

LITTLE BLUE BOOK NO. 491
Edited by E. Haldeman-Julius

Psychology for Beginners

Hereward Carrington, Ph. D.



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"Modern Psychical Phenomena," "The
Coming Science." etc.

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PSYCHOLOGY FOR BEGINNERS

The word "Psychology" originally meant the study of the *soul*. The human soul was thought to be a sort of entity, exhibiting qualities or "faculties," which became manifest to us as various psychological manifestations. The last century saw the gradual development of a "psychology without a soul"—a psychology based upon the study of *mind*, as manifested in human beings; it therefore became the study of consciousness.

Until relatively recently, the word psychology meant only this. Within the past few years, however, the scope of this science has been enormously increased. When we speak of Psychology, we no longer mean, merely, the adult, human, normal consciousness. We must define now our terms more accurately and in greater detail. We have *psychologies*—just as we no longer have "insanity," but *insanities*. The science has been enlarged. We know *animal psychology*—which deals with the mind of lower animals—extending all the way down the scale to the simplest organisms. We have *Educational psychology*, which deals with the psychology of childhood, and the best methods of training the young mind and developing it. We have *individual psychology*, dealing with the relationship of the individual to his environment, and going into the details of his own mental make-up. We have *social psychology*, which deals with the instincts and desires

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of man, as related to the society in which he dwells. We have *abnormal psychology*, dealing with the varied derangements, abnormalities and defects of the human mind. We have *aream psychology*, especially studied by psycho-analysis. We also have the *psychology of the crowd*, so different from the individual in the crowd. We have the *psychology of the subconscious mind*—that vast realm which was practically a closed book to the psychologists of the last century. We have *Oriental psychology*, which is entirely different from our own, in many respects. We have *supernormal psychology*, which deals with certain alleged "psychical" phenomena, and endeavors to explain them along psychological lines. We have psychology of religion, history, politics, etc.

It will be necessary to devote a brief space to all these sections, in order that a bird's-eye view of the whole subject may be obtained. First of all, however, a few words as to the general methods and scope of psychology.

The older psychology was based almost entirely upon "Introspection"—that is to say, subjective analysis of the mind and its activities. A great deal of valuable material was secured in this manner. Later on, came "experimental psychology"—the "new psychology," as it was called for some time—based upon accurate laboratory measurements, by means of suitable instruments of precision. This dealt very largely with the various reactions of the subject experimented upon. Still more recently, the so-called "Behavioristic" psychology,—which stud-

ies the behavior of the subject, and contends that the inner, mental activities can be interpreted in this manner. A brief summary of the behavioristic psychology will be given later on.

Whatever theory we may hold as to the relation of brain and mind, it is certain that the two are in some intimate way related to one another. Whether the activities of the brain actually *cause* or *produce* consciousness; or *vice versa*; or whether these two are but opposite sides of the same shield—but differing aspects of reality, (just as a decayed tooth and the pain caused by it are differing aspects of the same thing) cannot be decided; it is a metaphysical problem, which need not be discussed now, since it falls more properly under the province of philosophy than of psychology. For all practical purposes, we may take it for granted that brain and mind are in some unknown and intimate way connected, and that thought and the operations of consciousness are coincidental with the activities of the brain.

The human brain is a delicate and beautiful structure, of great complexity. The older "physiological psychology" really amounted to little more than physiology, since it dealt with mind largely in terms of brain. Nowadays, psychology is recognized as a separate science, and we can discuss its problems in purely mental terms or language, without referring to the brain.

In discussing cases of multiple personality, for example, we can now do so without using physiological terms, which was not the case until a few years ago. In other words, we now

recognize that the psychic sphere is a legitimate one of its own; and, although it is in some manner related to the brain-changes, this fact is not taken into account; the two worlds are regarded as distinct and separate, for all practical purposes,—although perhaps united in some metaphysical sense ultimately. Details as to the general anatomy of the brain can be found in any physiology, wherein the various motor and sensory centers are located, the higher association centers, etc. Dr. Bastian's work, "The Brain as an Organ of Mind," is a good book,—although several years old. But there is a wealth of material upon this subject,—to which we have no space to do more than refer in the present booklet.

The human mind is just as complex as the human brain. It reasons, wills, feels, associates, remembers, perceives time and space, forms concepts, forms habits, imagines, gives its attention, concentrates, discriminates, compares, induces, deduces, thinks abstractly, is subject to illusions, hallucinations, insanities, as well as flights of genius, directs the flow of thought, experiences emotions, feels sensations, experiences the constant feeling of "self" as a background, etc., etc. And every mind in the whole world is different, both in its structure and its mode of action! No two people think and feel *exactly* alike. Each person is a world unto himself. He himself represents an invisible entity, somehow tucked away in that little dark chamber which we call the skull, and within *that* his whole individual universe is contained.

Let us now endeavor to dissect this complex

mental organism, and see how it "works." We shall try to discover the nature and structure of the human mind, and ascertain how it operates. We shall devote a brief chapter to each of its varied activities, and then endeavor to weld together our findings, so as to enable us to understand the real nature of the Self.

First, however, a few words as to the various "Psychologies."

ABNORMAL PSYCHOLOGY.

This is occupying a prominent place in modern psychological literature. There is a "Journal of Abnormal Psychology," devoted especially to its problems. A variety of fascinating questions fall under this heading, a few of which I have briefly touched upon in the section dealing with "The Structure of the Mind." Space prevents further treatment here. The reader may consult such a book as Dr. Isador H. Coriat's "Abnormal Psychology" for further particulars.

ANIMAL PSYCHOLOGY.

A vast literature exists upon this subject also. Darwin's "Expression of the Emotions" is, of course, classical. Lindsay's "Mind in the Lower Animals" (2 vols.), and Mills's "Animal Intelligence" are useful books. Some original and ingenious speculations are contained in Ouspensky's "Tertium Organum." A most interesting work, from a practical point of view (that of a trapper and hunter) is "How Animals Talk," by William J. Long. A study of the so-called "talking animals" is "Lola: a Contribution to

the Thought and Speech of Animals." Chapters on the marvellous horses of Elberfeld are contained in Maeterlinck's "Our Unknown Guest," and in my own "Modern Psychological Phenomena."

The question of *Instinct* in animals has also received extensive treatment. C. Lloyd Morgan's works are classical in this respect: "Habit and Instinct," "Instinct and Experience," etc. See also Chadbourne's "Instinct in Animals and Men," and McDougall's treatment of the subject in his "Social Psychology," in his "Psychology," and a number of articles on this subject in the "Journal of Abnormal Psychology," and similar periodicals.

PSYCHOLOGY OF POLITICS, HISTORY, ETC.

This branch of our subject deals with such questions as the mental life of nations, religion and the state, national psychology, etc. A useful book in this connection is J. A. Dewe's "Psychology of Politics and History."

RELIGIOUS PSYCHOLOGY.

A voluminous literature also exists upon this subject. Attacks upon religion are to be found in such books as Leuba's "Belief in God and Immortality," and Theodore Schroeder's writings, which endeavor to trace all religion to sex. On the other hand, are to be found such books as Barrow's "The Validity of the Religious Experience," and William James' "Varieties of Religious Experience." An extensive study of Mysticism is Poulain's "The Graces of Interior

Prayer." The literature on this subject is so vast, however, that it would be impossible even to indicate the sources of reference.

EDUCATIONAL PSYCHOLOGY.

The mind of the pupil, the aims of the teacher, methods of instruction, school work, etc., form the subject-matter of this branch of knowledge. A useful book in this connection is Hugo "Munsterberg's "Psychology and the Teacher."

BUSINESS PSYCHOLOGY.

Of late years, much has been written concerning this topic. Many works upon it have been issued, among which one might mention Link's "Employment Psychology," and Atkinson's "Psychology of Salesmanship."

SOCIAL PSYCHOLOGY.

The most noteworthy book dealing with this question is undoubtedly William McDougall's "Social Psychology." Since the publication of this book, a number of others have been issued, but the student would do well to begin with this one. Much useful material is also to be found in H. G. Wells' "Outline of History."

INDIVIDUAL PSYCHOLOGY.

This is covered by any popular book, such as the present one.

CROWD PSYCHOLOGY.

An individual in a crowd is usually lost, more or less—mentally no less than physically. If

the crowd is carried away by some emotion or intense excitement, so is the individual in it. Crowd psychology is generally primitive; emotions overrule intellect. An interesting work upon this subject is G. LeBon's "Psychology of the Crowd." See also McDougall's "The Group Mind," and Trotter's "Instincts of the Herd in Peace and War."

DREAM PSYCHOLOGY.

This is covered by such books as Freud's "Dream Psychology," Walsh's "Psychology of Dreams," Coriat's "The Meaning of Dreams," etc. See also the little book upon "Dreams" in the present series, and the references therein given.

ORIENTAL PSYCHOLOGY.

This is extensive, in one sense, sparse in another. Orientals have written much about themselves, but largely concerning their mystical states. Rhys Davids's "Buddhist Psychology" is perhaps a good summary of the Hindu Teachings (a section of them). The various Sacred Books of the East give, perhaps, as good a clue to their inner life as any.

SUPERNORMAL PSYCHOLOGY.

This, naturally, falls within the province of Psychical Research (See the volumes upon this topic in the present series). F. W. H. Myers' "Human Personality" is a classic; an excellent and sane book is Prof. Th. Flournoy's "Spiritism and Psychology," translated by the present writer.

PSYCHOLOGY OF THE SUBCONSCIOUS.

Here, again, a voluminous literature exists, dealing with the various problems presented. Morton Prince's "The Unconscious," and Joseph Jastrow's "The Subconscious," are valuable books. A. T. Schofield's book, "The Unconscious Mind," may also be consulted. How new this idea of the subconscious mind is may be seen from the fact that it was hardly mentioned in James' "Psychology." The difference between unconscious and subconscious consists in this: that whereas the former is thought to represent a sort of "unconscious cerebration" (Carpenter), without definite thought, the subconscious mind is believed to carry-on a lively mentation of its own; there is an unconscious consciousness, so to say. This idea has been disputed by some authorities, but there is a mass of evidence in its favor. Indeed, investigations of the subconscious mind have taken precedence over those into the conscious mental processes, of late years. The mass of published material dealing with the psychology of the subconscious is now enormous.

BEHAVIORISM.

This is a relatively new school in psychology, and has been the subject for much controversy. Its main contention is that behavior is the key to a man's real, inner being, and that, from this, his total self can be gauged. His instinctive and emotional equipment, his habits,

his activities, his social adaptability, his recreation and sports, his sexual life, his reactions to conventional standards, his personal bias and peculiarities, etc.—these are all factors in the determination of his inner mental life. In other words; as a man behaves—so is he! Behavioristic psychology, however, totally fails to disclose to us the essence of self and personality—what it is. Those who may be interested in pursuing this line of reading further may consult Dr. John B. Watson's "Psychology: from the Standpoint of a Behaviorist."

THE SENSES.

The five generally recognized senses are: sight, hearing, taste, touch and smell. These depend upon certain sense-organs, (the eye, ear, etc), and also upon specific sense-centers in the brain. The structure and physiology of these organs can be found in any good text book on the subject. Suffice it to say that, in the case of the eye, for example, certain incoming ether vibrations are converted, by the rods and cones in the retina of the eye (by a wholly mysterious process) into nerve-currents, which are transmitted to the sight-centers in the brain, wherein the sensation of sight occurs. The ear converts sound waves into nerve-currents, which we then perceive as sound, etc. Touch depends upon nerve-currents from the periphery of the body. Smell and taste are closely related; in fact, there are only four primary tastes which are directly conveyed by the nerves of the tongue. These are sweet, salt, sour and bitter. All our other "tastes"

are dependent upon the sense of smell. That is why, when we have a "cold," and cannot smell anything, food seems to have no taste. The primary tastes are obtained through the "taste buds" in the tongue. Smell is a sense about which relatively little is known.

In addition of these sensations, arising from the sense organs, there are also other senses, such as the muscular sense, the temperature sense, etc. To what extent these may be properly classed as separate senses has been disputed. The so-called "sixth sense" is theoretically a sort of "second sight," of supernormal origin, which orthodox psychology does not at present recognize.

The sensation of motion should perhaps be mentioned in this place. Such sensations are of two kinds: (1) sensations of objects moving over our sensory surfaces; and (2) sensations of our whole person's translation through space.

The former of these has been much studied, though little definite can be said regarding it here. Curiously, while the sensation of a moving object can be accurately determined, it is most difficult to locate a number of stationary objects on the skin (if the eyes are closed). Thus, if one places the finger-tips against the chest, one cannot tell how many fingers are touching (after the first three). Certain areas of the skin are also quite insensitive; anaesthetic zones or patches sometimes existing,—especially in hysterical subjects, and these can be pricked without involving any reaction. These figure largely in the "witchcraft

trials," of the middle ages, for it was held that the witch was insensible to pain wherever the Devil had touched her. Such spots were, therefore, searched for with long needles!

As to the sensation of movement through space, we often experience this at night, in our so-called "flying dreams." (See my little book in this series on "Dreams.") The Hindus contend, however, that this is an actual possibility; that the physical body can really be lifted or "levitated," by means of proper breathing exercises, etc. I have discussed this question, briefly, in my volume in this series devoted to "Yoga Philosophy."

SENSATION.

Sensation depends upon certain nerve-currents, which affect the brain, but are usually localized or "felt" in a particular spot or area of the body. If a finger is burnt, for example, the pain is apparently felt *in the finger*; nevertheless the actual sensation takes place *in the brain*, and if the sensory (or afferent) nerves were cut, no pain would be experienced. Normally, we react to a stimulus of this kind by immediately withdrawing the hand; this is due to the motor (or efferent) nerve-currents, which are sent out, commanding the muscles to move the hand and arm in question. A definite "reaction" has then taken place. Reactions of this sort are constantly going on, but most of them never rise into consciousness. Only when the sensation is powerful enough to rise above the so-called "threshold" does it rise into con-

sciousness, and the reaction to the given stimulus is then consciously directed.

The outer world acts upon the periphery (surface) of the body, giving rise to all sorts of sensations. Again, various internal organs, if they are not functioning normally, will give rise to internal sensations. All such sensations are conveyed by sensory nerves; and, when these flow from any specific sense-organ, only the characteristic sense impression is thereby conveyed. Thus, the duty of the optic nerve is to convey sensations of sight; if the eye be struck violently, the optic nerve, in such case, does not transmit pain—only sight—and we “see stars” instead. This phenomenon is due to the sudden and violent transmission of a nerve current flowing along these nerve-tracts. Similarly with all the other senses.

This fact has given rise to the theory of “specific nervous energies,”—to the theory, that is, that each sensory nerve conveys the particular sort of current appropriate to it, and no other. Certain internal organs, however, appear to have no sensation. For example, the brain can be cut up, without any sensation on the part of the subject. (Of course, before reaching the brain, pain would be experienced on the surface of the head, in the skull, etc.)

Sensations are our most primitive mental constituents. They are distinguished from Perceptions by the fact that the latter are more complex; they are sensations, *plus* ideas about the sensation; hence “pure sensations” are impossible to us after the first few days of life.

Sensations differ greatly in the degree of their intensity; a feeble sensation, however, if continued, will ultimately rise into consciousness. On the other hand, sensations which intruded into consciousness at first may sink below its threshold after a time, and are no longer noticed. Thus, a workman may sleep in a boiler-factory; soldiers have learned to sleep amidst the constant booming of cannon, etc. Certain sensations also give rise to a sort of reverse of themselves. Thus, if one gazes at a red spot for a time, and then look at the white ceiling, a *green* spot will be seen to form there. This is a so-called "after image," and is due to fatigue. This can readily be demonstrated in the case of vision.

INSTINCT.

William James defines Instinct as "the faculty of acting in such a way as to produce certain ends, without foresight of the ends, and without previous education in the performance." Of late years, much controversy has arisen as to instinct—some authorities contending that it does not exist, (in the old-fashioned sense of the term) while others have postulated a number of different instincts—all more or less primitive and innate. (McDougall).

Instincts are certainly impulses—to perform some action. They vary greatly in complexity, and are by no means always blind or invariable. They often resemble thought—and yet it is certain that no actual thought is concerned in them. Instincts may be inhibited

by habits; they are also transitory. They are well adapted to certain ends, and an animal or an insect will perform quite complicated actions, under entirely novel circumstances. Most of the work done upon instincts, until lately, was done upon animals of the lower order; but, more recently, much attention has been paid to human instincts, and some authorities have contended that human beings have more instincts than the lower animals.

Instinct will usually cause the creature in question to perform actions compatible with its own safety and self-preservation. Instinct thus grades naturally into Emotion, which will next be considered.

EMOTION.

We know that practically all emotions give rise to bodily expression. Darwin wrote an extensive monograph upon "The Expression of the Emotions in Men and Animals." Fear, anger, hatred, etc., find visible expression in the face, and in the actions of the body. Common-sense seems to tell us that these bodily expressions are the *results* of the emotion; the James-Lange theory of the emotions says that the bodily expressions are the primary factors, the internal emotions following after. Thus, we feel sorry because we cry, etc. This theory was for long popular among psychologists, but is today questioned in many quarters.

Emotions of all sorts are certainly connected in a very intimate manner with the body and its internal mechanism. Healthful emotions stimulate, while destructive emotions inhibit

and destroy. It has been claimed that emotions actually cause the secretion of definite chemical substances, which can be partially expelled in the breath; varied emotions cause different colored precipitates in a given solution, etc. (Elmer Gates.) However this may be, there can be no question of the beneficial effects of healthful emotions, and the detrimental effects of the reverse. It is not so much the effects of the *thought* upon the body, as the *emotion* aroused by and associated with that thought.

Feeling is the fundamental sensation of all life. Strong feelings have been called emotions; these are dependent largely upon the sympathetic nervous system, although the glands of internal secretion are also important factors. These are stimulated by the emotion, and also give expression to it.

Emotions have, of late years, been the subject of much study. It is now believed that the various complex emotions are built-up, or compounded of simpler ones. An analysis of these complex emotions has resulted in their being resolved into their component factors. On the other hand, organized systems of emotional tendencies (centered about some object) exist in all of us, and these have been called "sentiments." This idea has played a large part in contemporary psychological literature.

Dr. William McDougall, in his "Social Psychology," has made a very ingenious analysis of the various emotions. He shows at considerable length how the complex emotions are built-up from the simpler ones. Thus:—*gratitude* is a compound of tender emotion and

negative self-feeling; *scorn* is a compound of disgust and anger; *fascination*, of horror and wonder; *envy*, of negative self-feeling and anger; *reproach*, of anger and tender emotion; *anxiety*, of anticipatory pain, tender emotion and anger—against the source of the threatened harm; *pity*, of tender emotion and sympathetically-induced pain, etc. Goddard ("Psychology of the Normal and Subnormal") says that low orders of intelligence (morons, etc.) experience only relatively simple emotions; many of the higher forms are lacking in them, and that "only higher intelligences have the highest emotions." The primary emotions thus seem to belong to animals and undeveloped humans; our emotions have evolved in their intensity and complexity like everything else. That is why refined and "sensitive" people experience the deepest and keenest emotions.

CONCEPTION.

"The function by which we mark-off, discriminate, draw a line round, and identify as a numerically distinct subject of discourse is called *conception*." We may therefore have conceptions of objects, people, qualities, abstract ideas, etc. Each conception is unique, separate, and distinct for the subject thinking it. No two conceptions can ever be quite alike; for no two individuals conceive things in a similar manner, and the same individual, conceiving the same thing twice, conceives it in a different way. The original conception *plus*, is always conceived the second time. For, from the purely physiological point of view, the brain has been

already modified somewhat by the first impression, and the second one reacts upon a modified, and not an unmodified, substratum. "History never repeats itself;" and no two thoughts, and no two conceptions, can thus ever be *precisely* alike.

PERCEPTION.

These two terms are often confused in the public mind. Psychologically, however, they are quite distinct. The consciousness of material objects through the senses is called "perception." We *perceive* them. On the other hand, we *conceive* an idea. Perceptions depend upon our senses and brain-processes; conceptions may be independent of the former. It is true, however, that perceptions depend upon the inner workings of the mind, as well as upon sense-impressions.

When we perceive a thing, we recognize or "know" that thing. But we do not yet think *about* it, associate it with other things, etc. This higher process of the mind has been termed "apperception." It is applied to the process by which the mind goes out to meet the incoming perception, and elaborates it by higher processes of association, etc. Thus, through the sensation of sight, you perceive an orange. But you do not yet say to yourself: "This is a nice, juicy orange; I like oranges; it will taste sweet; it will quench my thirst," etc. These associative processes of the mind may be classed, roughly, under the process of "apperception." They represent syntheses and associations.

We are all subject to fallacies of perception. Our senses may deceive us; or we may draw wrong deductions from genuine sense impressions. There are thus illusions and hallucinations, which resemble one another, but which may be distinguished thus: *Illusions* are caused by wrong inferences from actual, objective sense impressions—as, for instance when a hat and coat hanging on the wall are mistaken for a ~~man~~ standing at the foot of the bed, etc. In the case of a *hallucination*, however, there is no physical substratum of reality in the outer world; the whole thing is created from within, whence it is projected outward,—into space. Some hallucinations of this type seem as “real” as a solid object would be.

Hallucinations often result from diseased or irritated sense-organs, the sense-centers in the brain, etc. The condition of the blood may have much to do with this. Delirium tremens is a good example of hallucination of this type. But not all hallucinations are abnormal; we all have them at night when we fall asleep and dream. We then experience hallucinatory pictures of all sorts of things which are not really “there.” There seem to be, also, odd cases of “telepathically induced hallucinations,” as I have described in my booklet on “Psychical Research,” in this series. In such cases, the subject appears to be perfectly normal at the time. There can be no doubt, however, that most hallucinations denote some form of mental or physical disease—as the hallucinations of the insane, of drug fiends, etc., amply testify.

THE PERCEPTION OF SPACE.

When a baby first begins to notice objects about it, everything is doubtless more or less vague and confused. Gradually, order appears out of chaos. Normal adults have a fairly clear idea of the sizes, shapes and distances of objects—within certain limits. How are we enabled to do this?

An enormous literature exists upon this subject. Only a few essentials can be given here. First of all, it is probably true that the general feeling of size exists as a definite quality in sensation—of intensity of voluminousness. Varied sensations are inwardly compared with one another, and, so to say, checked-off. Smaller objects are discriminated within the object looked at; the object is usually seen in relation to other objects, etc. James holds that “extensity, discernible in each and every sensation . . . is the original sensation of space, out of which all the exact knowledge about space that we afterwards come to have is woven by processes of discrimination, association and selection.” These later powers are developed as the mind itself develops; on the other hand, sensations with a certain degree of innate extensity in them are postulated—and are denied by others!

Ouspensky (“Tertium Organum”) asserts that man is the only three-dimensional animal; the lower animals are naturally two-dimensional, and that what we perceive as the third dimension they perceive as movement. They see only flat surfaces. This is, however, a much-dis-

puted point, into which we have not time to enter now; it also takes us into the realm of animal psychology.

PERCEPTION OF TIME.

Our perception (or sense) of time differs considerably at different ages, and under different circumstances. When we are bored, tired, etc., time seems to move slowly; when we are interested or excited, it flits by rapidly, etc. A certain span of time always seems shorter to old people than to young ones. A year is an enormous period to a child; whereas an old man will often exclaim: "How the years have flown!" Time which is busily occupied seems short, but it seems a long period, when looked back upon. A waiting period, on the other hand, in which nothing is accomplished, seems interminable during its passage; but it seems extremely brief, when viewed in retrospect. This is probably due to the fact that many actions *seem* to occupy a long period of time, whereas a span in which nothing of importance happens *seems* to have taken-up no time at all.

The shortest period of time which we can appreciate is about $1/500$ of a second. Exner recognized two electric sparks to be successive when the second followed the first at that interval. On the other hand, the longest period of time which we can accurately distinguish from longer or shorter bits of time, according to Wundt, is 12 seconds. We probably have no sense of "empty" time; but of the flow of events *in* time. It has been suggested that the pulse may be a sort of natural clock, en-

abling us to appreciate time as it flows (for instance in sleep), but this hardly serves to explain many such cases. The same may be said of the idea that some unknown, but constant, feature in the brain activities is the source of our perceiving time at all.

When we become unconscious, time is obliterated altogether; the sense of time is also seriously impaired under the influence of certain drugs (*e. g.*, hasheesh), so that a second may appear to consume hours, and *vice versa*. It has been proved by experiment that subjects under hypnosis, and some natural somnambules, have a remarkable sense of time, and can reckon it with uncanny accuracy. Our conscious mind is notoriously bad at this sort of thing. The subconscious mind is the "ready reckoner," therefore, which must be added to its other accomplishments!

ATTENTION.

When we "pay attention" to a thing, the consciousness is narrowed down to a point, as it were, and concentrated like the beam of a searchlight. The greater the degree of attention, the more this narrowing process takes place, until the subject may be lost to all save the immediate object of his inward study. Attention may be either voluntary or involuntary; we may read a book with deep interest, or stand fascinated by some horrible spectacle, from which we are unable to avert our eyes. We may pay attention to objects of sense, or to ideal or represented objects (intellectual attention). Attention may also be connected with

some sense (sight, hearing, etc.); or may be purely psychical, as in cases of meditation, etc. Attention may be stimulated by associating the subject-matter with something of interest, or by drawing analogies. A person will always pay attention to something that interests him. The practical importance of this law should be utilized by all teachers, for the child's education would proceed by leaps and bounds were due advantage taken of these facts.

DISCRIMINATION.

The word "discrimination" is popularly used in two senses (1) we speak of a man having "good discrimination," meaning by that a sort of good judgment. (2) Discrimination, in the psychological sense, however, means the noticing of any part of an object, as distinct from the whole.

All sensations tend to fuse and become a single compound; discrimination singles these out, and separates them. Such differences may be felt, if they are *really* different, and different *enough*; further, they must fall more or less in succession upon the same organ, and not simultaneously. If they do, they are apt to blend hopelessly. Especially is this the case if the elements of the impression have never been experienced singly before. If we are familiar with a thing, we can begin to discriminate the elements going to compose it. It is, however, true that only such elements as we are acquainted with, and can imagine separately, can be discriminated, within a total sense impression. If a thing be associated at one time with one thing

and at another time with another, this may become a separate "thing" for the mind, which singles it out, by an act of discrimination, and places it in a position by itself. Such acts of discrimination may be greatly improved by practice.

ASSOCIATION.

This is the peculiar quality of the mind, by means of which two or more ideas or memories are coupled together. Association is thought to take place largely in the higher centers in the brain—the frontal lobes. Nearly all our higher education consists in association, and our mental lives are largely dependent upon it. Genius is said to consist, largely, in making associations, and seeing resemblances, which other people do not. Upon association memory largely depends.

Association is a very complicated process, which depends largely upon the brain. Various anatomical schemes have been devised to explain and illustrate association,—which may be found in text books upon the subject. Association may be partial or complete. Similarity is one of its distinguishing characteristics (and causes). Usually, objects which appeal to the same sense are associated one with another; but sometimes quite different sense-impressions are associated, in a very odd manner. The subject may, e. g., associate a sense of smell with a visual impression; or a sense of taste with a definite sound, etc. These are the so-called "synæsthesias." Thus: "*salt*, for instance, is described by one observer as dull red, *bitter* as

brownish, *sweet* as clear bright red, and *sour* as green or greenish-blue. To another observer the taste of meat seems red or brown, the taste of graham bread is rich red in color, while all ice-creams, (except chocolate and coffee) taste blue. To still another reporter, the sound of the word 'intelligence' tastes like fresh sliced tomatoes, while the sound of the word 'interest' tastes like stewed tomatoes. . . ."

These are unusual associations, however, which depend either upon some odd nervous connections between the various sense-centers in the brain, or upon some purely psychical associations. Most of our normal associations deal either with objects or with memories.

IMAGINATION.

Nearly all our imaginations are visual in character; great composers may imagine the orchestration of the masterpiece they are composing—so vividly, at times, that this amounts to an auditory hallucination. But most of us are more or less limited to *visual* imaginings; we "build air-castles in Spain," or imagine ourselves in various scenes or situations, which are seen by the "mind's eye." The explanation usually put forward to explain this is that "sensations, once experienced, modify the nervous organism, so that copies of them arise again in the mind after the original outward stimulus is gone." No such mental copy, of course, can arise in the mind, of any sensation which has never been directly excited from without, on this theory.

This power of "visualization" differs greatly in different individuals; some men are good, others bad visualizers. Images of sounds, muscular sensations, touch, etc., may also be reconstructed. These again may be so vivid as to amount to actual hallucinations.

Imagination consists in the power of the mind to build-up mental pictures, and project them into the *future*, just as memory-images are projected into the *past*—into our life-experience. Imagination is that power of the mind which seems, in one sense, to pierce the veil. While such imaginings are, as a rule, merely day-dreams, never coming true, it is also a fact that all great works must be thought of or imagined, in some sense, before they are executed, or come into being on the material plane. Someone must have "imagined" the Pyramids before they were built. Rightly used, then, imagination is a very valuable asset, which should be cherished and utilized—just as it can become destructive, if abused. It had indeed been said that a sense of humor and imagination are the two things which distinguish us more than anything else from the brutes.

Use your imagination, therefore, only keep it well in leash—like the thoroughbred horse which it is!

WILL.

The Will is that which seems more intimately a part of our inner Self than almost any other portion of our mental being. We feel when we actually *will* a thing that we thereby set some hidden energy in motion, which flows outwards,

and sets our muscles into action. Or we may will to accomplish a certain thing, or to feel or think in a certain way. The will seems to be centered in the forehead, just above the eyes and nose, and to form a part of the central Self or Ego.

Hence the doctrine of the "freedom of the will." We *feel* that we are free to will, to perform any given action, or to refrain from performing it. "The human will is free." The contrary doctrine, on the other hand, "Determinism," contends that this is an illusion; we are *not* free; our every action is determined by our previous trains of thought,—our education, environment, heredity, etc.,—and that we must *necessarily* choose and will as we do. This is the much-debated philosophical question of "Free Will Vs. Determinism,"—which is really a metaphysical question, and not a psychological one, and hence cannot be discussed at greater length in this place.

We may really will to perform a certain action; or we may merely *wish* to do so. This is little more than desire. A wish may exist without giving rise to the will to carry it out; the *fiat* of the will has not gone forth. Action only follows this fiat of the will. Wish and desire remain in the world of inaction. Hence the truth of the old adage,—“If wishes were horses, beggars would ride.” The reason they do not ride is that the wish is never translated into action.

Ideas of action may be expressed in action, or they may be inhibited—prevented from being actively expressed. There is always a tendency

on the part of the body thus to carry out any given volitional impulse. This is often checked, for our judgment tells us that we should not perform the action in question. On the other hand, we may force ourselves to perform a given action, from which we instinctively shrink.

We may have an impulse to perform a specific action, but we "let it go." Again, we may hold steadily before the mind the idea of performing that action, until we actually do so. Now, according to many psychologists, this act of voluntary attention is all that the will *is*; it is nothing else. "The essential achievement of the will. . . when it is most voluntary, is to attend to the direct object and hold it fast before the mind. The doing so *is* the fiat; and it is a mere physiological incident that when the object is thus attended to, immediate motor consequences should ensue. Effort of attention is thus the essential phenomenon of will. . ."

There are many of us, however, who cannot accept or believe this. We see in the human will something more than this. There is something more in will than mere effort of attention. Recent experiments, conducted by means of delicate recording instruments, seem to show us that the human will is indeed an energy, capable of registering itself, or being registered, by suitable apparatus; while the experiments of Dr. Charles Russ also appear to prove that the human eye, under the dynamic action of the will, can be made to emit a living force, capable of affecting delicate instruments. We feel that, when we love, some vital energy radi-

ates from the eyes; that the glance of hate is more than a mere metaphor. The will and the outward vision (if I may use the term) seem to be subtly connected, and experiments such as these seem to prove it. And if so, they cast a new and vitally important light upon the doctrine of free-will. For our immediate practical purposes, however, it may be said that the will seems to send forth a fiat, of a nature wholly unknown, following upon which definite actions are performed in accordance with that volitional effort.

MEMORY.

A sensation, an emotion, an idea, etc., may leave a more or less permanent memory which can, perhaps, be recalled years later. Where was this memory in the meanwhile? The usual explanation is that a sort of groove or trace is cut into certain brain cells,—just as the recording needle cuts a groove in the phonograph record, recording at the same time the *music*; and that the act of recalling a memory is analogous to reproducing the music, by means of a suitable device upon the phonograph. The brain is, on this view, “the physical basis of memory.”

One difficulty which at once arises, however, is that, inasmuch as all parts of the body are constantly being made-over, and replaced by new parts, these brain-cells must also be replaced (within a few weeks, months or years) and the record would vanish with them. The usual reply to this is that the newly laid-down brain-cell in some way “inherits” the memory

from the old one, and hence somehow continues to store its psycho-physical memories, which are again passed-on when this cell is replaced, and so on forever.

Needless to say, such an interpretation of the facts strains our credulity. None other, however, has ever been forthcoming. But the inherent difficulty of the case has led some philosophers—notably Bergson—to defend the idea that the brain is merely a mechanism for *reproducing* memories, and that memory itself resides within some spiritual storehouse, where it remains until recalled. The legitimacy of such a view, of course, rests upon the possible proof of such a super-physical world as that postulated.

Memory depends upon a variety of factors. A healthy brain is essential to a good memory; good blood, bathing healthy nerve-cells being here essential. Memory also depends upon (1) interest, and (2) association. We remember a thing which interests us; it makes an "impression" upon us. Also, if we associate a thing with other things, it helps us to remember it. An isolated fact is hard to remember; but if it is associated with a number of other things which we know, or which also interest us, it is more liable to be recalled. Any one of these things may then recall the other event, by association, and hence the given memory is more readily accessible.

Memory is first of all recorded, then stored, then recalled, and finally recognized or "placed," after it is recalled. Some authors say that memory consists in three stages, others in as

many as five (Hyslop). This is merely a question of the sub-division of the process involved.

It has been contended that there is no such thing as a "good" or a "bad" memory; it all depends upon the factors above mentioned. Various artificial schemes have been devised to improve and perfect the memory; and there is no doubt that it is a faculty which can be greatly improved by constant practice. In a sense, everything is remembered, but it is not vivid enough to be recalled. Such hidden memories can often be revived by means of hypnosis, etc. In certain abnormal conditions, the memory seems to be keenly stimulated, and events, long forgotten, are recalled, which had long before been forgotten by the conscious mind. Many apparently "super-normal" phenomena have been explained in this manner.

REASONING.

One thing which is held to elevate us above the brutes, more than all else, is our *reason*. "Man is a rational animal." Yet how few of us reason,—at any rate systematically! When in a crowd, we are carried away by the psychology of the crowd; and we are swayed more by our feelings and emotions than we are by our reason, as a rule. Yet there can be no doubt that pure reason is the highest type of thinking possible for the normal man.

Reasoning consists in carrying on a logical and connected chain of thought, each step of which follows logically from the one preceding it. It is dependent upon learning, sagacity and common-sense. The essence of reasoning is, of

course, *logic*, which is supposed to portray the highest type of reason. We think about a thing intellectually, when we reason. We arrive at a conclusion by a logical train of thought. Each thought is like the link in a chain. We may arrive at the conclusion in some other way, by some process of "intuition," or what not, but reasoning constitutes the basis of our thinking, and represents the solid rock, upon which most men are content to build their intellectual houses. And in order to reason well, systematically clear thinking is required.

SPEECH.

Normally, we communicate with one another in three ways; by means of marks upon paper (writing), by movements (sign language), and by means of air vibrations issuing from the vocal chords (speech). The question of the origin of speech is a much disputed one, some authorities contending that we gradually attached meanings to certain primitive sounds; others that we learned to express ourselves in speech in order to express our thoughts.

There are certain definite areas in the brain which send out the necessary motor currents, rendering speech possible. We have two such centers, one in each hemisphere, but we ordinarily use but one of them. Right-handed people use the one in the left hemisphere, while left-handed persons utilize the one in the right hemisphere. Should this active area be injured, the subject becomes *dumb*—though the corresponding area in the other hemisphere may be quite intact. Hence the importance of teaching

children to become "ambidextrous"; *both* centers are thereby cultivated, and, if one is injured, the patient can still talk. An extended discussion of this entire subject may be found in Dr. N. C. MacNamara's "Human Speech; its Physical Basis."

HABIT.

We all know what is meant by forming habits—either "good" or "bad." It is always easier to do a thing a second time than at first. If any specific action is performed a great number of times, it becomes practically automatic, so that we do not have to think about it at all. Every step in walking is conscious at first; every action in buttoning a button or tying a tie; in time these actions become more or less unconscious. A habit, once formed, is hard to break, but it is relatively easy to break in the early stages of its formation.

Man has been defined as "a bundle of habits." We hardly realize, perhaps, the extent to which habit governs us—not only in our physical actions, but also in our trends and attitudes of thought. "Habit second Nature?" exclaimed the Duke of Wellington; "habit is ten times nature!"

There is much truth in this assertion. When we form a new habit, we cut a new groove in the brain, so to speak, and nervous currents find it much easier to travel over this beaten path, rather than to cut a new one. Every time that path is used, it becomes relatively easier and easier for the nervous current to pass over it; and the result is that, whenever a nervous

current passes in its immediate vicinity, it tends to shoot along that path, before it can be prevented from doing so. The action in question is then performed. Of course, this is only a rough simile, but something of the sort takes place, and it enables us to visualize how habits are formed, from the psycho-physiological point-of-view.

Prof. William James, in his "Psychology," has laid down certain maxims, which are very helpful, and may be applied in daily life to our own advantage. These maxims, in brief, are:

(1) *Make your nervous system your ally instead of your enemy.* This is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. For this we must make automatic and habitual, as early as possible, as many useful actions as we can, and guard against the growing into ways that are likely to be disadvantageous to us, as we should guard against the plague. We should, then, take care to launch ourselves with as strong and decided an initiative as possible upon any new venture. This will tend to cut a deep initial groove, so to say.

(2) *Never suffer an exception to occur till the new habit is securely rooted in your life.* Each lapse is like the letting fall of a ball of string which one is carefully winding-up; a single slip will undo more than a great many turns will wind up again. *Continuity* of training is the great means of making the nervous system act infallibly right.

(3) *Seize the very first possible opportunity*

to act on every resolution you make, and on every emotional prompting you may experience in the direction of the habits you aspire to gain. It is not in the moment of their forming, but in the moment of their producing *motor effects*, that resolves and aspirations communicate the new "set" to the brain.

Much dispute has arisen as to the best way to break a bad habit—whether to abolish it at once, or to taper it off by degrees—thus avoiding "shock." The consensus of opinion seems to be that it is far better to break off at once, *providing one can stand it*. Similarly, the abrupt acquisition of a new habit is best, if there is a real possibility of carrying it out. If you set yourself an impossible task, and fail to carry it out, this will leave you weaker than before. But this is not necessary: slight tasks will serve just as useful purposes as more difficult ones in the formation of new habits. And the ability to perform unpleasant tasks is the test of character! "The faculty must be kept alive by a little gratuitous exercise every day."

According to the habits we form—lazy or industrious, bad or good—our life, success, happiness, destiny depend. An object-lesson of some sort—a book, a play, a living example—will perhaps modify and color our whole lives. I cannot do better than to conclude this chapter by a quotation from William James, which I personally read when about nineteen years of age, and which served to influence the whole course of my life. It may, perhaps, have the same effect upon others, and it is with the hope

that it will, that I call attention to it here. James says:

“Let no youth have any anxiety about the upshot of his education, whatever the line of it may be. If he keep faithfully busy each hour of the working day, he may safely leave the final result to itself. He can with perfect certainty count on waking up, some fine morning, to find himself one of the competent ones of his generation, in whatever pursuit he may have singled out. Silently, between all the details of his business, the *power of judging* in that class of matter will have built itself up within him as a possession that will never pass away. Young people should know this truth in advance. The ignorance of it has probably engendered more discouragement and faint-heartedness in youths embarking on arduous careers than all other causes put together.”

THE STRUCTURE OF THE MIND.

Great changes in our views as to the nature or structure of the mind have taken place within the past few years. The older psychology held that the mind was a *unit*; that it was a separate thing or entity, a sort of “sphere”—which, if it could ever be caught, would reveal all the secrets of True Being! Accordingly, they tried to catch this sphere-of-being, by inward reflection or “introspection.” But it was never caught! There are many reasons why this should be so, the chief reason being that a subject cannot be an object also; it is as

impossible for a thought to catch itself as it would be to turn a hollow rubber ball inside out, without tearing the cover.* But the newer psychology studies the mind objectively, from the outside—by means of recording instruments, and does not depend upon introspection for its results. Further, the very conception of the nature of the "self," is different; it is not now considered an entity, as of old; but rather a compound thing, a complex, composed of a variety of elements. Instead of being considered a single gossamer thread, it is now thought to be rather a rope, composed of innumerable, interwoven elements—and these, in turn, of still finer threads, until the subdivision seems endless. The mind, in other words, is thought to be compounded of innumerable separate elements; but held together, or compounded into one, by the normal action of the will, of attention, and the grip upon the personality of the true Self. When this will is weakened, when the attention is constantly slackened, when the mind wanders, this strand of rope separates and unravels. The "threads" branch out in various directions, no longer in control of the central governing will; the Self has become *dissociated* or split-up into various minor Selves—all but parts of the real total Self; yet separate and distinct, nevertheless. And if *enough* of these threads become joined together, or interwoven, one with another, it

*It can be shown, theoretically, that this is possible in the "fourth dimension," but not in the third. This illustrates the difference between theory and practice—a point it might be well for Christian Scientists to keep in mind!

can easily be imagined that this second strand of rope might become a formidable opponent to the original strand; it might become so large and strong, in fact, by the constant addition of new threads, and the dissociation of these from the first, true strand, that it would assume a *more* important role, and become stronger, and finally even control the whole. What was originally but a single, fine, divergent thread has become, in course of time, a successful rival to the original strand of rope.

Now let us apply this analogy—which is, of course, *only* a rough analogy—which seeks to portray briefly, in visual terms, something that seems to happen invisibly and internally in the mental life. The mind as a whole represents the rope; its elements or component parts are the threads; and, under certain abnormal conditions, these can be torn away from the original Self—like little rivulets, branching-off from the main stream of consciousness, forming independent selves. This is an abnormal condition; a splitting of the mind, a dissociation of consciousness. We here enter, therefore, the domain of *Abnormal Psychology*. In such cases, we have instances of so-called “double consciousness,” of “alternating personality;” or, if there are three or more splits or cleavages, of “multiple personality.”*

So long as this split-off portion remains a

*Although this theory of the “composite” nature of mind is now generally held, Mr. Myers has contended that the Self must have some *fundamental* unity—to enable it to withstand the shock of death—provided it does so.

mass of sporadic thoughts, not much damage has been done; but when they become abnormally linked or associated together, forming groups, then the abnormal conditions have begun in earnest. These masses of subconscious experiences are called "complexes," and give rise to all sorts of trouble. It must not be thought that this complex formation is always harmful; on the contrary, this very process, when normally conducted, is the basis of our educational processes. But when they are thus conglomerated and consolidated outside the conscious mind, and function automatically, by themselves, then they have become dangerous to the mental stability. Their pressure and influence may be felt in the conscious life—in fantastic imaginations, in fears, phobias and obsessions, in morbid dreams, in morbid emotional and moral reactions throughout the entire psycho-physical life. It is these automatic, self-acting complexes which originate many of the disorders of the mind.

This theory of the dissociation of consciousness has enabled us to explain many puzzling facts, hitherto inexplicable. Thus *hysteria*, with its multiform symptoms, and its internal contradictions, has long been the stumbling-block of medicine. Now it is no longer thought to be a morbid physical state (dependent usually upon sexual disturbances), but it is regarded rather as an indication of the splitting of the mind, a dissociation which embraces all the motor, physical and psychical activities. On this theory, hysteria is readily explained, and all its multiplex symptoms understood. In

treating it, the self is unified, abnormal suggestibility is removed, and the patient is cured!

Psychaesthesia, again, with its obsessions and fears, may be explained in the same manner, and its cure rests upon the same principles. The "attacks" cease so soon as the psychical synthesis is effected and the morbid self-consciousness removed.

Neurasthenia, long regarded as a pathological state, due to auto-intoxication and similar causes, is now thought to be due chiefly to dissociation, caused by excessive fatigue—one of the known contributory causes of this condition. *Psycho-epilepsy*—a sort of fictitious imitation of the real disease—is due to precisely similar causes, and may be cured in a similar manner. Hypnotism, Psycho-analysis and general psychotherapy may be employed in such cases.

ABSTRACT THOUGHT.

Two schools of philosophers—the "nominalists" and the "conceptualists"—for long waged a wordy war as to whether or not the mind could frame abstract or universal ideas. As a matter of fact, it was ideas of universal or abstract objects that was meant. These ideas dealt largely with the sense of *meaning*, the inner significance of the thing contemplated. It is one of the unsolved mysteries of mind—how such a thing as abstract meaning can exist at all, and how brain-changes can in any way account for it. McDougall, as we know, is inclined to question that they do so at all. Mean-

ing is a thing most difficult to account for on a purely materialistic basis. Abstract thinking is supposed to be one of the highest types of thinking possible for us; it is the most impersonal form of thought, and hence, in a sense, the highest. Much has been written upon this topic in Oriental literature. This question comes up for discussion, naturally, in the Section devoted to the stream of thought, and the consciousness of self; and further discussion of it will be found in that place.

THE CONSCIOUSNESS OF SELF.

We now approach the heart of our Problem; the central core of Being! The consciousness of self is ingrained in every one of us; we feel our own inner being, our true self, our personal identity, our individuality, as something unique and exclusive. What is this Self? What are thoughts, and who is the Thinker that thinks them? Are the two identical, or are the thoughts expressions of the flow of consciousness? What is the true Self—of what is it composed—and what relation has it to the other functions and processes of the mind which go on, and which are in some mysterious way related to it? Only a brief answer to these questions can be attempted in this Chapter; for many lengthy volumes have been written upon this question alone.

Our stream of consciousness is *continuous* (except during sleep); states of mind tend to succeed each other. Let us grant this to begin with. The mind seems to be *selective*

in its action, it is changing within itself, as time passes; no two states of consciousness are ever precisely alike. Further, "all consciousness tends to personal form"—a very important fact indeed. A flow of more or less continuous thought goes on; these thoughts follow one another logically in sequence. (In insane patients, of course, they are not logical. I speak here merely of the normal mind. Also it must be emphasized that nothing in this Chapter touches upon the subconscious mind, unless special mention is made of that fact.) Each thought seems to be personal to the thinker; it is not merely thought in itself. It is *my* thought. This flow of thought is in constant change; it flows as life itself flows; on the other hand, thought is sensibly continuous! The mental life might here be compared to a river, which eddies and swirls, as it flows, but is the same water, nevertheless.

One of the objects of thinking is to reach certain conclusions. We might compare thought to a bird in flight; its object is to perch upon yon branch; its flight is a necessary transitive stage to the branch. The chain of intermediate thought corresponds, on our analogy, to the bird's flight. This flight is very different, in the case of different people; with some, it is straight and rapid; with others, it is tortuous and lengthy. That is why different people think differently. About each thought is a sort of halo of relations, dimming off, as it recedes, into other things. This is the so-called "fringe of consciousness." All thought it-related to other thought, more or less di-

rectly. Knowledge *about* a thing is knowledge of its *relations*.

When I am thinking, I am aware of my *personal existence*; at the same time I am aware. There thus seems to be a double self within the Self—the Self as known, and the Self as knower. James calls the former the “ME” and the latter the “I.” Let us consider each of these in turn.

The Me.—This comprises all that a man can call *his*; the most important of these spiritual possessions are (1) the material me; (2) the social me; and (3) the spiritual me.

The *Material Me* consists in (a) his body, and (b) his possessions. *The Social Me* is the side he shows to his friends and acquaintances; this varies greatly in differing environments, so that it has been said that “a man has as many social selves as there are individuals who recognize him.” His name, fame, reputation, success, etc., are classed as parts of this Me. *The Spiritual Me* includes passing states of consciousness; it is that part of us which “goes out” to meet other thoughts. Feelings and emotions affect this Me; self-appreciation, self-satisfaction (or the reverse), self-complacency, etc., vitally affect this Me. Self-seeking and self-preservation are a part of it. These various Selves clash and conflict, to a certain extent, among themselves; they do not all want the same thing. “Happiness” probably consists largely in having all these Selves working together in harmony, to the same end.

The I.—This was called the “pure ego” by the older psychologists. It seems to be the

background of the personality—the string upon which the pearls of thought are strung. Is there a real “string,” or are the pearls merely separate, succeeding one another, as if they were thus strung?

That is a difficult question. Passing thought appears to be a unity; yet it consists of a number of different elements; there is no “fusing” of thought. Ideas, thoughts, in this unlike material threads, cannot be woven together upon nothing; there must be some background other than themselves. The human *Soul* has been postulated as this “permanent background,” uniting the whole, and withstanding the shock of death. If true, this would serve to explain the facts, and at the same time give us hope for survival. But whether or not such a soul exists at all is a matter of controversy! In the absence of its proof, we must, says Science—reject it. Consequently, we have today a “psychology without a soul.” Attempts have been made to explain the facts without resorting to it.

The usual argument is somewhat as follows: There seem to be single, successive pulses in the stream of thought, constituting the Ego. These vary and change; they succeed one another. May not consciousness, then, consist merely *in* such successive states of consciousness; may it not in truth be composed of them—just as a succession of pearls may exist without a unifying string? Each thought, on this hypothesis, in some way gives birth to the next, which also inherits its content; in other words, *the thoughts themselves are the think-*

ers. Were this true, we should have no "abiding entity," but merely a successive series of thoughts, constituting the stream of consciousness; this stream in turn composing the true Self. Which of these views is the correct one can only be proved by showing that survival in some form exists; and this can only be accomplished by Psychological Research! (See my little book upon that subject, in the present series.)

* * *

(Mutations, multiplications, etc., of the Self, have been touched upon in the Section devoted to Abnormal Psychology; Insanity in its own section; mediumships, possessions, etc., in the book just mentioned.)

THE DUCTLESS GLANDS, AND PERSONALITY.

Within the past few years, a new school has arisen, which contends that the ductless glands in the body (or rather their secretions) affect personality to a very great extent, and that, in fact, personality is largely dependent upon them for its peculiarities and general make-up. A good example of such teaching is to be found in Dr. Louis Berman's book, "The Glands Regulating Personality." Here, *e. g.*, we read:

"Acuteness of perception, memory, logical thought, imagination, conception, emotional expression or inhibition, and the entire content of consciousness are influenced by the internal secretions. . . . All the different *nuances* of personality are expressions of a peculiar relationship, transitory or permanent, between the endocrines and the viscera and

muscles. Conversely, behavior shows what a person actually is chemically; that is, what endocrine and vegetative factors predominate in his make-up. The constructive imagination, one of the few truly precious gifts of a personality, is probably the expression of a certain balanced activity of the ante-pituitary and the post-pituitary (glands). . . . It is possible to speak of thyroid moods, adrenal moods, ante-pituitary or post-pituitary moods, gonadal moods. Each of these is the echo in the mind of cells stimulated or depressed, by concentration or dilution in the blood of particular internal secretions. . . ."

Whether or not such arguments will "hold water" must be proved by further investigation. The *pros* and *cons* cannot be argued in this place. It may be said, however, that such extreme views as those outlined above are not yet generally accepted, either by the medical profession or by psychologists, and it seems an extreme statement of a partial truth. The mental life is certainly influenced by the secretion of the internal glands, but to what extent it is fundamentally altered by them is still *sub judice*.

MOTIVES.

Why do we act as we do, under certain circumstances? There is usually some "motive" at work, prompting our action. Human motives find their source in the subconscious mind of man; here they take root, and their products alone are seen by us—mostly in varied actions. Dr. James J. Jackson has writ-

ten an interesting volume on "Human Motives," in which he distinguishes two sorts of motives—motives of constructiveness and motives of adaptation. These are, of course, biological in origin. Usually, we speak of "good" and "bad" motives. They all arise from a complex of sentiments, which shape the form and tenor of the subconscious thought—which, in turn, is symbolically expressed in thought and action. Without discussing this question at greater length, it may be said that all our motives originate within the subconscious mind—which thus constitutes the spring of our thoughts and actions.

CONSCIENCE.

Conscience was for long thought to be the "voice of God" speaking to the spiritual ear of man. Nowadays, a more matter-of-fact solution has been sought, and, to a certain extent, found. Modern psychological investigations have deprived conscience of its supernatural origin.

Until these newer researches were undertaken, however, any clear understanding as to the nature of conscience was impossible. (See, *e. g.* George W. Reid's "Conscience," and Hastings Rashdall's "Is Conscience an Emotion?") With a clearer understanding of the subconscious mind, came greater light. We now believe that conscience is, very largely, the inhibitory action of a portion of the subconscious mind, which inhibition is exercised whenever the thoughts or the actions of the individual run counter to those generally accepted by the community in which he dwells,

or by his own individual up-bringing, or both. It is a sort of Censor; but it is an acquired thing, which has come into being, and evolved, like everything else. What the conscience of one man would prevent him from doing, another will do without the slightest qualms. Conscience is not, therefore, a universal principle, judging good and bad, alike in all men. It is a type of repression, exercised upon us from within. Early moral precepts, etc., have much to do with its formation. Here, then, we find the psychological basis for the existence of conscience, which is more or less active in all of us, according to our heredity, environment, education, etc. It is a normal attribute of the inner man.

INTUITION.

This is the term loosely applied to certain inner feelings, giving rise to a form of conviction as to the truth and reality (or the reverse) of something then present in the mind. Intuitions are popularly supposed to be right, and women are said to experience them far more often than men! No statistical evidence is available, so far as I know, upon either of these questions; indeed, it may be said that the whole subject has been grossly neglected, from the psychological point-of-view.

Intuitions probably present themselves to the mind as the result of subconscious mentation. A hidden and unknown process has been going on within the mind, the result or product of which finally emerges in vague form into consciousness. Usually it takes the form of ?

more or less vague feeling. Miss Goodrich-Freer, who had experienced many such intuitions, attempted to analyze some of them, from introspection, and contributed a valuable Chapter entitled "How it Came into my Head; the Machinery of Intuitions," in her book, "Essays in Psychical Research." Her conclusion is approximately that mentioned above. Mr. Walter N. Weston has also written a book entitled "Intuition," in which, however, little of value can be found.

INSPIRATION.

This term is generally employed to signify "divine" inspiration—ideas which are implanted directly into the human mind by some external Divinity. Such a conception, needless to say, is not in accord with modern thought. Throughout the ages, inspirational addresses have been heralded as evidence of the supernatural. The Pythoness at Delphi inhaled the mystic vapor, rising from a cleft in the rock, and gave forth her Oracular utterances. (See Dempsey: "The Delphic Oracle"; H. N. Bate, "The Sibylline Oracles.") Even in our own day, "mediums" give similar inspirational addresses, at various spiritualistic centers.

It is not necessary, however, to consider such utterances divine, or supernatural, for the vast majority of them may be interpreted in terms of psychology, with relative ease. They are the products of the subconscious mind of man. George N. Raymond has written an interesting book, entitled "The Psychology of In-

spiration," to which the reader may be referred to further *data* upon this subject. While it is somewhat religious in tone, it has some good material in it. Like Intuition, this subject has been much neglected by academic psychology, and there is much need for a careful study of its various problems.

GENIUS.

Genius is a term hard to define, though we all have a more or less clear idea as to what is meant by a genius. He is a man who stands apart from his fellows, head-and-shoulders above them, mentally or artistically. But what is it that thus causes him to rise above others? Is it vision? Is it originality? clever anticipation? breadth? constructiveness? concentration? patience? common-sense? Doubtless genius is all this, but it is also more! A genius can perform feats which another man can not, try as he will; and more than that, he performs them without effort or without training, very often! A certain type of genius amounts to what we term a "prodigy," and then we have cases of musical, mathematical or artistic genius. These gifts are often exhibited very early in life, for no apparent reason; they last for a few years, and then disappear. Few youthful prodigies retain their gifts into adult life. Often, their possessor is not even normally gifted with reason and common-sense in other directions. Such cases as these are unusually difficult to account for. Theosophists are apt to turn to the doctrine of "reincarna-

tion" for an explanation; but we must endeavor to seek its explanation upon more naturalistic lines.

Ostwald has contended that there are two main types of genius; the one which is emotional, erratic, temperamental, artistic, etc. This type acquires its genius without "elbow grease." The other is the intellectual type, and hard work is essential for the creation of genius of this type.

Nordau, Lombroso, and others, have endeavored to prove that genius is closely allied to insanity. In a sense, this is true; but so are dreams, and yet perfectly normal and healthy people dream. Because certain marks of *resemblance* may be found, this does not prove *identity*, by any means! A yellow ball may resemble an orange; but it is not identical with it—certainly not in its most essential part—its interior, and its utility.

Genius is probably hereditary, to a certain extent. Ribot has gathered together a mass of data, in this connection, which he has published in his work on "Heredity." An interesting study of this and allied questions may also be found in N. K. Royse's book on "Genius."

Frederic Myers has advanced the idea that genius represents an "uprush from the subliminal consciousness" (subconsciousness) of ideas matured below the threshold. These ideas burst upon the surface, much as bubbles might be said to break upon the surface of water. When the stratum of the mind from which these ideas originate is *diseased*, we have insanity; when, on the other hand, it is

healthy, we find the products of genius. Some such theory as this is doubtless true; but the study of genius, from the scientific point-of-view, is yet in its infancy, and the final solution of its mystery has yet to be found.

INSANITY.

Until the present generation, the word *Insanity* was popularly thought to mean either imbecility on the one hand, or a raving maniac or the other. We now know that this idea is quite untrue; insanity is a disease of the mind, just as small-pox is a disease of the body. Moreover, we speak of insanities, and not insanity; for there are many varieties—all shading-off one into another. A physician who deals with such cases is called an "alienist": and the terms psychiatry, psychopathology, abnormal psychology, etc., are employed to designate various branches of the study of the diseased mind.

Certain types of insanity are, of course, due to actual brain disease. A degeneration of the physical substance of the brain may have taken place. In other cases, however, no such gross degeneration can be traced, and we must assume microscopic alterations, or blood changes, or nerves improperly functioning, or purely physical changes and dissociations, as explained above. There has grown-up an extensive literature on insanity, within the past few years. A good primary book of this character is Dr. Bernard Hart's "Psychology of Insanity." See also Dr. Charles Mercier's "Sanity and Insanity."

INTELLIGENCE-LEVELS.

The tests conducted upon the male adult population of the United States, during the Great War, revealed the astonishing fact that the average mental "age" was approximately twelve years; that is to say, the average adult possesses an intelligence of a boy at that age. The body may have grown, but the mind has not! Of course, many were above that level; but many fell below, and the above represented the *average*. In many other countries, the average would certainly have been far lower.

The majority, therefore, do not possess normal adult minds; there has been an arrested development. A scale of mental development was accordingly constructed, and individuals were placed somewhere in that scale. The human mind may be anything, from a genius to an idiot. In this scale, there were many "defectives." Those individuals who possessed a mentality of from eight to twelve years, were classed as "morons"; those who ranged from three to seven years, "imbeciles"; and those of two, and under, "idiots."

The mental-age or intelligence-level of any person may be ascertained by special tests, devised for the purpose. These tests were originated by the psychologist Binet, but Terman and others have greatly extended and amplified the original methods. Such tests have now been conducted extensively, and the results show us that surprisingly low levels of intelligence are the rule, and not the rare exception. The importance of an extensive educa-

tional campaign is therefore manifest; and the Editor of this series, Mr. Haldeman-Julius, is carrying on one of the most important campaigns in the world today—by spreading general culture and education. For, by this means alone, and by suitable eugenic measures, can the human race be elevated and improved, with each succeeding generation.

THE PRACTICAL USE OF THE MIND.

There is an old saying that a man may be worth only five dollars a day from his eyes down, but he may be worth a million dollars a year from his eyes up. That is to say, man's value, both to himself and to the community, lies in his *brain*, and the use he makes of it. Manual labor is not well paid, proportionately, to creative brain work, so that it is to our advantage to develop and utilize our brains to the best possible advantage.

Cultivation of the mind will give us greater powers of concentration; improved memory; stronger will; more poise; sound judgment; greater wisdom; increased value. But mere book learning will not do this. We must learn how to apply the mind in a practical way, to the problems of daily life, and utilize the powers within ourselves. Curiously enough, there is no text-book of this character in use in any school or college in the world; but the necessity of such a practical work is obvious. Boys and girls emerge from College without the slightest idea as to how to apply their minds in any practical manner; their theoretical

knowledge is of but slight advantage to them. A few practical hints of this character should, therefore, prove useful. I select the following passages from Christian D. Larson's excellent little book, "Your Forces: and How to Use Them." He says:

"To make thinking scientific, there are three leading essentials to be observed. The *first* is to cultivate constructive mental attitudes, and all mental attitudes are constructive when mind, thought, feeling, desire and will constantly face the greater and the better. A positive and determined optimism has the same effect, and the same is true of the practice of keeping the mental eye single on the highest goal in view. To make every mental attitude constructive, the mind must never look down, and mental depression must be avoided completely. . . .

"The *second* essential is constructive mental imagery. Use the imagination to picture only what is good, what is beautiful, what is beneficial, what is ideal, and what you wish to realize. Mentally see yourself receiving what you deeply desire to receive. What you imagine, you will think, and what you think, you will become. . . .

"The *third* essential is constructive mental action. Every action of the mind should have something desirable in view and should have a definite, positive aim. . . . When the average man thinks of the future, he usually pictures a variety of conflicting events and conditions. He has nothing definite in mind. There is no actual leadership therefore in the

mind, and nothing of great worth can be accomplished. . . .

“Those people who fail, and who continue to fail all along the line, fail because the power of their minds is either in a habitual negative state, or is always misdirected. If the power of mind is not working positively and constructively, for a certain goal, you are not going to succeed. If your mind is not positive, it is negative, and negative minds float with the stream. We must remember that we are in the midst of all kinds of circumstances, some of which are for us and some of which are against us, and we will either have to make our own way or drift, and if we drift we go wherever the stream goes. But most of the streams of human life are found to flow in the world of the ordinary and the inferior. Therefore, if you drift, you will drift with the inferior, and your goal will be failure.”

In this connection, it is well to remember that negative people and non-constructive minds never attract that which is helpful in their circumstances. The reason why so many people fail is due to the fact that they do not fully and constructively apply the forces and powers they possess, and the reason so many succeed only to a slight degree is found in the fact that only a small fraction of their power is applied properly. The positive and constructive use of the power of mind, with a definite goal in view, will invariably result in advancement, attainment and achievement; but if we wish to use that power in its full capacity, the action of the mind must be *deep*. We must

not merely think from the surface of the mind; ideas and aspirations must come from the deep within. Such ideals and thoughts only come, as a rule, after a certain period of quiet and meditation. Hence the necessity of being quite alone for a certain time each day—and utilizing that time in actual reflection, and not merely in idling the time away!

We have now learned something of the general functions and powers of the mind; how it works, its mechanisms and "faculties." Having this ground-work, the next thing to do is to apply this knowledge in our daily life, and this can be done by following out suggestions such as those given above—provided the aspiration and the will be present, to drive us onward to achievement and success. The mind of man is assuredly his greatest possession; we must first understand it; then use it! Theoretical and applied Psychology enable us to do this.

MIND AND BRAIN.

The relationship between brain and mind is one of the most puzzling questions in the whole field of scientific and philosophic thought. For every thought we think, there is a corresponding brain-change; that we know. The problem is: What is the nature of this connection, and how can a thought (an immaterial thing, apparently) be connected in any actual sense with a brain change (which is certainly a material thing?) I have discussed this point at considerable length in my little book on "Life," in the present series, and have therein stated the various theories so far propounded. The

interested reader may refer to such books as McDougall's "Body and Mind," Binet's "The Mind and the Brain," Bain's "Mind and Body," Calderwood's "The Relation of Mind and Brain," and C. A. Strong's "Why the Mind has a Body," for further and detailed discussion upon this subject.

PSYCHOLOGY AND PHILOSOPHY.

Inasmuch as psychology deals with the mind, the spirit, the soul, (provided there be such a thing), and with purely imponderable and immaterial things generally, it is only natural that psychology and philosophy should be closely related. Many of the problems of metaphysics, as a matter of fact, deal with semi-psychological problems; among which may be mentioned the relation of brain and mind, free-will, the science of perceiving the reality of the outer world (epistemology), etc. How an external object and the "idea" of that object can ever be in any way "related" to one another, and how the mind can see a definite "sameness" or similarity between the two is, in fact, an extraordinary phenomenon. The idea of a beefsteak and the beefsteak itself are, indeed, as dissimilar as possible; and yet the two somehow correspond! This relationship is a remarkable fact, and awaits a full solution.

Again, every night when we fall asleep, we lose our individuality, in a sense; yet we are sure of waking up the next morning the same "person" who went to sleep—with its memories, thoughts, ideas, emotions, etc., practically

unchanged. How do we know that we shall do so? What guarantee have we that we shall wake up the same person that went to sleep and not some one else? As a matter of fact, this *does* sometimes happen, in cases of alternating personality; but such cases are exceptional, and the rule holds good. Yet consciousness is constantly changing. We are not the same person that we were five, ten, twenty years ago; we do not consider ourselves morally responsible, as it were, for acts committed by ourselves, when children, any more than if they had been committed by some one else. Nevertheless, underneath all these changes and modifications, there seems to flow a stream of "selfness," or uniformity, binding the whole together, and we recognize that Self as Ourself—behind and beyond all. What is the innermost nature of that Self? What is its origin, its destiny? These are questions which only the Science of the future can decide!









