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# HYPNOTISM

#### AND

# HYPNOTIC SUGGESTION

## A SCIENTIFIC TREATISE ON THE USES AND POSSIBILITIES OF HYPNOTISM, SUG-GESTION AND ALLIED PHENOMENA

# THIRTY AUTHORS.

BY

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#### HOW TO HYPNOTIZE DIFFICULT SUBJECTS.

By L. B. HAWLEY, M. D., New York Polyclinic College.

The method which I shall give for hypnotizing difficult subjects should be used only by physicians or those who understand the effects of chloroform or ether. I have found it very efficacious and have been able to hypnotize quickly many subjects upon whom I had previously worked for weeks in an effort to put them under its influence by other methods.

You should have the subject lying down on a couch or bed or in a physician's chair. Tell the subject to close his eyes and think determinedly of sleep. Give him suggestions for fifteen minutes as follows: "You are becoming drowsy—everything is getting dark to you—you are so sleepy—your eyelids feel heavy —you are breathing deeply—you are breathing heavily—everything is becoming hazy and misty—you hear no sound but my voice—a numbness creeps over you—nothing will disturb you you are sound asleep—when I count twenty, you will be sound asleep." Then count slowly from one to twenty.

While giving these suggestions, stand facing the top part of the subject's head and make passes with both hands, commencing with the three fingers of each hand in the center of the forehead, passing over the temples leaving the subject's face at the cheek-Repeat these passes slowly and lightly during the time bones. the suggestions are being given. You should have a bottle of chloroform and a handkerchief handy so that you can get it quickly. 'After making the passes and giving the suggestions, sprinkle a little chloroform on the handkerchief and hold it so the subject will inhale the vapor. As he is doing this, say to him, "You can smell chloroform-it is making you sleepy and drowsy-you are becoming sleepy-you are breathing heaviervou cannot resist its effects-it will soon put you asleep-it will have no bad effect upon your system in any way-you will not he sick at your stomach in the least-after you awaken you will feel splendidly." Repeat these suggestions until the subject becomes unconscious.

Another plan I have often used with good success is to sprinkle a little alcohol or anything else with a pungent odor on a handkerchief and impress upon the subject's mind before attempting to put him to sleep that it is a special preparation composed principally of chloroform. Give him the same suggestions you would were you using chloroform. In giving the suggestions, it should be called chloroform, as it will have a much stronger mental effect. By using the latter method, it will prevent any possible chance of sickness, which often follows the use of chloroform. Keep suggesting, "You will not feel sick after you awaken." This method will have a much stronger effect than if chloroform or ether were really used, without the suggestions. I advise every physician in placing anyone under the influence of an anaesthetic to give suggestions of sleep, telling the patient to be oprated upon that he is getting drowsy; he is so sleepy; he must breathe deeply and concentrate his mind upon sleep; that if he will, no sickness will follow. Less anaesthetic is then required. You should continue giving the sleep suggestions until the patient is thoroughly under the influence of the anaesthetic. In surgical cases, I have had splendid success where I have followed this plan, and I beg to state for the satisfaction of those who have not yet a practical knowledge of the subject that I have seen no bad consequences whatever, arise from persons being operated on when in the hypnotic sleep. Cases have occurred in which no pain has been felt subsequent to the operation even; the wounds healing in a few days by the first intention; and in the rest, I have seen no indications of any injury done to the constitution. On the contrary, it appears to me to have been saved, and that less constitutional disturbance has followed than under ordinary circumstances.

There has not been a death among the cases operated on. If the sleep is not profound the first time, the surgeon may safely calculate upon its being deeper the next, and it will be prudent to take the security of one or two preliminary hypnotizations. The flexibility of the limbs till moved and their remaining in any position they may be placed in, are characteristic of the hypnotic condition; but there are exceptions and these are equally diagnostic and to be depended upon. It sometimes happens that the limbs become rigid as they lie and on bending them they have always a disposition to return to a state of spasmodic extention. At other times there is complete relaxation of the whole muscular system, and the limbs can be tossed about like the limbs of a person just dead.

Whenever a physician finds it necessary to use an anaesthetic of any kind, if he will give the proper suggestions to produce the effect desired in addition to the anaesthetic, he will get much less reaction or shock than is usually the case. I would advise every practitioner of medicine to make a careful study of suggestion, apply it as directed, and use it in connection with medical and surgical treatment. I have made a careful study of the teaching and system of the celebrated French operator, Charpentier, who claims that any one can be hypnotized quickly by these methods, and believe that the results obtained in many cases will be marvelous to a great degree.

#### HYPNOTIC CURE FOR HICCOUGHS.

#### By J. C. HERBERT.

Stand in front of the patient and look steadily between his eyes. Ask the patient to raise his right hand as high as possible until it becomes a slight strain. Make him maintain this attitude for one minute. Then ask him to close his eyes. Make three passes across the throat in a slightly downward direction. This will cure the worst case of hiccoughs.

#### PERSONAL MAGNETISM.

#### By CHARLES S. CLARK, M. A.

Personal magnetism is personal trust,—it is an intangible something that creates confidence,—it is the power of personality. Some call it personal atmosphere; some do not call it anything, for they are not discerning enough to mark its presence. They pay a tribute to its existence, nevertheless, by following those who possess it,—by permitting themselves to be swayed and influenced by the men and women of magnetic personalities.

Personal magnetism does not depend, primarily, upon personal appearance. A fine physique, a commanding presence may contribute to it, but they are only incidental. There is no human form too frail, no human form too grotesque, no human face too homely, to harbor personal magnetism. It is something beyond and better than personal appearance, to which it bears the relation that thought bears to words. Elegant language that does not express thought is in no sense to be compared with even dialect that is pregnant with meaning and expression. Beautiful thoughts expressed in beautiful language are the highest ideal, but thought rises superior to the medium of expression, which, after all, is only secondary.

So with personal magnetism. The man or woman of commanding presence and superior beauty or comeliness, possesses, by nature some of the attributes of marked personality. But without personal magnetism, such a person is like a lithographic reproduction of a beautiful face—it lacks life. Health, physique, beauty, comeliness, though a person has all these and lacks personal magnetism he is as sounding brass and a tinkling cymbal. Personal magnetism is the real expression of unselfish self,—it is the ego,—it is what remains when all personal charms have been subtracted, all tangible accomplishments have been eliminated.

History abounds with striking examples of men and women otherwise insignificant who, through force of character, willpower, magnetism, ability to control others, have stood foremost in the eyes of the world. Napoleon, slight in stature, lacking a commanding presence, born poor and without opportunity, forced himself upon the world and made it subservient to him by the exercise of qualities that could not be defined. Madam De Stael, the least attractive of women, by her charming personality made the world do her homage and caused Napoleon to exile her. His beautiful and wealthy courtiers he tolerated and pitied, they lacked that personality that made them dangerous,—but the magnetic, though otherwise insignificant, Madame De Stael he hated and feared as he never feared another.

Personal magnetism in its perfection is not a heritage. It does not descend from father to son or from mother to daughter. True, it bears a more abundant fruitage in some natures than in others, like unto wheat sowed upon different grades of soil. But where there is intelligence in any human being there is latent personal magnetism. It may be fanned into a bright glow or it may be permitted to lie dormant, unused, inactive, wasted.

The objects of this article are twofold; first, to arouse the reader to the fact that he has personal magnetism if he will but cultivate it; second, to give some specific instructions in regard to its development.

Personal magnetism is more valuable than pecuniary wealth, for it is not taxable and it is not subject to sheriff's sales. It is more abiding than fame, for it cannot be swept away in an instant. It is more enduring than honor, for it carries within itself the very germ of all these. That it is worthy of any one's serious attention need not be iterated; that true success without it cannot be attained in any profession or calling, vocation or avocation, cannot be gainsaid. With it, all things are possible; without it, nothing is perfect. It is at once the steppingstone and the fruition of happiness; the exponent and the expression of power; a component part and the ultimate of success.

Those who would cultivate personal magnetism must bear in mind four things: First, it will not grow spontaneously. It is the result of careful, painstaking, plodding, faithful effort. Second, as a condition precedent, he who would cultivate it must beget a confidence in himself. Third, it is never an active force in the lives of vacillating, inactive, lackadaisical people. Fourth, it is not dependent upon station in life, comeliness of personality or education, in the general acceptance of this term.

To cultivate personal magnetism cultivate self-confidence. There is a difference between self-confidence and egotism,-a difference so vast that there is no analogy between them. To be self-confident is to believe in your own ability; to be egotistical is to vaunt an imaginary ability. The one is a virtue, the other is a vice; the one helps to success, the other hinders. The one attracts people and begets confidence; the other repels people and fosters their detestation. If you would cultivate your personal magnetism, cultivate self-confidence. You can do this by auto-suggestion. Begin by resolving to accomplish whatever you concentrate your mind upon. Do not contemplate failure; think only of succeeding, even in the most trivial things. There is no deed so trifling that it does not hold the germ of success. Succeed in its accomplishment, and you grow stronger; fail and your energies diminish. So it is with thoughts. Every thought subtracts itself from your potential ability, or adds itself to your possibilities of achievement. "As a man thinketh, so is he,"-the contemplation of failure invites it; thoughts of success, lend wings to its accomplishment. Then, let us reiterate, "Think only of success; do not contemplate failure." Have courage to dare; foster confidence that you shall be able to do.

It is in your power to give yourself stronger suggestions than can be implanted in your mind by any extraneous force. Your own suggestions, your innate courage, your cultivated determination, can overcome every obstacle and conquer every foe, but to attain this object you must think about yourself. You must turn your eyes inward,—you must discover your weak places and fortify them. No man ever won an athletic contest who trusted to luck and made no effort to train. Preparation for such a contest requires painstaking effort. How much more must he who would win in a mental contest train his mind for the ordeal? Athletes appreciate the value of physical training; brain workers appreciate the value of mental training, of thinking before acting. 'If you would become either, you must follow the methods of both.

Cultivate decision of character. Learn to say things with promptness and with a calm determination that leaves no room for doubt in regard to your sincerity. Do not vacillate. No vacillating leader very long retains his following. Decide, if you err. Better an error with promptness and positive action, than indecision that allows opportunity to escape. No man can ever be right all the time and succeed. A man who never makes an error is too deliberate to march in the front ranks of the leaders of men. Vacillation militates against leadership; decision nurtures it. Prograstination is the death knell of opportunity; promptness is the corner stone of confidence; it is the capital of hope, the treasury of trust; it keeps opportunity dodging to escape its grasp. Whom would you follow with the greatest confidence, him who decides without delay and executes without misgivings, or him who vacillates, hesitates, procrastinates, defers? The question is absurd; there can be but one answer to it.

Personal magnetism cannot be located on the map of human destiny. Some men carry it in their mien; some express it in their gestures; some disclose it in articulation, accent, intonation; some give it full expression in all these, without emphasizing it in any one.

There is magnetism in the human voice; how much, must be determined by him who uses it. There is no excuse for a voice that does not express it, except to plead neglectful indolence, criminal inattention. Sound lungs may be an accident of birth, but a good voice is an acquisition. Did you ever listen to yourself talk? Do so; it will interest you. Mark your defects of articulation, of intonation, of accent. Strange that you should talk in your own presence every hour of every day of every week that you live, yet never listen to your own voice.

A good voice, like correct breathing, may be acquired. No other human possession equals it in influencing others. Imagine trving to follow heroically a man who has a weak, piping voice or one whose articulation is indistinct, effeminate, emasculated. Think of the ecstatic thrill caused by listening to the masculate, rancous utterances of some woman whom you know! How often do you see a person who possesses all that is necessary to make him magnetic, save a voice? But, you will say, if a person is naturally endowed with such a voice, how can you criticize him? Permit us to answer that your voice is what you make it; that it is susceptible of cultivation; that a good voice may be acquired by any one who will turn his attention to it and devote the time necessary to acquire it. Cultivate your personal magnetism in all things else, but neglect to cultivate your voice, and it is like turning a wolf into a flock of sheep.

There is character in the human voice. It is an accurate index to the man. It limns his past deeds, portrays his present thought, and circumscribes his destiny. No man who talks incoherently, thinks clearly. The action of his mental machinery may be judged by his articulation. Clear, incisive words fall from the lips of these who think precisely. The drawl of indifference, the loose, disjointed speech of ignorance, the driveling whine of the idiotic, are but descending steps in the scale that ascends from imbecility to the highest order of intelligence.

The human voice is the most delicately attuned musical instrument that God has created. It is capable of a cultivation beyond the dreams of those who have given it no thought. It may be made to express every emotion in the gamut of human sensations, from abject misery to boundless ecstacy. It marks the man without his consent; it makes the man if he will but cultivate it.

Magnetic men and women possess self-control. That is a prerequisite to influencing others. They do not indulge in outbursts of passion. If angered, the eloquence of silence, accented by a very few well-chosen words, suffices to emphasize their selfcontrol. They are always thoughtful of self, yet ever conscious of others, never forgetful, yet never obtrusive; ready to lead or willing to follow. Thus, if you would cultivate personal magnetism, cultivate self-control. Anger destroys reserve energy with the hand of a prodigal; it saps vitality and visits an awful punishment upon him who indulges it. It never accomplishes anything; its work is destruction; it is a price too dear to be paid for any achievement, and it always hinders success. It is destructive of life itself. It follows, therefore, that no human possession is of sufficient value to justify its indulgence. If you would be magnetic you must be calmly self-confident, self-centered, sufficient unto yourself and unto others.

The reader of this article is interested more or less in the science of hypnotism. It is not necessary, therefore, to lay emphasis on the fact that hypnotism is, and always must be, in its true nature, the basis of personal magnetism. The successful hypnotist, with a little attention to himself, may develop a personal magnetism that is irresistible. The practice of hypnotism furthers this object and for these reasons: First, it insures a confidence in self. Second, it necesitates an understanding of man's relation to man. Third, it consists of the exercise of influence over others. Fourth, it develops the power to make effective suggestions, to emphasize self-control as a condition precedent to the control of others, to the exercise of influence. It is the visible expression of cultivated personal magnetism.

Hypnotism is but suggestion; therein lies its identity with personal magnetism. If you would influence others, you must be able to plant suggestions in their minds,—suggestions that will bear fruit in action.

The essence of hypnotism is effective suggestion. It is not necessary to say more to emphasize the analogy between hypnotism and personal magnetism, to establish their close identity. The successful hypnotist understands suggestion and knows that through it, he can gain dominion over men. Let him turn his attention to himself and to human nature, and he will soon be able to plant a suggestion in the mind of any person, each according to his kind.

To cultivate your personal magnetism, study those who please you. Discover what elements in their character, attract you. Contrast them with others and find wherein lies their strength. Do not imitate their actions, but emulate their examples. Nor is this all. Lessons just as valuable may be drawn from those who repel you, and there are many such. There is a reason for this repulsion. It does not arise spontaneously and without provocation. Analyze their characters, separating the good from the bad; assimilate the former, avoid the latter.

Another class well worth your study is those who make no impression upon you. The milk and water people whom you ignore inadvertently and notice only when they step on your toes. They have found, without an effort, the dead level of mediocrity, the commonplace position of the average. There is some reason for their lack of personality. Discover it, if possible, and add it to your list of things to avoid.

The student of hypnotism understands auto-suggestion. Let him practice it to develop his personal magnetism. Determine to be magnetic and the condition is self-induced. Turn your will upon your wants and hold it there as the mariner holds the proud ship upon her course. Imagine a Napoleon without a will, a Grant without self-reliance, a Lincoln without fortitude!

Train your will upon the object of your achievement and do not swerve. Every obstacle may be surmounted, every desire achieved, every worthy wish gratified. Such a will may garner a plentiful harvest where the fields have been devastated by blighting failure. Such a will may unhorse death itself. It is the attribute of kings, yet it is beyond the reach of none who would acquire it.

#### HYPNOTIC STATES AND THEIR NEXT OF KIN.

#### By WILLIAM ROMAINE NEWBOLD, Ph. D., University of Pennsylvania.

One often hears the word "hypnosis" used as though the thing for which it stands were as definite an entity as typhoid fever or diphtheria. Any recognized disease consists of certain well-marked symptoms which succeed one another in a fairly constant order, and, taken together, they constitute a relatively permanent system. This is not true of "hypnosis." What in a disease would be called the "symptoms" are, it is true, fairly determinate in it so far as their character goes, but they occur in such irregular, seemingly haphazard, combination, that it is impossible to frame any definition of "hypnosis" which will not seem hopelessly arbitrary.

This tendency to make simple that which is really complex has resulted in much popular misapprehension, and in many superficial theories. The popular misapprehension is, perhaps, a minor matter,—it was inevitable at any rate,—but the superficial theories are, in part, preventable and are of more importance, for they have often delayed the progress of investigation by giving the false impression that the ends of science had been reached and that further study of the facts was thereby rendered unnecessary.

I wish to enumerate the more salient phenomena of the states termed "hypnotic," to point out their nearest analogues, to bring them under a common formula, and thus to show some of the questions which must be answered before a theory of their nature can be framed. But I do not intend to frame such a theory myself. The agencies used in the production of hypnotic states form a convenient starting point. They are two in number, fixation of attention and the suggestion, "Go to sleep." The fixation of attention is usually prolonged, and various devices, such as passes and other monotonous sense rhythms, are used to prevent its wandering. But occasionally a sudden or violent arrest of attention, as for instance, that occasioned by a loud noise or by a brilliant flash of light, proves sufficient to induce an hypnotic state. The suggestion, "Go to sleep" is often expanded into a series of suggestions, all of which are really implied in it, as, "You are growing drowsy, your eyelids grow heavy, your hands numb," etc., etc. The relative importance of these two factors has been much disputed. I believe that the fixation of attention is always essential. Even when one hypnotizes by suggestion alone, attention is fixed upon the hypnotizer and his suggestions. But fixation of attention is not always, or even usually, sufficient to produce an hypnotic state for the first time, without suggestion. After the subject has been frequently hypnotized, however, he can be again thrown into an hypnotic state by anything to which the idea of being hypnotized has been attached, he can even hypnotize himself.

The effects produced by such manipulations can be classed under six chief heads:

- 1. Disturbances of Motion.
- 2. Disturbances of Sensation.
- 3. Disturbances of Ideation.
- 4. Suggestibility.
- 5. Post-hypnotic and Sub-conscious States.
- 6. Rapport.

The most common disturbance of motion is paralysis. It usually begins in the eyelids, progressing thence to lips and tongue, fingers, hand, arm, body. But its progress is sometimes more irregular and it often does not go so far.

The disturbances in sensation may be in the direction of an increase or of a diminution in sensitiveness. Increase I have never seen, though it has been reported by others. Diminution may be partial, or may progress to total anaesthesia. Sensitiveness to pain is usually the first to be affected, then the others, but in case of the others I have never observed any order in their going. But one should remember that the deafness, for example, of an hypnotic state is very different from the deafness which is due to a destruction of the hearing machinery. It is more like the deafness of the boiler maker, who, though his hearing is perfectly good, will say that he 'does not hear,' the incessant hammering in the midst of which his waking hours are spent. To this I shall recur later.

The ideational effects are the most difficult to ascertain and to classify. There is no doubt that most commonly the flow of thought is stayed. The teeming trains of ideas become thinned out and the ideas that remain succeed one another much more slowly than in the normal state. Thinking becomes an effort and soon comes to an apparent stop. But sometimes precisely the opposite is observed. Sober thought is replaced by vivid dreams, very like those of normal sleep, or by a swift stream of relatively coherent ideas poured forth in a "sermon" or "lecture." Between these extremes, again, lie all manner of intermediate states. Memory also is generally profoundly influenced and often for the better. The subject can often recall with precision many triffing happenings which he has entirely forgotten in his waking life. But occasionally memory seems to be split into mutually exclusive strata, the subject remembering the occurrences of previous hypnotic states only, or of certain periods of his life only. When this happens, one has reason to suspect that the subject's waking memory is not normal,-but this question is too broad for discussion here.

As a rule, the occurrences of the hypnotic state are not recalled after awaking. But the rule has many exceptions and I think that altogether too much emphasis has been laid upon it by many writers. The most characteristic change which hypnotizing works in the inner life is also the most difficult to define. We are all familiar with a something which we term the "self" and with the acts of will and of effort which we ascribe to the "self" in a peculiarly intimate sense; but it is not easy to define what we mean by the "self," or by ascribing to it acts of will and of effort. Whatever it be, this it is which is most affected in hypnotic states. It seems to lose, in a large measure, its power of initiation and of resistance. Whenever the subject can remember enough of the hypnotic state to describe his feelings this is the one thing upon which he lays most emphasis. He will say he felt "drowsy" or "lazy" or "helpless;" that he often recognized the commands of the hypnotizer as absurd, but was either unable or disinclined to resist their execution.

#### HYPNOTIC STATES AND THEIR NEXT OF KIN.

This brings me to the fourth phenomenon,-suggestibility. By a "suggestion" is meant any impression or idea which tends to produce in the subject some change other than itself, more especially to produce an act of some kind. "Suggestibility" is a state in which such tendencies are strengthened, in many cases so much so that they are practically sure of realization. Suggestions are usually given in the form of commands, but anything which expresses the wishes of the hypnotizer, and sometimes impressions not connected with the hypnotizer, will produce an effect. For instance, the "wax like catalepsy" so often observed is merely the realization of a suggestion which the hypnotizer conveys by placing the subject's limbs in a given position,-the subject takes the hint and keeps them there. Anything which the hypnotizer says to another person in the subject's hearing, or even a hint conveyed by a tone of voice, will often serve as effectually as the most positive command. Suggestibility is a chief factor in the production of controversies among observers of the phenomena, for, unless one is on his guard, he is apt to find in his subject just what he expects to find and no more.

Suggestibility varies much in degree and is often subject to curious and apparently arbitrary limitations. I have usually found the muscles suggestible in proportion to the degree of paralysis. In one of my subjects, for example, the eyelids, lips, tongue and fingers were paralyzed and they obeyed my every command. But the arm was only weakened, not helpless, and when I told the subject he could not lift that arm he disobeyed me and did it,—with difficulty it is true, but still he did it. In another the left hand was totally paralyzed, the right but slightly. I ordered the forefinger of the right hand to wag, there was no apparent result. Two or three minutes afterwards I saw that forefinger wagging violently and had much difficulty in stopping it. Here the suggestibility existed, but it was imperfect and I was never able to improve it. The right hand, however, I could never affect at all.

To the subject this suggestibility presents itself under various forms. Sometimes the muscles seem to obey the commands of themselves, the subject looking on, so to speak, but having no part in producing the result. In other cases the suggestion seems to be realized only through the subject's own will; he must consent before it can be carried out. He then sometimes feels that he must obey, whether he will or no; at others he feels as though he could refuse but "didn't care to make the effort," or thought he "might as well oblige" the hypnotizer. How far these feelings of the subject's are illusory is an open question, but I think there are always limits to the hypnotizer's power of imposing upon the subject suggestions which he finds repugnant, and a more careful study of these limitations is one of the things most needed in hypnotism.

The fifth phenomenon to which I shall call attention is the post-hypnotic state together with the notion of sub-consciousness which is often irresistibly suggested by it. Occasionally a suggestion given during the hypnotic state spontaneously outlasts the state itself. Thus, I once told the subject of whom I have above spoken, ----the one whose finger responded so slowly to the sugges-tion to wag,-that his left hand was stiff. No apparent effect. A little later I woke him and found that his hand was as rigid as a bar of iron; neither he nor I could do anything with it at all and I had to hypnotize him again to undo the locked muscles. Here the suggestion refused to include itself in the general command "wake up," and persisted into the waking state. An analogous phenomenon,-and this is what is commonly known as the "posthypnotic suggestion"-can be produced in nearly all cases by telling the subject to do so and so when a specified signal is given, the signal being given only after he awakes. The study of the relation which such post-hypnotic suggestions bear to the normal consciousness into which they are intruded is the most interesting and has proved one of the most valuable fields of study offered by hypnotism, for it has thrown a flood of light upon some of the most perplexing phenomena of hysteria,--in particular upon the "sub-conscious fixed idea" and "double personality." Sometimes the subject has not the least idea that the act in question has been imposed upon him by another; he fancies that he does it of his own motion and will allege the most plausible reasons for wholly purposeless acts. For example, a subject who 4-2.

had been told to open and then close the door upon a given signal, when asked why he did it said, "I thought I heard a dog in the hall." Very often the subject, while performing the post-hypnotic suggestion, relapses temporarily into an hypnotic state.

Sometimes there is reason to believe that states of consciousness which appear in the hypnotic state, persist after the subject has awakened in a sort of subterranean or, more exactly, subconscious form, quite unknown to his waking consciousness. Suppose the subject be told that after he awakes he is to do so and so as soon as the hypnotizer has used the word "and" ten Punctually upon the utterance of the tenth "and" the times. suggestion will be executed. Clearly the "ands" were being counted. Yet if the subject be questioned about it before the tenth "and" has been reached, he will not have the least idea how many "ands" have been used, and will stoutly protest that he never dreamed of counting them. What, then, did the counting? If you hypnotize him he will tell you immediately how many "ands" have been used, and will say that he was counting them all the time. This is the very simplest form of the class of phenomena to which "double personality" belongs,-a class of phenomena the importance of which to psychological theory cannot be overestimated.

The sixth and last phenomenon to which I shall call attention is that of rapport. In most hypnotic states only the hypnotizer has access to the hypnotized mind. To his every word the patient is keenly alive, but he is dead to all else. The spontaneity of this phenomenon has been contested of late and it has been ascribed to suggestion. My own experience leads me to believe that it is the normal result of the manipulations which produce the hypnotic state, being due to the fact that the hypnotizer never allows his subject to lose consciousness of him, though consciousness of all else falls away.

These six are the leading phenomena which are produced by the manipulations which I have described. But not all are found in the same subject. One might almost say that no two subjects hypnotize in exactly the same way, or, if that be deemed an exaggeration, as it doubtless is, one certainly may say that the variations which are found are too extensive to be accounted for by any one principle. Hence I do not think it well to attempt a definition of "hypnosis." I do not think there is any one combination of these phenomena which is sufficiently common to be entitled "hypnosis" or "the hypnotic state." It is better to speak of such states simply as "hypnotic."

These phenomena are by no means isolated *in rerum natura*. Each of them is found in other contexts, but the attempt to enumerate all of those contexts would carry me far beyond the limits of this paper. I can only sketch briefly their next of kin.

Of these one of the nearest, as the very name "hypnotic" implies, is sleep. Normal sleep is usually produced, not by concentration of attention, though that favors its onset and is often resorted to when sleep is slow in coming, but by the simple withdrawal of the stimuli of sense. And although not all the phenomena of hypnotic states are characteristic of sleep, all are at least occasionally found in it. Yet it is not quite exact to say that hypnotic states are forms of sleep, unless one would call an unfinished building a kind of house. They are rather cases in which the processes which normally end in sleep have been arrested; the subject is only partly asleep. This is the reason why hypnotic states are so unstable, always tending to resolve themselves into either sleep or waking life. They are essentially transition states artificially prolonged.

Another group of near relatives to hypnotic states is to be found in "trance" and "ecstacy." Trance is characterized (1) by a suspension of the ordinary sense commerce between the world of ideas and the world of things; (2) by great activity of the idea-trains themselves. Ecstacy is a trance-state in which there is an overflow of pleasurable consciousness, sometimes so great as practically to submerge all articulate thinking. But the precise relation which these states sustain to the hypnotic is difficult to determine. They are of relatively infrequent occurrence and have never been sufficiently studied.

The nearest analogue to the hypnotic states is undoubtedly to be found in hysteria. Here we find all the above-described phenomena, occurring, not temporarily and in response to manipulation especially designed to produce them, but spontaneously, often persisting for months and years, and in the greatest variety and profusion. Many writers, with Charcot at their head, go so far as to regard the hypnotic states as merely forms of hysteria, while many others, led by the professors of the school of Naney, repudiate the charge, with much needless bitterness, as a slur upon the mental and physical health of the subject. The truth, as often, lies between the two extremes. The phenomena and, perhaps, in part the causes of hypnotic states, are identical with some of those of hysteria, but this no more makes the hypnotic subject an hysteric than a bruised foot makes a man a cripple, or a dose of whiskey makes him a lunatic. Hysteria is a relatively permanent entity, produced by relatively permanent causes, while hypnotic states are transitory groups of phenomena produced and ended at will. But, one may retort, if the foot is bruised often enough and badly enough the man will become a cripple indeed, and if he drinks enough whiskey often enough he may become a lunatic,-does the analogy hold? That is a question of fact upon which the authorities differ.\* If a so-called hypnotic state were to become permanent, or were to tend to recur of itself, it would undoubtedly be a form of hysteria, but the weight of evidence, in my opinion, goes to show that repeated hypnotizing does not tend to fix the hypnotic state upon the subject.-that it has in fact no injurious effects whatever. Still, the question should be regarded as open.

All these diverse phenomena are capable of being brought under one conception. All can be expressed in terms of the relation between the self and the various sensations, ideas, motor powers and powers of control which we usually ascribe to the self. The hypnotic paralysis is not a true paralysis. The motor machinery remains intact, but for the time being the self is deprived of its power of control over the muscles. Hypnotic anaesthesias are not true anaesthesias. Of them, as of hysterical anaesthesias, it is possible to prove that the lost sensations still in some

<sup>\*</sup>From long experience and close observation. I am thoroughly convinced that hypriosis within itself is absolutely harmless. If any harmful effects should court, the same power that produced them could immediately correct them.—Editor.

sense exist, although cut off from and unknown to the hypnotized self. Whether the arrest of thinking is to be interpreted in like manner as a mere separation of thought from self, or is to be regardel as an actual abolition of thought, is more dubious, but in many cases the evidence for the first conception is very strong. The loss of the power of initiation is a phenomenon peculiarly characteristic of these states, and goes hand in hand with sugges-The two together constitute a "weakening" of the tibility. self Losses of memory are to be interpreted as are losses of sensation,-the memories still exist in some sense and can be revived. Gains, whether in memory, sensation or power of motion, are only to be looked for, as a rule, when the normal consciousness exhibits corresponding losses. Every normal consciousness has forgotten much, while relatively few ordinary consciousnesses,---and they, of course, are not normal,---are defective in sensory or motor powers, hence gains in memory are more common than gains in sensation and motion. But there are cases in which the gain exhibited in the hypnotic state cannot be interpreted as the repairing of some earlier loss, but really represents an increase in power above the normal.

The phenomenon of rapport is nothing more than the fact that impressions proceeding from the hypnotizer are exempt from the destructive process which cuts the self off from the impressions of the outer world,—they are never lost. Suggestibility is of two types. In the first the elements lost by the subject can be directly controlled by the hypnotizer. In the second the resisting power of the self is so far weakened that it passively accepts and executes nearly all the hypnotizer's commands. In post-hypnotic suggestion certain phenomena of the hypnotic state persist into waking life, and the question as to the existence and nature of sub-conscious states, which is really connected, as I have shown, with all forms of hypnotic losses, is forced more clearly upon the student.

Thus these changes in the relation of the self to the various activities of consciousness may be summed up somewhat as follows: In the normal state, the self is conscious of various sensations and ideas of which, in the abnormal state, it is not conscious, although their continued existence can, in some sense, be sometimes proved and may always be suspected, and, occasionally, in the abnormal state the self gains new ideas or increases in sensitiveness which are not found in the normal. In the normal state the self possesses 'a control over the muscles, a power of initiation and a power of resistance to external commands which it loses in the abnormal. Clearly then the solution of these problems turns upon the answers to such questions as these: What is the self? What are these "activities" of which the self is "conscious?" Are the "activities" themselves conscious states and is the self's "becoming conscious of them" nothing more than the blending of two streams of consciousness? If so they are still conscious when separated from the self. Or are they mere brain processes, becoming "conscious" only when in some way affecting self-consciousness? What is the nature of this "weakening of the self" of which I have so often had occasion to speak? Is the self a spiritual being, finding but imperfect expression through the activities of the brain with which it is united, and are hypnosis. hysteria and so on various complex disorganizations of those activities, impairing that union and rendering that expression yet more imperfect? Or is the human personality a species of layer cake, with one self on top and one or more other selves beneath, and are these abnormal states due to a partial or total destruction of the upper self, thus allowing one or more of the lower selves to come to view? Or is the self nothing more than a co-ordinate system of activities, its control over any given one of them nothing more than the sum of the controls exerted over that one by all the others, and are these abnormal states due to a partial or total disruption of the system, by which the various elements are set free to pursue their more or less ungoverned ways, or to fall under the sway of the hypnotizer?

These and their like are the questions which must be answered before we can frame a theory of the hypnotic state, and the answers to them will be found, not in the wild dreams of half-educated and wholly visionary theorists, nor yet in the arbitrary assumptions of a soi disant "science," but in the observations and experiments of many generations of patient, plodding students.

#### THE FUNDAMENTAL PRINCIPLES OF HYPNOTISM.

By THOMSON JAY HUDSON, LL. D., Author of "The Law of Psychic Phenomena," "A Scientific Demonstration of the Future Life," "The Divine Pedigree of Man," etc.

Hypnotism constitutes no exception to the axiom that the successful study and practice of any science depends, primarily, upon the student's mastery of its fundamental principles. This sounds like—and it is—a truism. And yet no axiom of science is so persistently disregarded as this is by the average student and practitioner of hypnotism.

Without stopping to illustrate my meaning by the citation of examples, I propose to state what I regard as the essential fundaments of the science, without an understanding of which hypnotism can neither be mastered as a science nor practiced with safety. The first of these pertains to the classification of hypnotism as a science; the second relates to the interpretation of its phenomena, and the third to the conditions of safe and successful practice.

#### CLASSIFICATION.

(1.) Of the first, little need be said beyond a statement that hypnotism, as a science, belongs primarily to the domain of psychology. That is to say, the phenomena of hypnotism are psychological effects due to psychological causes. To the majority of modern scientific investigators this will appear to be a self-evident proposition; and it might be dismissed as such were it not for the fact that many of the materialistic school of scientists still persist in a vain search for a physiological cause of the phenomena. It is, therefore, of the first importance for the student to realize that he is dealing with phenomena that are induced by mental conditions; and that accompanying physiological phenomena are effects—not causes. Otherwise he will seek in vain for a working hypothesis capable of correlating all the facts with which he will come in contact.

#### INTERPRETATION.

(2.) It is in the interpretation of phenomena that a knowledge of fundamental principles becomes absolutely indispensable. Until within a very few years, students of the science of hypnotism have been handicapped by the lack of such knowledge. Many were in doubt whether it was a psychological or physiological science. The law of suggestion had not been discovered. The law of duality of mind had not been formulated. The discovery of the law of suggestion by European scientists at once settled the question of classification, and afforded an explanation of much that was mysterious in the phenomena. Indeed, so far as hypnotism, per se, was concerned, nothing further seemed to be required to constitute a valid, working hypothesis. But it was soon found that there were thousands of cognate phenomena which the law of suggestion, as at first formulated, could not adequately explain. In other words, it was obvious that the law was of far wider application than to persons in the hypnotic con-Another term was, therefore, necessary to constitute a dition. valid, working hypothesis, applicable alike to hypnotism and to all other psychic phenomena. That term was found in the theory of duality of mind. Formally stated, the hypothesis is as follows:

1. Man is endowed with two minds,--objective and subjective.

2. The subjective mind is constantly amenable to control by suggestion, either by the objective mind of the individual, (auto suggestion) or by another person, as in the practice of hypnotism.

These two propositions, properly understood, constitute a never-failing working hypothesis applicable alike to the phenomena of hypotism and to all other psychic phenomena.

In the space allotted to this article it is impossible adequately to differentiate the two minds; and the reader must be referred to the author's published works<sup>\*</sup> for a full explanation. In the meantime, however, it will be sufficient for the purposes of this article to say that the objective mind is the mind of ordinary

<sup>\* &</sup>quot;The Law of Psychic Phenomena;" "A Scientific Demonstration of the Future Life;" and "The Divine Pedigree of Man."-New York State Pub. Co., Rochester, N. Y.

waking consciousness. The subjective mind is the source of that intelligence which is manifested when the objective mind is asleep or is otherwise inhibited, as in dreams or in hypnotism.

As an illustration of the capacity of this hypothesis to explain psychic phenomena, mental therapeutics or mind cure may be cited as an example. The chaotic condition of that science, in times past, is too well known to require comment. An indefinite number of conflicting theories was invoked to account for the well recognized fact that a vast number of diseases could be cured by mental processes. The only thing common to the theories was their unscientific character. But this was offset by the fact that the ability to cure disease was common to all systems. Thus it was that so-called "Christian Science" and other cognete forms of fetichism, up to voodoism, including the placebo of the medical practitioner, were for many years enshrouded in the same veil of mystery. Even hypnotism, in its early history, was prolific of theories of causation, some of them reaching into the realms of superstition; and of those who were least inclined to superstitious notions, many regarded the hypnotic sleep as being in itself, the curative agency. The discovery of the law of suggestion, however, served to dispel the latter idea; but it was not until the general hypothesis had been formulated that a rational theory applicable to mental therapeutics was rendered possible. That is to say, when the law of duality of mind was discovered. it became evident that the law of suggestion pertained exclusively to the subjective mind. From this it was but a step to the obvious conclusion that in the subjective mind resides the potential energy that controls the functions, sensations and conditions of the body. And thus it was that, by adding the latter proposition as a subsidiary term to the original theory, a perfect working hypothesis for mental healing was evolved. Its terms are as follows:

1. Man is endowed with two minds,—objective and subjective.

2. The subjective mind is constantly amenable to control by suggestion.

3. The subjective mind controls the functions, sensations and conditions of the body.

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It is self-evident that, if these three propositions are true, they constitute a working hypothesis which explains all of the phenomena of mental healing, (by whatever name the various systems may be designated) suggests in a general way the method of successful practice, and removes the whole subject-matter from the realms of mysticism and superstition. That each proposition is true cannot be successfully refuted. To say the very least, everything happens exactly as though they were true; and that is all that any scientist pretends to demand in a working hypothesis. In this respect it is as well sustained as is the atomic theory, or the Newtonian hypothesis of gravitation.

It will thus be seen how perfectly the hypothesis of duality of mind, coupled with the law of suggestion, explains all that is mysterious, and harmonizes all that seems contradictory, in the vast congeries of systems of mental therapeutics. And the student is assured that he can rely upon the same hypothesis as an instrument of logic and science equally efficacious in the explication of all other psychic phenomena.

#### PRACTICE.

I have purposely selected mental therapeutics as an illustration of the efficacy of the dual mind hypothesis as a means of correctly interpreting the phenomena of hypnotism, for the reason that it is in therapeutics that hypnotism finds its most useful employment. In saying this I am not unmindful of its potential value as an agent of moral reform, or of the fact that it may be made extremely useful in promoting the education of the young. Nor do I underestimate its importance or usefulness in the field of experimental psychology; for it is to hypnotism that credit is due for the elevation of psychology into the domain of the inductive sciences. Nevertheless, the great majority of those who are interested in the science, are so because of its value as a therapeutic agent.

The value of truth is universally recognized in a general way; but there are few who seem to be aware of its transcendent importance when dealing with a hypnotic subject. Any deviation from the truth in making suggestions to a hypnotized subject works an injury to his nervous system exactly proportioned

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to the character and importance of the deviation. A very simple experiment will demonstrate the truth of this proposition. After a subject has been hypnotized, let another hypnotist be introduced and placed in communication with the subject. Then let a strong, vigorous suggestion be made to the subject by one of the hypnotists and immediately denied by the other. In other words, let two antagonistic suggestions be enforced upon the subject at the same time. By the law of his being, he is compelled to accept the suggestions imparted to him. But here are two antagonistic suggestions, equally, we must suppose, entitled to acceptance, and each clamoring for recognition. The result is that the subject is thrown into a state of mental distress and nervousness that is simply indescribable; and it usually ends by the awakening of the subject with a painful nervous shock. It goes without saving that a persistence in such experiments would soon wreck the strongest nervous organism.

I have supposed an extreme case; but it is obvious that any two opposing suggestions to a hypnotized subject must produce a like effect, differing only in degree, and proportioned to the importance of the subject-matter.

Now, be it remembered that an auto-suggestion, or a suggestion arising from the experience or the training of the individual, is just as potent as the suggestions of a hypnotist. Whatever, therefore, is recognized as truth by the subject in his normal experience, constitutes an auto-suggestion to his subjective mind. It follows that a false suggestion made by a hypnotist violently antagonizes the auto-suggestions of the normal experience of the subject; and the result is precisely the same as in the experimental cases we have supposed,-proportioned, of course, to its importance to the hypnotized subject. That is to say, in matters of indifference he may, and often does, accept a false suggestion with seeming alacrity; whereas, in matters of some importance to himself, he will offer a stronger resistance before accepting it; and in matters of supreme importance, as in criminal suggestion, or those violative of the conscientious scruples of the subject, especially where a criminal suggestion is sought to be carried into immediate execution, the same violent shock to the nervous

organism,—the same awakening to normal consciousness is experienced—as in the experimental case mentioned.

It is, in short, a universal law that (1) antagonistic suggestions imparted to a hypnotized subject invariably shock his nervous organism to a greater or less degree. (2) A known truth and a suggested falsehood constitute antagonistic suggestions in the mind of a hypnotized subject. It follows that false suggestions cannot be indulged in with safety to the hypnotic subject; and persistence in the vicious practice will invariably wreck his nervous organism and reduce him to a state of imbecility.

It is evident, therefore, that the danger line in hypnotism is coincident with that which divides truth from error. On error's side lies constant danger in the psycho-physical as in the moral world. Safety is on the side of truth.

#### HISTORY OF HYPNOTISM.

## By MAX DESSOIR, M. D., Ph. D., Professor of Philosophy, University of Berlin.

About fifteen years ago-I was then a student eighteen years of age-I began to think seriously about hypnotism. At that time the extensiveness and significance of hypnotism had not been accepted in Germany, particularly not in Berlin; consequently the main task for myself and my friends consisted in establishing a fit position for the "fact" itself. By means of demonstrations in the "Society for Experimental Psychology," just founded at that time, and which is now known as "Psychologische Gesellschaft," by means of demonstration in medical societies, for which Dr. Moll deserves much credit and by means of many popular essays, we slowly approached the accomplishment of our aim. This rather necessary task of vulgarizing was frequently met by a somewhat humiliating treatment on the part of our younger searchers. The gentlemen forget that their researches (although perhaps of a far greater scientific value) would have been practically impossible if at that very time facts of hypnosis had not been introduced into the general knowledge, viz., into the rank of recognized phenomena.

I am inclined to think that the progress of explaining hypnotic phenomena is not as great as younger scientists are inclined to suppose. Even to this day a number of problems are quite as vague as they were ten and fifteen years ago. As for instance, the problem of the relationship of sleep to hypnosis. Other problems again are solved to-day, just as they were solved in former days. Some things, however, have actually changed, and these are principally the two following: First, that we find discussions on the subject in scientific journals which have even been taken up by the Royal Bavarian Academy of Science; there was a time when this would have been deemed impossible, but it is a glorious result of the movement that took place in Germany in the eighties. Second, the terminology is much changed. The leading words of former hypnotic literature were popularly selected, and not always the most accurate. But even if the representation has changed, the original theories have remained the same. No new point of view of any importance has been presented; no thought expressed that we have not already found in Bentivegni, Forel, Moll, Schrenk, Notzing and others, naming German writers only.

With us the treatment of hypnotism has passed through two phases in the past twenty years, and when I survey the work accomplished in both and ask as a philosopher ought to do, not about single results, but regarding the general result, the process presents itself to me, as one among the many evolutions by meane of which something apparently objective has in reality been recognized as something subjective. Whereas, it was formerly supposed that hypnosis with all its strange features could be produced by magnetic efflusions, or similar causes,---that is to say--by objective conditions; we know now that the decisive process is performed in the soul of the hypnotic himself. (Read Moll in his studies of the "rapport" in hypnosis.) With this removing into the subject, the theory of hypnosis has at the same time been converted into psychology, and this is universally acknowledged at present. But the treatment and conception of hypnosis vary according to the conception and treatment of psychology. The disciples of physiological psychology seek an explanation in nervous processes. The representatives of psychology of association define the suggestion by the aid of associative processes, etc. I, personally, am now as ever, of the opinion that the auxiliary notion of the sub-conscious physical activity is a permissible hypothesis and can give a sufficient explanation; a veritable psychological explanation can (yes must, perhaps) take advantage of the facts conveyed in the ideas of super and sub-consciousness, double ego, etc. It is true that this creates some difficulty in the psychology which is at present accepted. For with the atomistic analysis of the contents of consciousness practiced at the present time, the former ideas can only be united if we attribute a certain degree of strength to the substance contained therein, by means of which they can take possession of the quantity of energy at their disposal. It would appear to me, therefore, that the researches made in hypnotic conditions will lead from psychological atomistics to psychological energetics.

The acknowledgment of the subjective and psychological character of hypnosis has had still another effect. By means of this enlightenment a number of conditions have been explained which were formerly excellent food for superstition. Now we can understand the mechanism of automatic writing, of trance speaking, etc. In fact we have been enabled to raise the veil of popular superstition, which in former years was quite impossible, and whosoever knows what the social importance of superstition implies, will appreciate the significance of this fact.

### SOME MANIFESTATIONS OF DOUBLE CONSCIOUSNESS AND THEIR RELATION TO HYPNOTISM.

By CLARK WISSLER, Fellow in Psychology, Columbia University.

Now and then individuals are met with, seemingly actuated either alternately or simultaneously by two different and distinct personalities. The personality usually predominating is regarded as the normal, or primary personality, while the one less prominent or less frequent and complete in manifestation is known as the secondary personality. The appearance of the latter may be frequent, periodical or rare. When such manifestations result from internal or functional causes, they are considererd natural, but when due to personal manipulation of external conditions, they are spoken of as induced. In hypnotism we find the individual actuated by a strange and apparently independent personality, neither known to nor knowing the normal personality, a condition induced usually by an operator who alternates the two rersonalities at will and who possesses power of control, more or less complete, over the secondary personality. In cases of automatic writing, planchet writing, etc., we find two distinct personalities working simultaneously, but independent of and unknown to each other. In the latter, no operator is necessary as the secondary personality will communicate with any one in its chosen way, or express ideas when no one is present. It thus appears that hypnotism is a particular kind of phenomena belonging to a more general class.

The so-called hysterical eye presents an interesting case of double personality. In such an eye the normal field of vision is greatly narrowed so that objects falling slightly to one side of the retina are not seen as in the normal eye. Yet, if a pencil be placed in the hand of a person so afflicted and the attention fully occupied elsewhere, the hand will often proceed to record what falls upon the apparently blind part of the retina, while its owner is ignorant of the whole affair. Here we have a secondary personality able to receive impressions too weak to reach the other. In ordinary cases of automatic writing the impressions are received through the ear.

Attempts have been made to induce automatic writing in normal persons with some show of success, but so far as the writer is aware no such cases have gone far enough to put the eye or ear in rapport with the hand, so as to furnish a clear case of induced double personality That such is possible the following experiments seem to indicate.

In the first place, let us see if the eyes of normal persons can be trained to act in a manner similar to the hysterical eye. Dr. Scripture, of Yale, made a few observations upon unconscious association, that give us a hint as to how to approach this problem. He mounted pictures upon cards, in one corner of which a small letter was printed, so that when the subject was looking at the picture the small letter would fall upon the indirect field of the retina. Eye movements were avoided and the letter made invisible by exposing the card for an instant only. After seeing the picture, the subject was asked what letter it suggested to him. As a great many answers agreed with the letter in the corner of the card, the conclusion was reached that association might take place between things consciously seen and those not so seen.

Similar tests were made by the writer. The cards used carried rather complex geometrical figures of the same size. Upon the right end of the card a letter or numeral was printed. The card was exposed by a quick acting shutter, and a fixation point served to keep the eye of the subject in the proper position. In the preliminary experiments the subject was requested to close his left eve and fix his right upon the point where the figures would appear and to take note of them as they were exposed. Three cards were shown in succession, after which they were repeated in a series of four and at each exposure the subject was required to say whether he had seen the figure in the former series, and then requested to name the first letter coming to mind. The purpose and conditions of the experiment were unknown to the subjects, they being led to believe my object the testing of their ability to recognize geometrical figures and the determination of what they first associated with them. Because of this they fixed their eves so intently upon the place where the figures

were to appear that the presence of characters on the end of the card was not discovered. Thus the conditions of fixed attention essential to automatic writing, etc., were secured.

Six young men, college students, were taken for the preliminary trials. With two of them the number of correct answers far exceeded the limits of chance, while the others did no better than if they had simply drawn letters from a hat. So far we have simply tested Dr. Scripture's conclusions and found them true, at least for some individuals.

The two promising subjects, C and R, were then practiced with daily for several weeks with decided improvement in the number of correct answers. As was to be expected C and R soon found the letters coming into mind shortly after the presentation of the card. According to their own statements the change came about in this way. As the differences between the complex geometrical figures were small, they found it difficult to remember them in detail. So while the experimenter was changing a card they would visualize the preceding. It was not long until the letters would also come into mind for the association. A little later the letter would come as soon as the figure was seen in the first presentation. From this it appeared that association of memorv images was not necessary to bring impressions of the marginal letters into consciousness and the method was changed accordingly. Pictures were substituted for the geometrical figures and numerals were used in the margins. The subject was to name the picture as quickly as possible and then give the numeral suggested. Between each exposure the subject was engaged in conversation to break up any trains of association set going by the previous one, and to prevent him falling into that state of mind best described as "wondering what the next will be."

In all the earlier tests the subject knew in each case what kinds of images he was expected to select from the train following the exposure. After a time it was found easy to pass from letters to numerals as the case required. The final tests were given without this cue, the marginal characters being letters, numerals and blanks in irregular order.

We give here a table of the first twenty cases in the final test of R. It is not necessary to give other results for either C or

R, as they are all similar. The striking difference between C and R was that C gave letters best and R numerals. In the course of the tests both subjects discovered by accident the presence of the actual characters in the margins and thus learned the purpose and conditions of the experiment. Yet the rate of improvement was not apparently modified by this knowledge and actual test showed them unable to see consciously the characters on the card when the shutter was thrown under the same conditions as before. We thus have reasonable proof that the retina in the indirect field of these eyes carried in impressions not consciously seen and handed them over to the conscious self—impressions too weak to be directly experienced in vision.

The manner in which these impressions were received is worth noting. When R wished to give the numeral or letter, he closed his eyes and usually began by saying, "I see," etc. Once, when 55 was the numeral, he replied to the usual interrogation by saying with considerable hesitation, "I see a 5 with something before it. I can not make it out. I am certain the number is of two figures." At another time the numeral was three—"I see an 8. No! it has changed to a 3." Any numeral ending in 6 gave him much trouble, as 46 was often read 40, 72, 12, etc. Sometimes he would say, "I see a figure but can not make it out. It seems to be several in one." When the margin was blank he usually saw nothing at first and was very reluctant to answer, saying that the figures were slow to come and very dim. C did not close his eves and gave his answers very promptly, but said the images rose up in his mind as in case of R.

It will be observed that many of the errors in the table may be explained as misreadings by the eye, or such as would be made in determining the content of vague memory eye images.

Another series of experiments was made upon eight college students, one of them giving results similar to the early tests of C and R. Thus we have found three susceptible cases in fourteen. So far no attempt has been made to train the less promising subjects.

Strangely enough, if in these experiments, the eye was fixed upon the point where the picture was to appear and the atteation given to the indirect field of vision, the letters and numerals on the end of the card were not only invisible but could not be given correctly as in the case of attention directed elsewhere. That is to say the necessary conditions of attention are here the same as in cases of automatic writing or in double personality.

The finale to this series of experiments would be the training of the hand of the subject to record the marginal letters independently. This is still more difficult and tedious. It has been tried with a new subject and, though the results are encouraging, no certain statement can be made at this time. However, these meagre results lend more weight to the idea that we are here dealing with the same relations of consciousness that appear in an exaggerated form as a secondary personality.

Now, let us see what light these results throw upon hypnotism. One of the most striking facts of hypnotism is that commands given the hypnotic personality are afterwards executed at the appointed time by the normal personality. The individual denies all knowledge of being so commanded, maintaining that the idea of the act was original with him and that it was done because of no good reason for not doing it. Here an idea comes into consciousness without a trace of relation in time and space to other conscious acts. In the case of R, images of numerals rose up in consciousness and differed from the images of the pictures on the card, in that he was conscious of seeing the latter at a given place and at a certain time in relation to his other conscious acts, while in case of numerals, he was only conscious of an image rising up in mind whose counterpart had no place in his experience and for whose presence he can give no explanation save that it just came. In such manner fragmentary memories may be taken from the mental series of the hypnotic personality and transferred to the normal mental series, free from all old connections so that the subject is tricked into accepting it as a new and original experience. It is possible that such a method may account for many of the ideas that come to normal people, as it were, out of the air, but we believe this occurs far less often than many writers would lead us to believe. The whole matter of the transfer of ideas from a subconscious personality to the conscious, or normal, is probably, at bottom, the same process by which we

go through the common experience of feeling that the clock struck a certain hour while we were reading but do not know that we heard it strike nor can we even guess what we were doing while it did so. The real problem here, however, is to discover the mechanism by which this is brought about. This is so far a mystery.

Another cause for popular wonder is the acuteness of the senses sometimes observed in the hypnotic state. In the cases before mentioned, we see how the secondary personality receives impressions from stimuli below the threshold of the normal. From these it is not so surprising that in hypnotism, where the secondary personality is stimulated to great activity, the eye should become extremely acute or the ear exceedingly sharp.

The inducing of hypnotism by the operator and the training of our subjects to bring about exceptional phenomena of consciousness, all indicate that in such anomalies of personality we have an unusual relation of normal tendencies brought about by unusual circumstances. But an operator is not essential to these circumstances.

As we have already pointed out the one essential condition for the induction of automatic action of any kind is to get the attention firmly fixed on something else. It is generally agreed that in hypnotism we have a case of extreme concentration of attention somewhere to such a degree that the whole normal consciousness is held at a standstill, producing a condition not unlike natural sleep. So every one who can concentrate his attention has within him the fundamental possibilities of the various phenomena of the secondary personality.

From the experiments reported in this article, it seems possible to devise a series of tests for susceptibility of this kind by which individuals may be classified for study and practical considerations. This would enable us to make a more searching investigation of the relations between hypnotism and other characteristics and contribute greatly to our insight into human nature. The few experiments of the writer give no idea as to what percentage of people at large, or even of college students, exhibit these automatisms, but they are probably more numerous than is generally believed. In the regular psycho-physical tests of

students in Columbia College, all are asked if they have ever experienced a hallucination, an apparition, heard voices, etc., and the written replies contain many accounts of such experiences. Most of these heard voices calling them or making suggestions, other kinds being rare. Among 300 male students there were slightly more than 50 cases of such auditory experiences, ranging from single to constant occurrence and in varying degrees of complexity. Many published reports of hypnotism show that the hypnotic personality is in possession of the memory store of the secondary personality present in automatic writing and alternating consciousness, and there are other facts indicating a similar relation between the latter and simple auditory illusions. On the other hand, these illusions seem to play a prominent part in certain classes of insanity. In view of this, considerations of mental health make it desirable to find means for detecting tendencies of this sort, and it is not unreasonable to hope that the future will give us a working knowledge in this important field.

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