chances of matrimony are much lessened. The various expressions of gallantry in men and those of modesty in women serve to increase their chances of marriage, and thereby of reproducing their kind. Observe, then, *e. g.*, the utilitarian nature of blushing, which cannot be feigned, and which is, therefore, a mark of genuine sincerity of feeling. I believe that the union of bashful young couples is hastened

on account of the very fact that their embarrassment gives mutual impressions of sincere regard, while the dissimulations of the "highly cultured" pair tend to the opposite effect, on account of mutual impressions of insincerity.

In the first place, fear is a powerful emotional stimulant, as are its refined modifications,—bashfulness, timidity, and the like. The young man who feels timidity or embarrassment is likely to act with corresponding force and effectiveness. His movements may be paralyzed temporarily, but, if so, there will be a reaction later that will deepen his reflective experiences and lead him to *do something* decisive. "The effect of emotion upon the train of ideas," says Wundt, "is accurately reflected in external movement. . . . The excitant emotion quickens ideation and involves heightened mimistic and pantomimic movement."

The isolated country youth is late in his social development, but this very fact may prove advantageous to him. When he comes into the social gathering, say a party once a fortnight, he is green and awkward. Emotions stir his soul to the very depths. He stumbles and falters and blushes and perspires. The period of childish embarrassment has lingered so long with him that nothing short of a long-continued, soul-stirring experience will subdue this emotion and turn it to his better account. He is not only temporarily wrought up, but he also *lives the experience over in memory during the subsequent hours of isolation*, and meanwhile he experiences "deep yearnings for the unattainable," and forms many secret resolutions that make for better character and nobler worth. Here is the battle-ground of his most telling victories for the future. He

"fights many an inner fight," and goes to the next social gathering with renewed confidence, but perhaps to suffer only a less degree of agony.

It is needless to say that during all this time, both in society and out, this typical swain experiences vigorous exercise of many of the bodily functions. The blood flows faster, the heart beats quicker, there being occasional palpitations, and other of the life processes are accelerated. "During the emotion of sexual love the circulation is accelerated, sometimes to an extreme degree, the respiration likewise; and they react on the organic function."

**The Blasé Youth Again.** — But what of the blasé youth? The noises in the street, the runnings to and fro, the multitude of human gazes, both strange and familiar, have played on his tender sensibilities till he is no longer emotionally responsive. Nothing short of a high-keyed orchestra playing "rag-time," or a dazzling circus procession, or a brilliant pyrotechnic display, will ever touch him again. It is most lamentable, but he has lost his various modes of social sensitiveness,—real virtues that *ought to have stayed with him* till the *reflective period was reached*, in order to *regenerate and refine* his thinking.

**Meaning of Reflection Here.**—Having now touched upon the origin and practical value of certain forms of social sensitiveness, let us examine at closer range some phases of the struggle of the "youth of greener sort" to overcome these manifestations. What I desire to emphasize more fully here is a fact that has been too much in the background heretofore; namely, the great value, in character-building, of this sensitiveness to the individual who is in what might be called the later formative period of character,—provided these various modes of emotional

experience have been preserved to him to that time. All such emotions and the reflective experiences that follow greatly enrich the mental life of the individual, and spur him on to attempt to reach a more satisfying adjustment to his social environment.

**Getting a Better Image or Ideal.**—While all forms of emotional response to other presences are no doubt accompanied by a good deal of self-consciousness, I believe that the reflective period that follows is one of much greater consequence to the individual. During the emotional attack, sober initiative is, of course, out of the question. But when one holds this post-emotional experience up before his calmer judgment, in memory, the true situation is more clearly seen, and readjustments for another such occasion are made out. Now, if the individual is able at this point persistently to imagine himself in a more ideal relation to that formerly embarrassing situation, he is in the beginnings of what I call one of the most fruitful forms of autosuggestion. Right here is accomplished a great work upon his character. A concrete illustration will make this clearer.

Suppose an extremely bashful young man at a party, suddenly thrown into the company of a young woman who, to him, has a "peculiar presence." At once there are terrible surgings to and fro of his life-blood. Palpitations and stoppages of that storm center, the heart, alternate. He is hot and cold by turns, and shortly afterwards carries himself off the scene limp as a reed, and bathed in a cold perspiration. During the second sober thought that follows his recovery, this verdant youth fights many a fearful foe within his own breast; and, if he is going to be saved at all, wins in imagination as many

victories. These ideal responses, thought out and repeatedly gone over in mind during this interval, are certain to be actualized in some degree, at the very first opportunity. Thus the young man learns to "spark" while alone, similarly as one, according to James, "learns to skate in summer and to swim in winter." Thus to subdue the embarrassment by degrees is to refine the expression of the emotion, which really lives on and serves its purpose.

The experience of beginning business is analogous to this, in the case of many a young man. Some years ago I watched a case of this kind through all the stages of its progress. This young man was trying to establish an agency, and was lacking in both tact and "nerve." His emotional experiences were both deep and strong, and his afterthought correspondingly intense. He made many attacks and retreats before any promise of success came. I gave him some mild suggestions at first, and later helped him to image himself to better advantage in the trying situation. Still later he was given a more definite lesson in autosuggestion, and I had the pleasure of witnessing his increasing success during a period of a half-year.

**Differences in Personalities.**—There is a marked difference in personalities. Even a little child will give evidence of this fact by his various methods of approaching strangers. While some attract him and win his confidence at once, others repel him. Some people seem to carry a sort of psychic atmosphere with them that impinges upon one's nervous organism. Go into an "august presence" and immediately you feel as if you had a "hangdog appearance." The lower lip falls, the throat becomes dry, and your utterances are labored and more or less inco-

herent. The other fellow has you at his mercy, and you both know it. Again, you meet a person of weaker personality, and the effect is exactly reversed. As he grows weaker and less positive, you become stronger and more fluent; and sometimes you almost feel keen pleasure in the punishment you are giving him. At another time you meet one who is on your own psychic level, and there is, perhaps, a struggle for the mastery, with the victory alternating. On still another occasion you come into the presence of one between whose personality and yours there seems to be no conflict. You are both at ease.

Some persons may never experience this form of the sense of other selves in any pronounced way, but I believe that in the end such experience is of positive advantage to the individual, for reasons given above, and for others. It may come in the presence of one or of many, in the drawing-room, the lecture-room, or in the form of stage-fright. In the ideal case, this emotional experience becomes a sort of refined habit, and it initiates a struggle within that leads to higher attainment and better and more forceful forms of expressions.

**Aids to Higher Culture.**—What are some of the aids in this struggle for higher existence?

(1) A merely mechanical one is appropriate wearing-apparel. That is, the subject must not feel that his personal appearance draws out any adverse criticism. (2) A clear conscience. The guilty conscience feels that its condition is revealed, and the psychic power is therefore lessened. (3) Rational self-confidence; and herein is implied practically the whole story. As the first and second points are simple and relatively unimportant, I will pass at once to the third. Of course it is only necessary to say

that imitation is an element in all this readjustment. It is implied in all I have said about imaging the better situation. The one who simply images himself persistently as overcoming his sensitiveness, is practicing what I call unconscious autosuggestion. Conscious autosuggestion consists in the same thing, plus the knowledge of the nature and value of the process. Let us see how the matter operates, even though some things said in the chapter on Self-Confidence may be repeated.

Of course, it is not reasonable to maintain that simply imaging an act once will necessarily bring about its performance, although there is perhaps always a tendency to that effect. It is the *persistent repetition of the image* that counts for most here. The whole social world today is more or less under the influence of suggestion, and the greatest factor in it all is the modern newspaper. In every item of sensational news, and every advertisement, if properly written, there is a strong suggestion to act. According as their natures and education may direct, many people take up these suggestions unconsciously and repeat them mentally many times, until the situation or act suggested becomes intimate and *personal.* Thus the suggestion becomes *auto*suggestion, and the tendency to act accordingly is made altogether more pronounced.

The imagination is not creative, but inventive and constructive. The individual who is stirred emotionally experiences a fuller flow of ideas as to how to act, and that form of activity which appears under the circumstances to be most satisfactory is the one of which the image is most likely to persist. The longer and more frequently this image is entertained, the more likely it is to function in action. If I am stirred emotionally by some embar-

rassing situation, and finally frame in imagination an act that will relieve and atone for this embarrassment, I immediately become fond of this new image. It is entertaining and deeply satisfying, and I entertain it again and again. Now while this act is repeatedly taking place in fancy it is being prepared for expression in fact. For the organism is concomitantly undergoing many of the processes that this act requires. Muscles, limbs and vocal organs feel impelled to perform their respective parts of the act. I see myself in the appropriate bodily attitude, hear myself uttering the right words, and feel within semblances of the necessary organic experiences.

**Organic Aspects.**—Laboratory tests show that the organism responds appropriately to the act, in the case of any intense imagination. The pulse-beat is changed, the blood distribution is modified, and the muscular tension is suitably readjusted. So far as the psychology of the act is concerned, it is already performed. Unless some strong counteracting influence is set up, the outward expression naturally follows upon the presentation of the appropriate situation. The organism has become in large measure habituated to the new act through the repeated process of imagination. When one is embarrassed, the conduct tends to follow the course of the deeply ingrained habit. This imaging process, then, is really the preparation of a new habit to inhibit and take the place of the old one. Backed up by emotional interest, as it is, this new habit gets the advantage, and in time becomes stronger and more natural than the old one, when it may be left to perpetuate itself and to develop itself, through actual experience, into better form. Thus the organism takes on and develops many of the most significant acts of life.

**Post-Suggestion.**—It is a well-authenticated fact that many persons are able to awake at an unusual hour in the morning, provided they determine to do so before falling asleep the previous evening. Undoubtedly the nervous mechanism is given in some way a "set," so that it sounds the alarm at the proper moment. It has been pretty well demonstrated that, "by taking thought" before going to sleep, one can prevent the occurrence of a disturbing dream that has been a regular nightly visitor. These are both merely forms of what has been called post-suggestion; *i. e.*, suggestions to be worked out in later processes. If these two forms are possible, why not others? If one can arouse himself from sleep at a certain time by post-suggestion, why can't he arouse his intellect to the solution of other scientific problems in the same manner? I have proved to my own satisfaction that he can.

If, for instance, a high-school graduate has, say, to deliver a commencement oration and has forebodings of failure on account of stage-fright, he can, most likely, prevent such a calamity by conscious autosuggestion. While persistently imaging himself as succeeding most admirably, he must continue to affirm within himself about as follows: "I *will* succeed! I CANNOT FAIL! I shall be *strong* and *self-possessed* and *clear-minded!*" He must continue this procedure until all thought of failure has vanished and the thought of success has completely possessed him. The remainder is both easy and natural. "As he thinketh, so is he." His success is practically assured. Titchener says: "Fix the attention steadily and intently upon some idea of bodily movement, and the impulse to do the act grows stronger and stronger until finally you can overcome it only by an effort."

**Physical Changes.**—As the result of the mental and emotional experience related in the last paragraph above, a corresponding change will have taken place in the physical conditions. Instead of pains and quiverings in the region of the solar plexus, the fluttering, enfeebled heart-beat, and the other various constrictions of nerve and muscle (all of which likely accompanied the fear of failure), there is now an opposite condition in the life processes. The heart beats with vigor, the blood flows freely to the parts, and the intellect is clear and keen. In short, there is a full sense of masterfulness that is at once a joy and an inspiration to its possessor.

This one case illustrates the method in them all, whether in social life or in business. This work cannot be accomplished at one trial or in a day, but it must become more and more a rule of practice,—a habit of life. The sensitive young person who becomes adept in this mode of procedure, becomes day by day more enabled to create the world anew to his own liking.

James, in this chapter on the Will, also says much that is in harmony with this sentiment. But he does not call it imaging, which it really is.

**A Negative Aspect.**—But I am aware that there is a negative aspect to this whole subject. For a time at least, after the individual first experiences the sensitiveness, there is often an effect that resembles temporary paralysis. In all such cases, it would seem at first glance that the result is anything but beneficial. We will now examine some of these cases more closely.

1. Under influence of great fear, the organism sometimes collapses.* Indeed, there are on record cases of some an-

* "In fear the skin is pale, the breathing shallow and hurried, the pulse weak and irregular, and the muscular strength diminished." (Tichener, Outline of Psychology, p. 235.)

imals, and even of some people, dying from sheer fright. These are not, however, cases of fear of people, but fear of things. By introspection and by analogy we can judge, however, that fear of persons may have a paralyzing effect in the case of timid children.

2. We are better acquainted with the depression of spirits, so called, that sometimes follows adverse criticism, or an affront of some other personal nature. There is a sense of weight about the heart, the circulation seems sluggish, and the thought processes are retarded. Titchener, in his Experimental Psychology, shows that under all ordinary circumstances of unpleasantness, the physical strength is reduced. We all know, too, that under stress of embarrassment, one's normal mental operations are confused.* One's normal physical acts are inhibited also. I am reminded here of the story of the young man who intended to ask a certain young woman for her company, but who "got the blamed trembles so bad he couldn't ask her." Many school children, and even some college students, suffer so acutely from timidity that they cannot recite, at least not creditably. Such instances are common. Two cases of this kind have received my personal attention. The first was a little seven-year-old school-girl, C.H., who, on account of timidity, could not be induced to recite or say a word during the class exercises, for a term of three months. The second, F.J.H., was a young freshman college student who came to me three times and asked to be hypnotized as a treatment for timidity. His was an extreme case. When called upon to recite he would usually stand and tremble, and, after a faltering effort, drop into his seat in a state of collapse.

* Darwin, Expression of Emotions, etc. p. 323: "Most people while blushing have their mental powers disturbed."

3. The sting of defeat in the case of school children and others, when they fail in intellectual contests, has the same physically depressing effect as described under number 2 above, which is enough alone to place the ordinary school contest under condemnation. The defeated child is likely to lose something of his power of initiative, and he will likely formulate permanent mental images of himself in defeat, and thus retard his own progress. No child is very likely to rise above his dominant idea of himself. Not long ago the writer gave an address as the closing number of an all-day program which was made up mostly of contests. Many districts in the country sent one or more representatives to contest for the prizes in arithmetic, declamation, singing, and the like. The battle raged all day, and was exciting. All the ordinary rules of order and decorum were violated, as the relatives and other admirers of the contestants crowded around and "sicked 'em on," while the poor little creatures worked despairingly. Quarrels and sharp charges of unfairness were not infrequent in the audience. Fourteen months later I met the father of one of the vanquished, and he was still full of spite as he related how they "cheated his thirteen-year-old daughter out of the prize." The latter has quit school as a result.

4. It is evident that there can be too little exercise of social sensitiveness during the growing period. According to the theory of this paper, this embarrassment ought to be gradually worn off, until, at maturity, it disappears in form of refined modification. (See ch. XVIII.) We see many instances of this under-development in people around us. Such people proceed with fear and trembling in an ordinary social gathering, and experience intense stage-fright whenever they try to perform in public. Unless

these embarrassing emotions are gradually subdued by practice that is well-nigh enforced, the inhibitory processes will in time gain complete mastery, and action will become practically out of the question.

To make this point clearer, a concrete situation will be described. Suppose a general meeting be called to consider matters regarding civic improvement, and that some familiar subject is proposed for general discussion. Only a few of those present will speak. Many others, who scarcely dare to stand in their places on account of timidity, will work out in their minds the wording of a few remarks, and will experience various painful organic disturbances, such as tremor, palpitation, agitated respiration, etc., winding up with a cold perspiration, and a feeling of being glued to the seat. People in such condition, whether old or young, are at the "danger point," and nothing short of violence will ever restore their expiring volitions. As time goes on, the impulse to act becomes less pronounced and the emotion less violent, till finally the individual lapses into a state of "innocuous desuetude" and becomes merely a quiet witness of the proceedings.

It seems to me that the duty of the teacher is very clearly implied here, viz., so to direct the exercises that the child may have a reasonable amount of practice in active response in the various embarrassing situations. The volitions must be exercised sufficiently to overcome the inhibitions if development is to take place rightly. These inhibitions are like temptations—better present than absent, if *overcome*, as they add force to the character and emphasis to the conduct.

**A Final Word and a Summary.**—My final word here is, that in all these negative cases there is present the

beginning of the usual impulse or tendency to novel and intensified forms of action, but the inhibiting process simply gains the mastery, and this condition of affairs in time becomes habitual. Relative to such situations, Professor James says: "One liability of such arcs is to have their activity inhibited by other processes going on at the same time. It makes no difference whether the arc be organized at birth, or ripen spontaneously later, . . . it must take its chance with all the other arcs, and sometimes succeed and sometimes fail, in drafting off the currents through itself."

To summarize briefly, I have tried to reach the following conclusions:

1. Social sensitiveness, in the case of children, is likely to initiate many new forms of physical movement out of which there are developed various new adaptations. It is an irreparable loss for children to become blasé.

2. In the case of youths, this sensitiveness is the occasion of much reflection, during the process of which the individual works out in imagination many new forms of better response for the future.

3. The sensitive emotions that accompany the pubescent period are especially stirring, and they are certain to initiate many new efforts in behalf of a better personal appearance.

4. This sensitiveness is an essential condition of normal development of character, and it should be present in some form during the entire formative period.

5. There are certain morbid aspects of this question, *i. e.*, negative ones, in cases of which the inhibitory process somehow gets the upper hand and becomes habitual.

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## CHAPTER XX.

### THE HIGHER LIFE.

There is so much being written and said of late in reference to purer thinking and higher living, and the like, that it is considered worth while, in this closing chapter, to devote a few pages to a discussion of these matters. First:

**Is there a Higher Life?**—If you should compare the mental life of such a man as the late Phillips Brooks with that of a common tramp or vagabond, you would doubtless say at once that the former is the much higher type of life. There is certainly a vast difference between these two types of consciousness. If it were possible to examine the entire record of the thoughts of two such men during an average day of their lives, there would doubtless be some interesting revelations. First, it would seem that the vagrant's thoughts would not compare with those of the philanthropist in richness, depth, and variety of ideas. Second, they would differ radically in the *nature* of their ideas. The vagrant's thinking would be concerned almost wholly with acts that would satisfy his baser animal nature, and with schemes for obtaining something without earning it. Being without self-respect, he could of course have no love for either God or his fellow-men.

On the other hand, we could reasonably suppose that the philanthropist's thoughts would dwell much upon matters pertaining to the well-being of the race. He would naturally be much interested in various means of relieving want and distress, and of uplifting mankind

generally. Such thoughts, if entertained habitually, would naturally lead to deeds of a similar nature, and to an affectionate regard for the welfare of men. The reader will doubtless agree that in these two cases, one mode of life is much *higher* and better than the other.

**As to Ordinary Persons.**—But these are two very extreme cases. What shall we say of the average one? Is there possible a higher type of consciousness toward which the person of average intelligence may and can direct his attention? Before entering into a discussion of this matter, let me remind the reader that this book has all along adopted the *selective aspect* theory of consciousness. This theory maintains that it is possible at nearly all times to choose from the many available objects of attention those that will bring about a certain preconceived order of things, and that the limits to which one may direct his thoughts in a given way are fixed only by past experience and memory. With this theory in view, and at the risk of being tedious on account of some possible repetitions, I shall try to describe what might be called a higher type of consciousness.

**A Growth.**—If the selective-aspect theory of consciousness is accepted, it is fair to assume that one by means of this process of selective attention gradually acquires more spiritual habits of thought. He might reasonably ask himself some such questions as: "What type of consciousness seems to secure the most out of life? What kind of thinking is contributive to the best physical health, the longest life, and the greatest amount of permanent satisfaction? What kinds of experience called pleasurable are at the expense of impaired health, shortened life, and future misery?

**Mental Attitudes.**—In trying to answer these questions for himself, one might be conceived of as arriving in time at a number of relatively fixed attitudes of mind toward such matters as knowledge, work, recreation, wealth, other people, religion, and the future life.

What knowledge is of the most worth, and, consequently, to be striven after? Herbert Spencer has tried to show that knowledge of sciences is all-important. This view seems one-sided, as it does not do justice to the arts and crafts. It is useless to try to answer this question in specific terms, but it is strongly urged here that the young student can best prepare himself for a useful life by taking (1) a broad general course, (2) a special course. The general course should include a minimum of two foreign languages (one ancient and one modern), all the sciences taught in a first-class high school, and manual training or industrial work of considerable variety throughout the entire period. The special course should then be entered upon and made intensive, and should fully prepare one for his chosen calling. Lack of patience and thoroughness are two of the most common weaknesses observed here.

**Regard for Work.**—The one who reaches the higher type of consciousness not only sees the ennobling quality of all honest work, but he is also himself a willing worker in some kind of field. It matters little as to the name of the vocation, just so it admits of honest effort and engenders self-respect. The saying that trickery, cheating and other forms of unfair dealing are necessary to business success, cannot be made good. The world is full of opportunities for successful business enterprise through fair means.

The work of any calling is made pleasurable and inspir-

ing if it leads to the accumulation of something in the nature of material wealth. It is only the acquisition of wealth for wealth's sake and for other base purposes that makes it ignoble. The man who believes in and practices the higher life herein described is not necessarily less industrious or less ambitious to acquire wealth. His ambition and energy are merely transformed and turned toward the realization of higher ideals.

**Regard for Others.**—A cheerful, optimistic view of human character is a necessary element of this higher consciousness which we are describing. To have a habit of ignoring the foibles and of magnifying by word and act the good points of character in others, is a most desirable and valuable asset. To be able to find a spark of divinity in the so-called base character is a means of exalting one's divine nature. If one will try to regard even the most benighted of human creatures not merely as an animal possessing mental powers but as a spiritual being struggling feebly toward the light, he will certainly thereby render his own sympathies more active and his judgments of men less harsh. He will more nearly realize the meaning of the common brotherhood of man, of which the poet speaks.

**The Spiritual Life.**—Every one who is interested in a higher mode of living must of necessity develop his spiritual nature. It would be injudicious to suggest any religious creed here, excepting, perhaps, such as could be indorsed by all those who believe in a Supreme Ruler of the Universe and who have a common interest in developing the sublimest and noblest qualities in human character. Nothing herein suggested is intended to be offered

as a substitute for anyone's religious belief, but rather as a supplement to it.

Let those who believe in a Supreme Being call him whatever suits them best. God, Jehovah, The Omnipotent, Divine Mind, The Heavenly Father,—any such term will do. The essential thing is that in connection with one's ordinary affairs, there be formed a habit of spending a few moments daily in some kind of communication with this Being. The manner must be of one's own choosing. By coming habitually into close, spiritual union with this power one may render himself more susceptible to good influences both human and divine. This sense of a Divine Presence, if realized deeply, will become a potent factor in one's experience.

Such a religious nature as is here contemplated ought to be characterized further by the fullest tolerance of the religious beliefs of others, criticising them, if at all, only in a kindly and affectionate manner. This world is made more interesting by virtue of the fact that there is a great variety of opinion among people. It would be very dull and uninteresting, indeed, if all were finally brought to one fixed belief with reference to any great question. Such a condition would really mean stagnation, or death. The statement cannot be made too emphatic, therefore, that the religious question must, because of its very nature, forever remain open and unsettled. If this statement is true, it is also true that the religious views of even the most intelligent man living must be only partial and fragmentary.

**A Plea for Fairness.**—Is it not entirely fair, then, to say that the various religious beliefs may be so many aspects of the same great spiritual truth, which is ever

working itself out in the lives of men? Is it not also fair to suggest, in view of these seeming facts, that the only reasonable course of activity, as regards religious beliefs, is to live and let live? Or, if one must try to supplant another's religious faith with his own, would it not be well to proceed to the effort with loving exhortation rather than bitter denunciation? It seems almost incredible, but yet it is often true, that a man of average intelligence, possessing religious views of his own, should denounce as "fools" and "dupes" a large body of other people, also of average intelligence, simply because the latter are adherents of a religious faith different from his own.

Man is by nature a religious creature. It appears to be just as natural for him to have spiritual cravings as it does for him to desire food and drink. None of these desires can be permanently satisfied, and each calls for a kind of supply peculiar to its nature. It would be absurd for me to pretend to know better than you do what food you crave, although I might in kindness tell the kind that is most suitable for me, and why. The same kind of attitude might be assumed by me toward your spiritual sustenance.

**The Great Fact.**—The author has been trying to discover what there is peculiar and yet habitual in the experience of those persons who seem to find such comfort in what they are pleased to call the higher spiritual life. He has found that in addition to many of the qualities of mind already mentioned, the usual case is of a person who has had practically eliminated every form of fear from his life. And in nearly every instance there is another matter of even greater significance, namely, a

*peculiar way of habitually realizing the influence of the Supreme Being believed in.* No doubt the reader will be interested here in taking note of some of the terms used to designate this peculiar experience. Several, which have been gathered from various quarters, will be given.

A good, innocent, illiterate old negro said that there was always "a kind of singin' in his soul." A refined woman, who had evidently had much in the nature of annoyance to overcome early in life, termed it "a message of sweet peace." Not a few maintain that they hear "a still small voice." Another calls it a "Divine Presence within and without." A careful student of things spiritual characterizes this condition as "a feeling of complete At-one-ment with the Divine." It was a skilled musician who described this peculiar presence as a "sublime symphony," while a beautiful-spirited elderly woman was "constantly borne up by the Everlasting Arms." Still others expressed it as "a great flood of spiritual light," "a sense of being in tune with the Infinite," "a sense of being transformed," and the like.

**The Significant Point.**—Now the point to be urged here is this: Even if it be admitted that the type of experience just described is in every way a pure hallucination, there can be no denying the fact that *every such experience* constitutes *a predominating factor* in the life of the person concerned. If one who has long been buffeted and tossed about in pain has at last become soothed and sustained by "a message of sweet peace;" and if one who has long been bearing a heavy burden up life's steep incline feels himself at last "borne up by the Everlasting Arms;" and if another, who, having lost his way,

seemed for many years to be groping about in darkness and despair, "heard a still small voice saying, 'Arise and shine, for thy Light is come;'" and if still another, who has been bitterly hating and persistently persecuting those who happened to dissent from his religious creed, suddenly becomes transformed and pours out the remainder of a long life in deeds of sacrifice because he "heard a Great Voice out of Heaven;"—if these experiences actually occur, and one's life is actually made more deeply satisfying both to himself and others by them, does it make much difference whether we call them hallucinations or something else? The fact remains that such experiences are seemingly natural, and that *they may be the means of reaching a higher mode of life.*

**Recapitulation.**—To see the goodness in other people, and to help them to find it in themselves; to be tolerant of the opinions of others, giving them credit whenever possible for sincerity of purpose; to be frank and open-hearted and honest in my dealings with others, showing a willingness to accord even a competitor a fair opportunity in the race of life; to deal fairly and affectionately with those who are in any sense criminal in their acts or tendencies, and to rebuke and criticise only in love; to respect and care for my body as a fit temple of the soul by temperance in eating and drinking, and to work hard enough to appreciate rest and recreation; to refuse utterly to worry unnecessarily about anything, but to strive at all times to entertain only pure and ennobling thoughts; to get good and to give good everywhere, making somebody glad of my presence;—these are some of the affirmations that might profitably be made by those who

are interested in a more spiritual type of consciousness. Finally—

To see the beauteous world,
To breathe the fragrant air,
To hear accordant sounds,
To feel, to be,—
  This is not life!
There is a larger view,
There is a deeper breath,
There is a finer touch,
And a diviner sound,
Than sense can e'er reveal.
To see the glory in the Infinite,
To feel the breath of the Almighty,
To hear the voice of the I Am,—
  This is to live.

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Everett,—The Psychological Elements of Religious Faith, Ch. XII, "The Supernatural Character of Beauty."

Coe,—The Religion of a Mature Mind, Ch. VI, "The Chief End of Man."

Adler,—Life and Destiny, Chapter on "The Higher Life."

# APPENDIX.

## REVELATIONS OF SCIENCE.

Modern science is doing much to trace out the connections between neural activity and consciousness. In an effort to accomplish this purpose, three kinds of evidence have been brought out, namely: pathological, anatomical, and physiological.

Injuries to various parts of the nervous system, especially the brain-cortex, have been brought to the attention of physicians and other specialists, and the neural effects noted. For instance, a soldier receives a bullet-wound in the occipital lobe of the brain and is immediately rendered wholly or partially blind. In this case the evidence is fairly conclusive that the center for sight lies in the region of the brain which was struck. If the lesion in the occipital lobe is such as to cause complete blindness, all *memory* of things seen is also obliterated. A person so injured can form no visual images whatever. An injury in the upper left side of the brain (in the case of right-handed people) often causes inability to understand what is heard. So the destruction of other centers causes the loss of other functions.

The second kind of evidence of scientific mind-body connections is obtained, for example, by means of autopsies. By cutting into the brain of a diseased person who has long been deaf, dumb or blind, or partially paralyzed, the scientist finds the nerve structure of a peculiar nature. The center, which, on account of the particular ailment,

has not been used, is always found to be shriveled up,—atrophied. On the other hand, unusual ability in the performance of any function is attended by an unusual development of the corresponding brain-center.

By means of vivisections upon lower animals a further line of evidence leading to the same conclusion is deduced. Frogs, rabbits, monkeys, and various other animals are made martyrs to the cause of science. By means of electrical stimulations upon different portions of the monkey's brain, artificial bodily movements are brought about. The close resemblance between the brain-structures of men and monkeys warrants the assumption that their brain-functions are also similar. Actual comparisons, so far as they have been possible, have proven this assumption true.

**Definite Neural Tracts.**—Under ordinary stimulation the excitation seems to pass over well-defined neural tracts. Dr. Paul Carus, in his *Soul of Man*, quoting from Professor Exner in Hermann's *Physiology* says:

"If a man gives an appropriate answer to a question, the following things must take place:

"(1) He must hear the words spoken.

"(2) These words must awaken in him the ideas that belong to them.

"(3) From the mental operation conducted with the help of these ideas, a resultant product must issue.

"(4) This product must be clothed in words.

"(5) The central innervation necessary to the utterance of these words must be thought about. And finally,

"(6) These innervations must arrive at the proper muscles in their proper order and intensity."

**The Neural Elements.**—"The nervous system," says

Professor Angell, "is made up of nerve-cells, with their filamentous elongations which are called fibers. . . . They are accumulations of granular protoplasmic masses containing a nucleus, and often within the nucleus smaller nucleoli; while from their edges are given off filaments of various forms and sizes. These filaments are outgrowths of the cell-body. The whole structure, including both fiber and cell-body, is called a neurone. The neurone is therefore the real element of the nervous system." The number of these neurones in the nervous system of the average adult is estimated at 3000 millions or more, and they are in constant process of development.

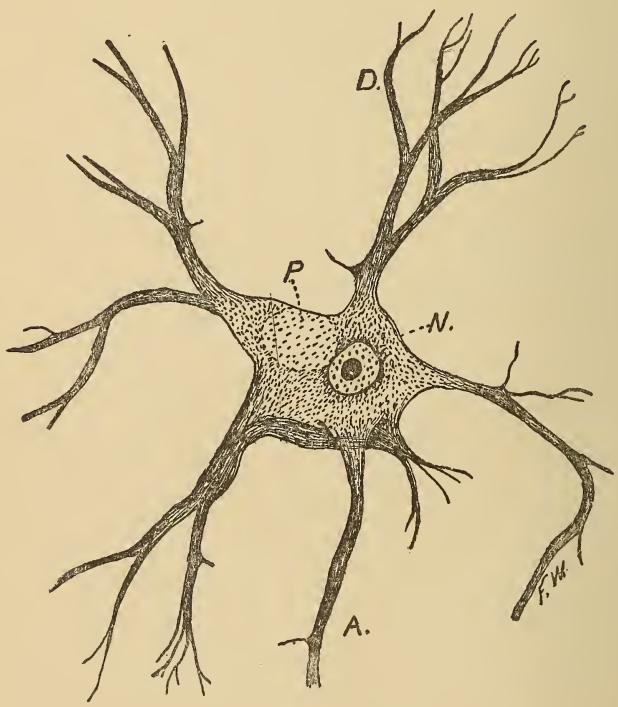


FIG. 1. Isolated body of a large cell from the ventral horn of the spinal cord of man. Multiplied 200 diameters. (Donaldson, after Obersteiner.) *A.*, axone (each cell has but one); *D.*, dendrites; *N.*, nucleus with inclosures; *P.*, pigment spot.

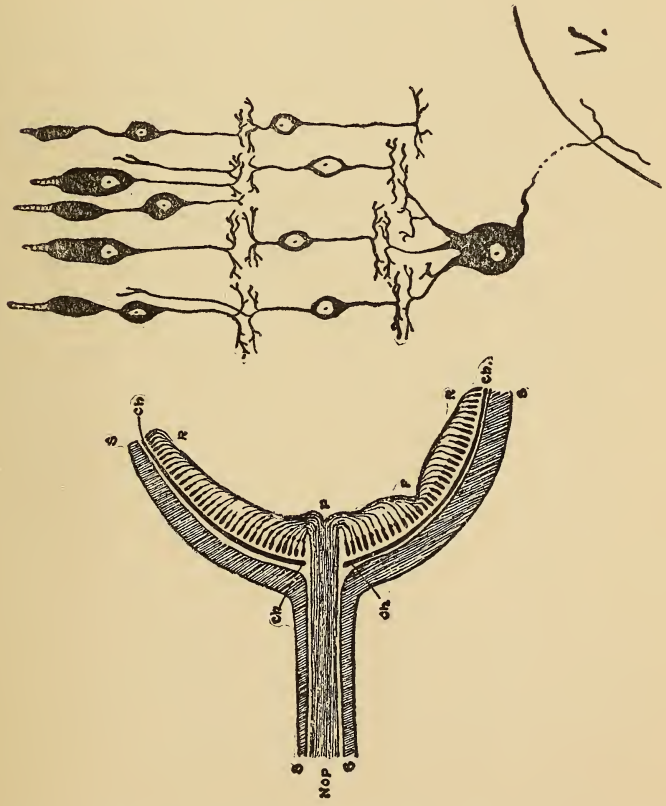


FIG. 2. Scheme of retinal fibers. (James, after Küss.) *Nop.*, optic nerve; *S.*, Schlerotic; *ch.*, choroid; *R.*, retina; *P.*, papilla (blind spot where no retinal structure is found); fovea (point at which the clearest image is focused); *V.*, rod-and-cone structure of the retina, highly magnified.

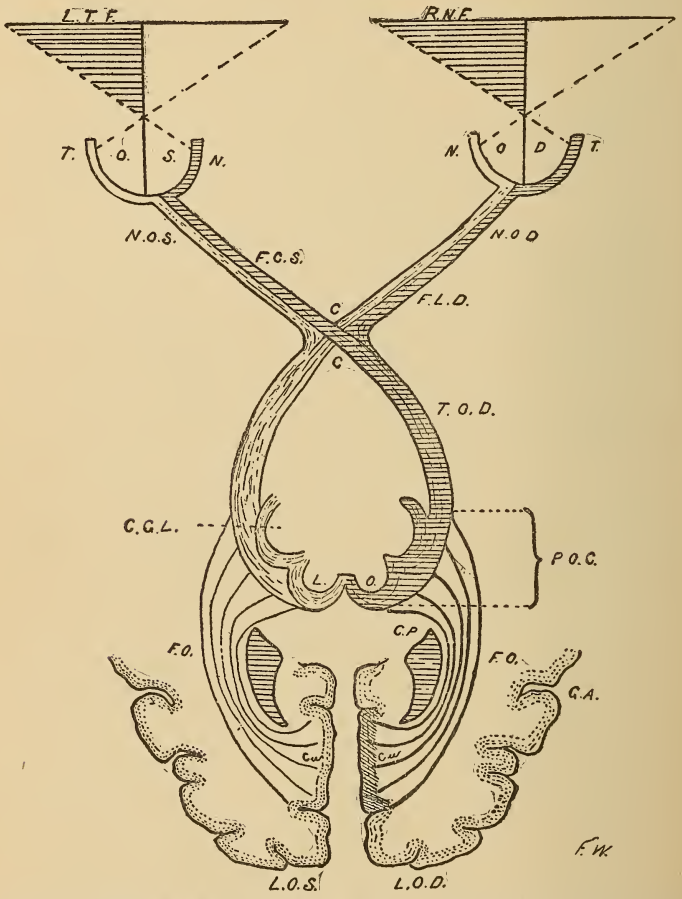


FIG. 3. Scheme of the mechanism of vision. (James, after Sequin.) The *cuncus* convolution (Cu.) of the right occipital lobe is supposed to be injured, and all the parts which lead to it are darkly shaded to show that they fail to perform their function. *F. O.*, the intra-hemispheric optical fibers. *P. O. C.* is the region of the lower optic centers. *T. O. D.* is the right optic tract; *C.*, the chlasma; *F. L. D.*, fibers going to the internal or temporal half; *T.*, of the right retina; and *F. C. S.*, those going to the central or nasal half of the left retina. *O. D.* is the right and *O. S.* the left eyeball. The rightward half of each is therefore blind. In other words, the right nasal field, *R. N. F.*, and the left temporal field, *L. T. F.*, have become invisible to the subject with the lesion at *Cu.*

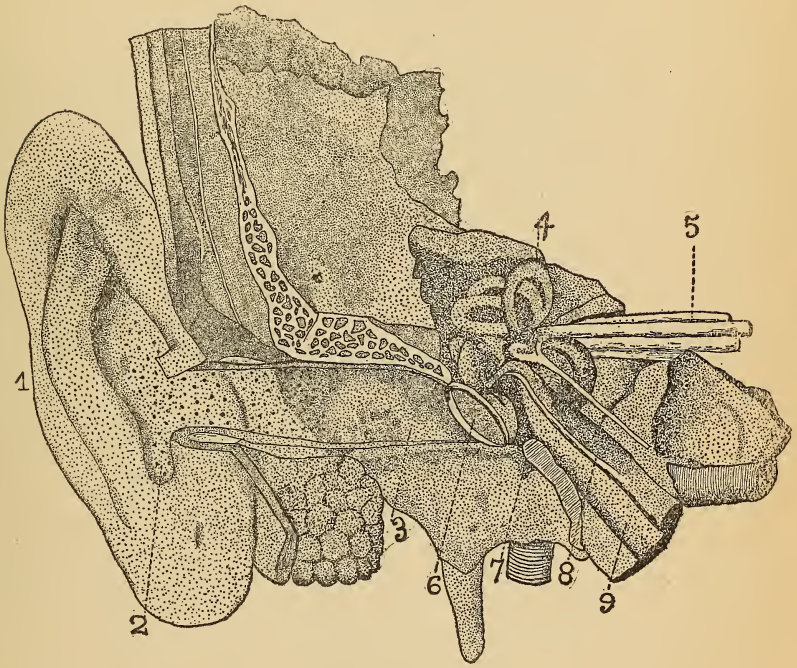


FIG. 4. The organ of hearing. (From Walker's Physiology.)

1. Auricle.
2. Opening of ear showing orifices of sebaceous glands.
3. External auditory canals.
4. Semicircular canals.
5. Auditory nerve, with facial nerve.
6. Membrana tympani, with the elastic fibrous membrane which forms its border.
7. Tympanic cavity.
8. Tensor muscle of the tympanum, the tendon being attached to the upper portion of the handle of the malleus.
9. Upper portion of the Eustachian tube.


FIG. 5. *H.* and *C.* represent respectively the hot and cold spots as found in the back of the hand. At these points are nerve termini sensitive to (*H.*) heat stimulations and (*C.*) cold stimulations.

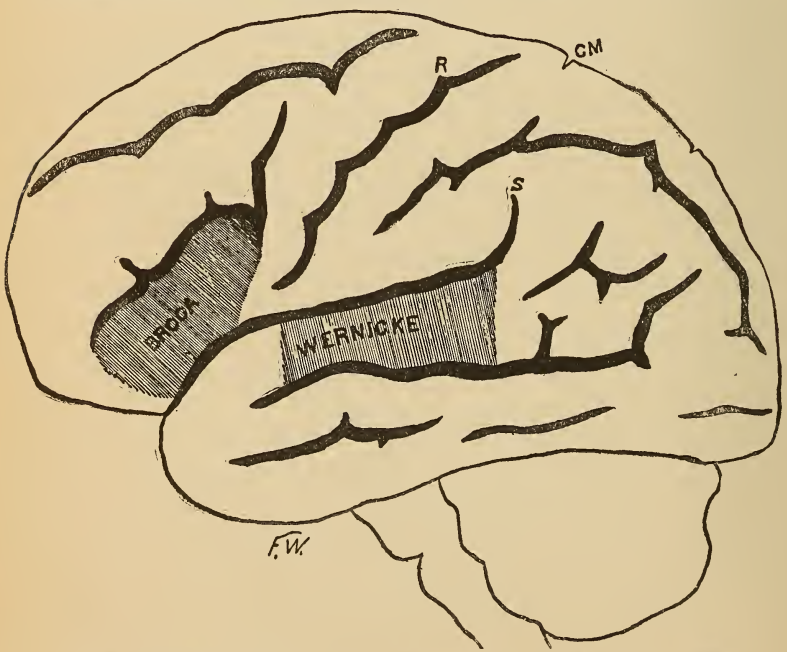


FIG. 6. Schematic profile of left hemisphere. (After James.) If the region marked *Broca* be destroyed, motor aphasia (inability to execute movements) results. Destruction of the region marked *Wernicke* results in sensory aphasia; *i. e.*, inability to feel sense-impressions. This case assumes a right-handed person. In case of left-handed persons these centers would be located in the right hemisphere.

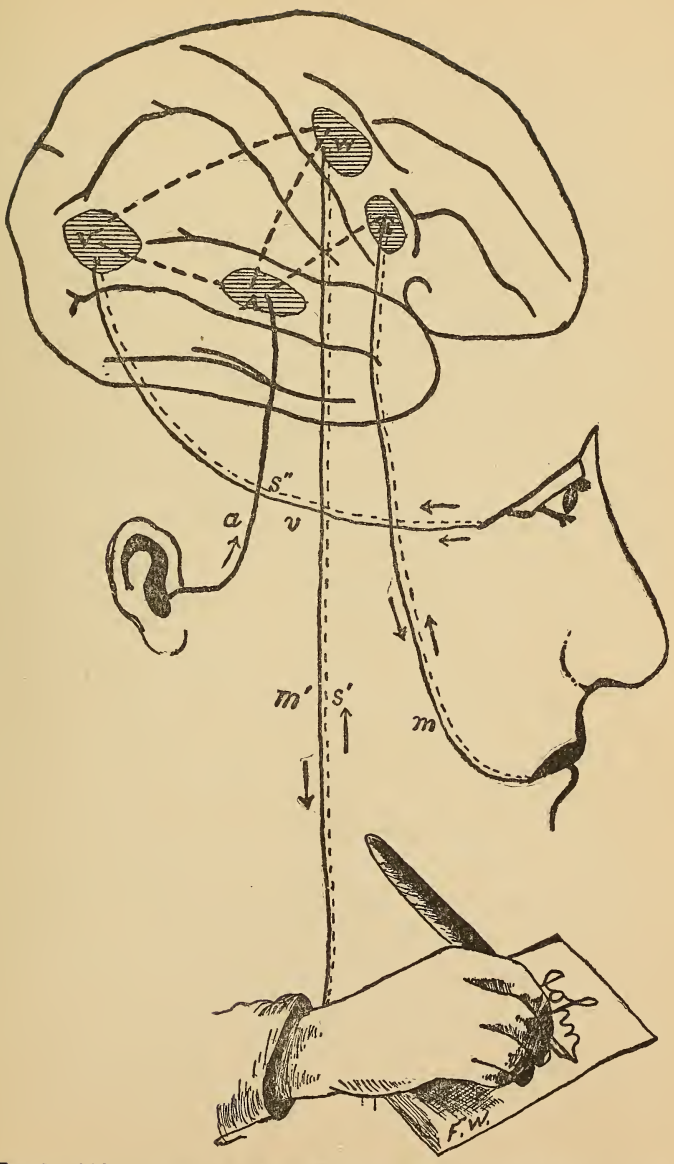


FIG. 7. (After James.) *A.* is the auditory center, *V.* the visual, *W.* that for writing, and *E.* for speech. This figure is designed to represent the round-about course taken by the nerve-current during the act of writing something heard. The complexity of this neural act is considered by some as an argument against the early introduction and the over-practice of writing from dictation.

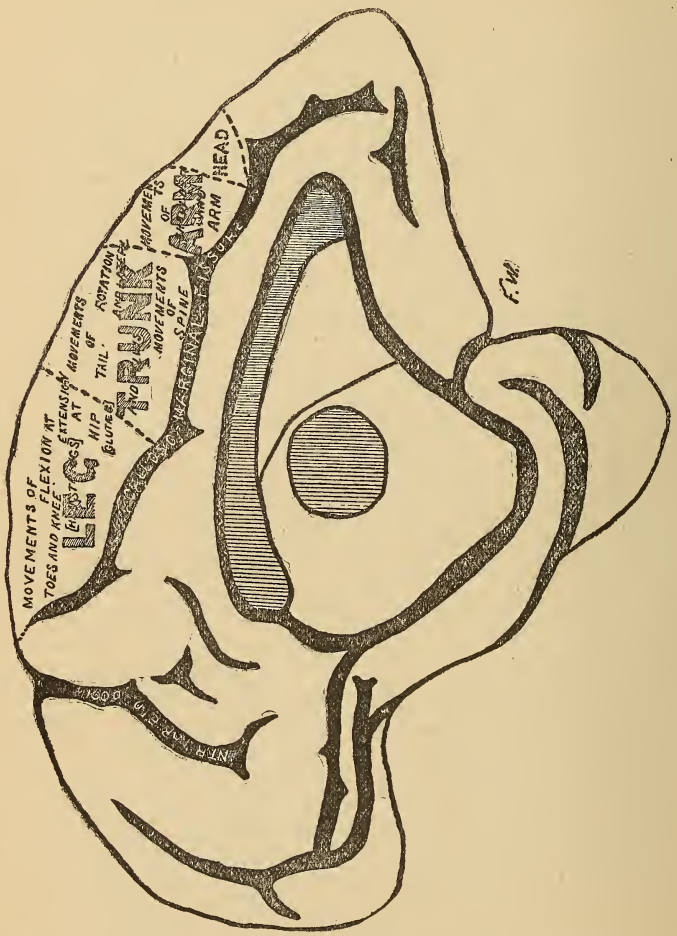


FIG. 8. (After James.) Left hemisphere of monkey's brain, showing localizations of functions. Mesial surface.

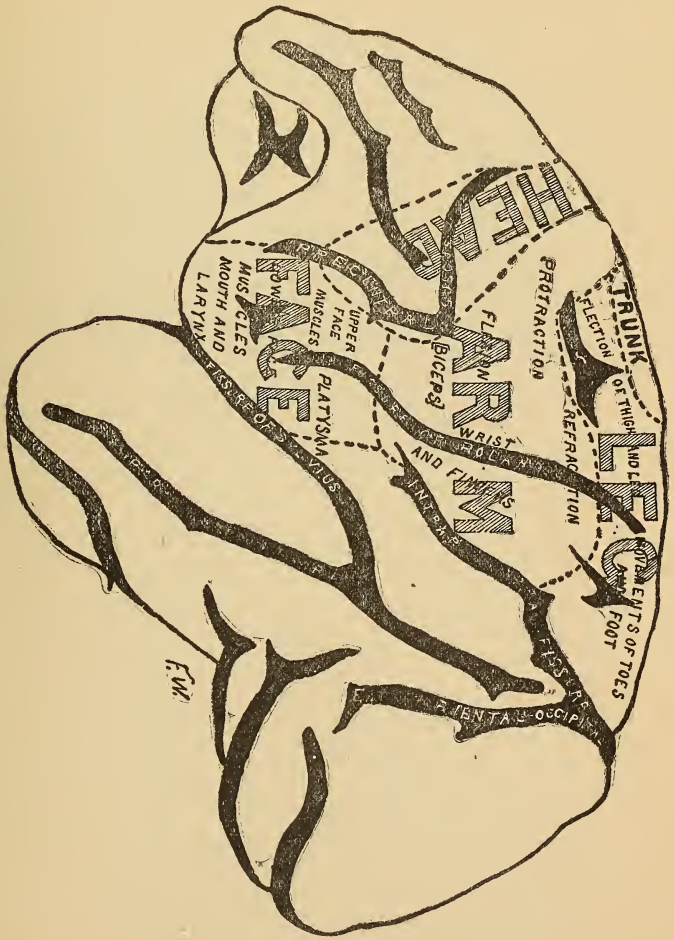


FIG. 9. (After James.) Left hemisphere of monkey's brain, showing localizations of functions. Outer surface.

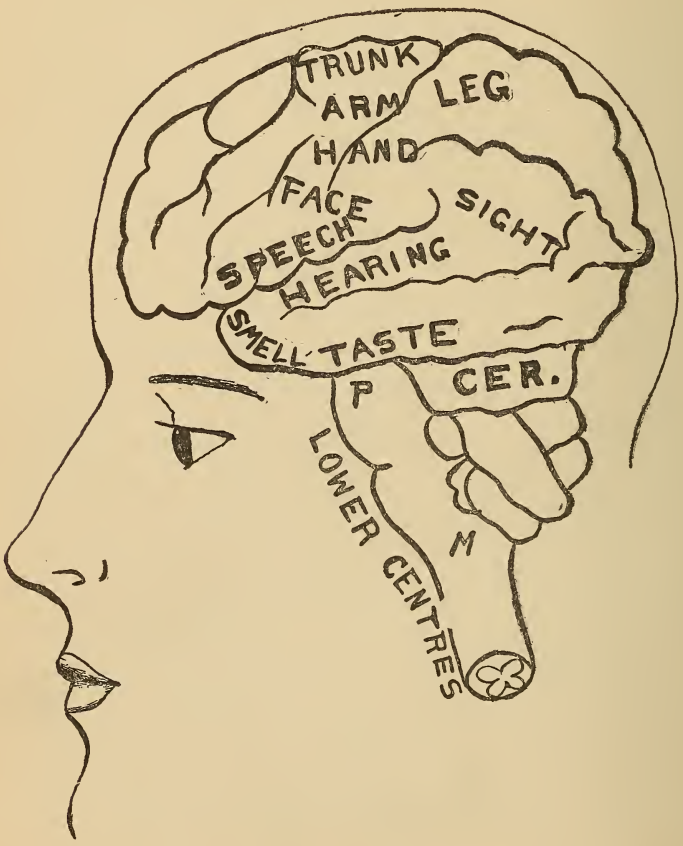


FIG. 10. (From Walker's Physiology.) Showing localizations of human brain. *P.*, pons; *M.*, Medulla; *Cer.*, Cerebellum.