# HUMAN MAGNETISM

·H·S·DRAYTON·M.D·

# HUMAN MAGNETISM.

## ITS NATURE, PHYSIOLOGY AND PSYCHOLOGY.

---

ITS USES, AS A REMEDIAL AGENT, IN MORAL AND INTELLECTUAL IMPROVEMENT, ETC.

---

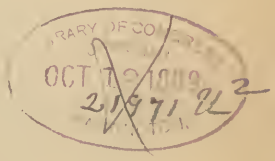
BY

H. S DRAYTON, LL. B., M. D.

AUTHOR OF "BRAIN AND MIND," "NERVOUSNESS," ETC.; FELLOW OF THE N. Y. ACADEMY OF ANTHROPOLOGY; MEMBER OF THE NEW YORK MEDICAL SOCIETY, ETC.

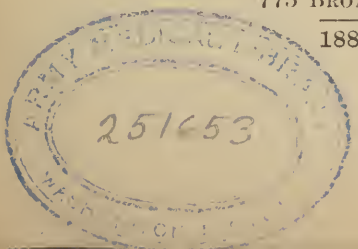
---

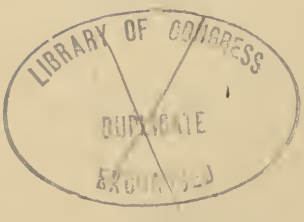
ILLUSTRATED.




NEW YORK:
FOWLER & WELLS COMPANY, PUBLISHERS,
775 BROADWAY.

1889





# TABLE OF CONTENTS.

CHAPTER VIII.



CHAPTER IX.



CHAPTER X.



CHAPTER XI.



CHAPTER XII.



CHAPTER XIII.



CHAPTER XIV.

# PREFACE.

Public interest in the phenomena of animal magnetism has never been more substantially shown than at the present time. These phenomena are no longer regarded in the vague, mysterious light of thirty or forty years ago, when the mesmerizer or magnetizer was an object of distrust, but have become the property of science. They are recognized as the effects of a peculiar psycho-physical state more or less easily induced by certain procedures, and as much subject to examination as the effects of electrical action upon animate or inanimate objects. Besides, purposeful observation has revealed useful phases in the magnetic sleep that await but little further development to command universal respect, and to produce important changes in physical and mental therapeutics.

The aim of the author in preparing this volume is to furnish the general-reader with a summary of principles and facts bearing upon the subject, and to furnish them in a manner as free from prejudice or partiality as his "personal factor" of bias would permit. The accumulation of details from observation has become so great that it is an impossible task for one to examine and digest everything, and to present a summary that will prove entirely comprehensive; hence, it is considered sufficient to show how hypnotic control is obtained, what the best observers think of its nature, and to supply a variety of illustrations to indicate its extraordinary range of application in human life.

## CHAPTER I.

### HISTORICAL SKETCH.

The rapid multiplication of books on the subject of hypnotism renders at this time an historical sketch quite superfluous that furnishes more than a summary of its early development. There is no doubt that the ancients were conversant with the occurrence of the phenomena of animal magnetism, and used various methods for its production. Inscriptions and figures on the old Egyptian tablets are sufficiently definite to show that the Egyptians were acquainted with magnetism to the degree of using it for remedial or other purposes.

There is a sect in Egypt that claims to have been in existence for upward of four thousand years, and to use the same means to-day for inducing the magnetic trance that their ancestors did. In the middle of a white porcelain plate two triangles are drawn in black ink; these cross each other; and in the intervals between the lines cabalistic words are written. Oil is poured over the plate to increase its brightness. The person to be magnetized is required to stare for some minutes at the centre of the figures. A crystal globe is used for the same purpose in the East. Some of the Arabic sorcerers draw a black circle in one hand with a spot in the middle. The Moorish marabouts place a bottle filled with water on a table covered with skin; back

of the bottle a lamp is set. The subject is required to gaze at the light as rendered brighter in the focus of the bottle.

Many of the methods in use in Europe and America by public clairvoyants and fortune tellers to-day are but modified reproductions of these tricks of the old magicians.

Among the Hebrews, according to their scriptures, prophecy, divination, visions, trances etc., were not uncommon and were related to powers or gifts that followed the laying on of hands. In the New Testament are many instances of "signs and wonders" being wrought by manipulations. Jesus sustained his wonderful character and mission largely in this way, and his disciples also healed the sick and performed what were regarded by the multitude as miracles by hand movements.

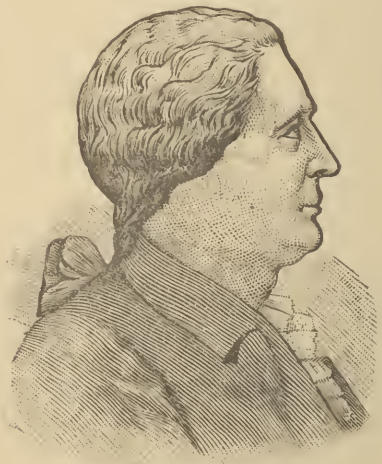
In the old Greek and Latin literatures occur many interesting records of the practice of the art now called animal magnetism, and it appears to have been regarded as a magical procedure. Hippocrates mentions the salutary effect on the sick, to be obtained by hand rubbing and says: "It hath often appeared while I have been soothing my patient that there were a strange property in my hands to pull and draw away from the affected parts aches, and divers impurities, by laying my hand upon the place, and by extending my fingers toward it. It is thus known to certain of the learned that health may be impressed in the sick by certain movements and by contact, just as some diseases may be communicated from one to another."

Of Aesculapius it is said that he was able to allay pain by breathing on the inflamed parts or by stroking with his hands, and could throw some into long and restoring sleep. He could also subdue the frantic and hysterical by his manipulations, and he himself went into a trance or dream during which he gave counsel to the sick. In this last statement it is seen that the "clairvoyant" phase of the magnetic sleep was evidently known to the ancients. The mysterious oracles of the Sybils were phenomena of this character. St. Justin, otherwise called Justin Martyr, speaks of them—that they "spake many great things with justice and truth, and that when the instinct which animated them ceased to exist they lost the recollection of all they had uttered."

We can readily believe that much of the miracle working of the early and mediaeval times of our own era was nothing more than the successful production of the phenomena of animal magnetism, and of the physiological results that may supervene to the impressions, suggestions or expectancy that relate to the procedure and establishment of the trance. When one looks into the history of this subject he is likely in a short time to agree with Von Helmont, the Flemish philosopher of two hundred and fifty years ago, who wrote "Magnetism is active everywhere, and has nothing new but the name: it is a paradox only to those who ridicule everything and who attribute to Satan whatever they are themselves unable to explain."

In modern times Anton Mesmer, a native of Swabia, became conspicuous by his success in inducing the mag-

netic trance by artificial means and making it serviceable for the treatment of diseases. A controversy arose in Vienna, where Mesmer was practicing medicine, between Maximilian Hell, an astronomer, and Mesmer as to the credit of discovering the method for producing the magnetic effects, and this controversy became so sharp that Mesmer was accused of entertaining



ANTON MESMER.

wild delusions if not openly attempting to impose upon the credulity of people, and finally was warned by the government that his experiments must cease. He left Vienna and went to Paris in 1778, where he was received with great favor by the public, but with suspicion by the scientific. He started a sort of "mag-

netic cure" wherein he received persons suffering from various diseases and performed many reputed cures.

His success in a pecuniary way was remarkable, and the system became so popular that he felt warranted in applying to the French government for the grant of a certain chateau and lands as a place for the establishment of a great healing institute. This request was refused although a pension of 20,000 livres was offered him and a certain sum for his projected hospital, on conditions that he would instruct persons nominated by the government in the principles of his art. This offer he declined; but later formed classes of pupils bound to secrecy, and for a large fee gave them lessons. Lafayette was one of his pupils, as were the Marquis of de Puysegur, Dr. D'Eslon and others.

The French government ordered an investigation of the theory and practices of Mesmer, a commission being appointed for the purpose among whose members were Benjamin Franklin, minister from the United States, Lavoisier, Baillie, D'Arcet and Guillotin. Mesmer could not be persuaded to appear before them, but Dr. D'Eslon, who had been very successful in using the methods of Mesmer in his medical practice, was more pliable, and assuming the place of advocate of the "new force" made a number of experiments in presence of the Commission. He did not succeed, however, in converting that body of savants to his notions, for the report made by them was a unanimous conclusion "that there is no proof of the existence of the animal magnetic fluid," and that "the violent effects which are to be observed in the public practice of magnetism are due

to the manipulations, to the excitement of the imagination, and to that root of mechanical imitation which leads us to repeat anything which produces an impression upon the senses."

The Commission also felt compelled to add "that the spectacle of these crises is likewise dangerous on account of the imitative faculty, which is a law of nature, and consequently that all treatment in public in which magnetism is employed must in the end be productive of evil results."

In a further report of a private nature intended only for the consideration of the Royal ministry, the Commission deemed it necessary to specify certain moral dangers, especially affecting women, that were likely to result from the practice of animal magnetism as it had come under their observation. M. D'Eslon himself made certain admissions in relation to these dangers at a conference that was held at his house. This private report is published in full by Messieus Binet and Féré in their recent book.*

The Royal Society of Medicine also charged a committee drawn from its members to look into the same matter, at about the same time the government commission entered upon its work, and presented a report a few days later in which similar conclusions were given. One of the committee, however, differed with his colleagues and later published a statement to which I shall refer in another place.

One reason for the discredit into which Mesmer fell

*Le Magnetisme Animal. Paris, 1888.

with educated and learned people was the questionable manner of his procedures in dealing with his patients. He made as much as possible of the effects of mysterious surroundings on the imagination—"had his consulting departments dimly lighted and hung with mirrors; strains of soft music occasionally broke the profound stillness; odors were wafted through the room, and the patients sat around a kind of vat in which various chemical ingredients were concocted or simmered over a fire. Holding each other's hands or joined by cords the patients sat in expectancy, and then Mesmer, clothed in the dress of a magician, glided among them, affecting one by a touch, another by a look, and making 'passes' with his hand toward a third." This kind of "business" of course obtained the condemnation of scientific men.

After the report of the Government commission was made known interest in the matter of animal magnetism declined; Mesmer himself was denounced as an impostor and empiric, and those who still practiced or attempted to practice the art were looked upon as jugglers and cheats. Mesmer found himself compelled to leave Paris; he withdrew to Switzerland and died there in 1815.

Of his disciples the Marquis de Puysegur was probably the most eminent, as he demonstrated the fact that the magnetic sleep could be obtained by gentle manipulations, and the array of mystery with which Mesmer invested the proceeding was unnecessary.

Cloquet who witnessed the treatment administered by this operator to his patients writes that the patient's

eyes were closed and there was no sense of hearing unless it was awakened by the master's voice. Here we have an illustration of the true hypnotic condition. He also says that care was taken not to touch the patient during his crisis nor even the chair on which he was seated as this would produce suffering and convulsions which could be subdued by the master only. There was no public exhibition of this power on the part of de Puysegur; nothing was done to strike the imagination; there was no selection of subjects from among hysterical or melancholic women. His patients of both sexes were of the peasant class, and often suffering from severe diseases, and his treatment was given mainly from benevolent motives, not as in Mesmer's case to accumulate riches.

M. Deleuze, a naturalist, connected with the Jardin des Plantes, assisted in the further development of the phenomena, and contributed toward inspiring a favorable sentiment with regard to the subject. His book, "Critical History of Animal Magnetism," published in 1813, was followed by another publication more or less extended in discussion of the procedure and phenomena. In Germany and England physiologists devoted time to researches; such men as Betrand, Georget, Kluge, Kieser, Braid and Dr. John Elliotson deeming it of importance enough to be employed in medicine.

In 1825, through the insistance of an enthusiastic observer, M. Foissac, the Royal Academy of Medicine in Paris appointed a new commission to make another inquiry into the nature of the magnetic or hypnotic phenomena. This commission reported in 1831 in such

favorable terms that a powerful impetus was given to further investigations.

In 1841, a new student of these phenomena, Mr. James Braid, a surgeon of Manchester, England, discovered that he could produce the trance "by a fixed and abstracted attention of the mental and visual eye on one object, not of an exciting nature." To accomplish this he ordered his subjects to look steadily at some small object about a foot from the eyes and above their level. He gave the name *neuro hypnotism*, or nerve sleep, to the condition that was the result of this. Braid read a paper before the British Association in Manchester, June 29, 1842, and the year following published his work "Neurypnology or the Rationale of Nervous Sleep considered in relation with Animal Magnetism; illustrated by numerous cases of its successful application in the relief and cure of disease."

Braid, it may be said, was the first to make systematic and minute investigations with the view to obtaining a truly scientific explanation of the nature of the influence, force, condition of the brain or whatever else it is that is fundamental to the phenomena. Most of the later observers have for the most part followed his methods, and but further elaborated his results.

The so-called "imponderable" or odylic force that Baron Von Reichenbach shortly afterward announced as a new discovery, and which he declared to be developed by certain crystals, magnets, the human body, etc., associated with heat, chemical action or electricity, is but another reading of the same thing, as Reichenbach's "Researches in Magnetism, etc., in relation to

Vital Force," published in 1850, shows the phenomena to be of the same character, although much after the manner of Mesmer.

If anything in Reichenbach's theories were notable, it was the revival they signaled of old world magic in the modern dress of methodical application. In ancient times it was supposed that the magnet possessed curative powers, and Cardon, in a work on precious stones, published in 1584, mentions the effect of an application of a magnet. It was then customary for people affected with nervous diseases to wear "magnetized" rings. Paracelsus enunciated the proposition that the human body was endowed with magnetism of a double nature, a double polarity, so to speak, one part deriving wisdom, sensibility and the higher mental qualities from the planets, and the other attracting the lower material elements from which were formed the physical structure of man. Many other learned men following the lead of that eccentric genius, wrote voluminous treatises in which were discussed the properties of the loadstone or magnet, it being generally regarded as representative of a great principle by which it was possible to explain all phenomena.

It can not be doubted that Mesmer drew much of his information from the old books and showed great skill in adapting the doctrines of the mediaevalists to a new system of practice. "Where he showed his originality was in taking hold of the so called 'universal principle of the world' and in applying it to the sick by means of contact and passes. His predecessors do not appear to have been addicted to such practices; they believed

that in order to infuse the vital spirit it was enough to make use of the talismans and of magic boxes."

Other investigations were made, undertaken with the sanction of the Academy of Medicine, but resulted for the most part in dissatisfaction and controversy. Furthermore the disciples of spiritualism deemed magnetism a valuable auxiliary in their seances for table turning, rappings and the appearances of ghostly forms. In the Church there were many of the clergy who practiced it for the avowed purpose of obtaining communications from on high, Lacordaire, himself, appears to have become a disciple, and preached on the subject at Notre Dame. So far, indeed, did the clergy go that the Roman Inquisition deemed it necessary to intervene and command the bishops to oppose the abuses of animal magnetism, and after much consideration established the following rule in 1847: "For the avoiding of error of all sorcery, and of all invocation of evil spirits, whether implicit or explicit, the use of magnetism—that is the simple art of employing physical means not otherwise prohibited—is not morally unlawful so long as it is for no illicit or evil object. With respect to the application of purely physical principles and means to things or results which are in reality supernatural, so as to give them a physical explanation, this is an illusion, and an heretical practice worthy of condemnation."

In the United States there were forty years ago those who followed the leading of Braid for the most part in experiment, such observers as J. B. Dods, the Fowlers, Grimes giving popularity to the subject

and awakening much wonder in the circles of learning and culture. The practicability of performing severe surgical operations upon a magnetized person without his being at all sensible of pain had been demonstrated years before. In India, Dr. Esdaile had been so successful in hundreds of cases that a mesmeric infirm-

PROF. J. M. CHARCOT.

ary was established in Calcutta. The subsequent discovery of the anaesthetic effects of chloroform, however, discouraged a resort to a magnetizer because of the greater convenience and certainty of the anaesthetic in producing the required insensibility to the knife when a protracted operation was to be performed.

Of the recent observers Dr. Beard in America, Charcot, the eminent superintendent of La Saltpetriere, Paris, Liebault, Liegois, Bernheim, of Nancy, Prof. Heidenhain of Breslau, and others have done much towards obtaining clear and positive data and placing the subject on a scientific footing. Dr. Charcot and his associates, with the exceptional facilities provided by a great hospital for the special treatment of nerve diseases, has prosecuted the study of hypnotism with enthusiasm, and added a vast amount of most interesting phenomena to the general stock.

## CHAPTER II.

### THE NATURE OF ANIMAL MAGNETISM OR HYPNOTISM.

From the foregoing very cursory sketch of the historical relations of our subject it is apparent that many opinions were held concerning the nature of the force, or whatever else it may be termed, that produced such remarkable phenomena. But are we in better position to-day as regards a definite conclusion? Observations, to be sure, are more carefully made. Many observers of acknowledged scientific acumen, whose impartiality no one impeaches, have lent their aid for the purpose of establishing a determinate principle governing the phenomena, and yet it cannot be said that a satisfactory solution has been offered on either psychological or physiological grounds. Such, indeed, is the extent and variety of the phenomena that a theory that may apply well to one class of subjects, will be found to apply imperfectly to another.

As an American observer who has pursued the subject experimentally to a considerable extent not long ago concisely said: "We may note its facts if not its factors. It is easier to point out its phenomena than to formulate its philosophy. The genesis of the will, physically or metaphysically viewed, is too profound a theme to enter upon at this time. For pres-

ent purposes we may say that the faculty we call the will, a free, self-directing power, puts forth, during our waking hours, acts which we call volitions. This conscious activity is briefly, the voluntary life. When the will relinquishes its control and yields to influences without, a new condition begins. The surrender may be partial, as in reverie. Idealism becomes incoherent because the helmsman dozes at the wheel. In other conditions, as in mania, the abdication is complete."

Liebault, a physician of Nancy, representative of the large class of observers who have followed more or less closely the line of experiment marked out by Braid, at one time sought to prove that all the phenomena of the induced or artificial sleep could be produced by suggestion. He claimed further that artificial as well as natural sleep was produced by an act of the intelligence, that is, by concentrating the attention on one idea—that of going to sleep. Now, we know that persons are sometimes hypnotized against their will, and this explanation can not apply to such a phase of the subject. He says:

"Concentration of attention causes the isolation of the senses, the cessation of muscular movements, the establishment of a rapport between the somnambulist and the operator, catalepsy, etc. The afflux of attention to the organs of the senses increases their power of perception, its accumulation on the '*empreintes sensorielles*' quickens the memory; and so it is with the other senses. On awakening from a state of profound hypnotism there is oblivion, which is due to the fact that all the nervous force accumulated in the brain during

sleep is, on awaking, again diffused throughout the organism; since the nervous force is diminished in the brain it is impossible for the subject to recall to mind that of which he was previously aware.*

Dr. Beard was among the first to formulate a systematic scheme for the elucidation of the magnetic phenomena.

He says in his "Encyclopedia of Medicine," edition of 1833, "Trance is a disease of the nervous system in which the activity of the brain is concentrated in a limited region, the activity of the rest of the brain being for the time suspended." His definition, Dr. Beard claims, will account for and harmonize "all the phenomena of trance in all its phases and manifestations, and however induced." From sleep he differentiates "trance," which he regards as synonymous with hypnotism or animal magnetism, by five general points, each descriptive of a special class of symptoms—viz.:

1. The trance subject acts out his dream, while in sleep the dream does not cause any corresponding coherent physical phenomena.

2. The performances of the trance are logical, coherent and consistent; while dreams are filled with extravagance and absurdities which, to the sleeper, seems entirely proper.

3. In trance some of the senses are perfectly sealed. The loudest noises are not heard, the most fragrant

*In a recent utterance Dr. Liebault expresses the opinion that a specific influence is exercised by the operator upon the subject or patient, and he terms it "zoo magnetism."

odors are observed, and there is no power of taste. While some of the senses are thus utterly closed, others may be greatly exalted. On the other hand, the soundest sleepers are awakened by loud noises or by sufficiently irritating the sensitive nerves.

4. Trance subjects are capable of responding to suggestions offered by a second party, or from an external source, and become consciously obedient to these suggestions. Sleepers present no such peculiarity: if they respond to external suggestions addressed to the senses, it is automatically and not consciously or coherently.

5. In some forms of trance there may be divided or double consciousness. The subject, on coming out of the trance, has no recollection of his experience while in it. Or again entering the trance, he resumes the experience of the previous attack where it left off, as though no active life had intervened.

These views of Dr. Beard, presented in his original and definite style, differ but little essentially from those of the Nancy school as formulated by Liebault; and the same may be said of the Charcot school that claims to have established the truth of Liebault's deductions.

The magnetic or hypnotic condition therefore, is not to be regarded as true sleep, but another form of mental life—an involuntary condition that has distinct conscious activities, although apparently utterly lacking, when the trance is complete, in consciousness of the ordinary surroundings. In the induced trance or mesmerism the response to external suggestion is a marked feature; the senses are active, impressible even to an exaggerated degree, and indicate this by the extraordi-

nary performances that an entranced subject may be prompted to execute.

Another American writer is satisfied that "the philosophy of these phenomena is found in the physiological fact that in consequence of their fixed gaze by a sensitive structure the mental faculties become fatigued, and lose, for the time being, the power of self-control, and are controled by one dominant idea." The peculiar mental condition thus produced is shown by different individuals variously according to temperament, organization and their peculiar nervous state at the time the trance is induced. There is first a mistiness of vision, succeeded, it may be, by lassitude and desire to sleep in one; in another, by a stiffness of the eyelids only; in others by deep sighs, labored respiration or other signs of nervous excitement.

Prof. Heidenhain regards the performance of one in the hypnotic or magnetic sleep as but imitative. The eyes may appear to be closed, but they are not entirely so; movements are seen and unconsciously imitated. "The material change brought about in the central organs through the stimulation of the organs of sense, liberates movements which have the type of voluntary movements, but are not really so. Thus I can easily induce him (the subject) to follow me by walking before him with an audible step; to bend first this way, then that, by standing before him, and myself performing these movements. If walking, the medium imitates exactly the time and force of my audible steps."

The majority of observers may not agree in this, that the magnetized subject merely imitates, because of the

apparently complex actions that he may go through. Mr. G. A. Romanes, the eminent naturalist, expresses surprise on this point, and remarks in his preface to the English edition of Prof. Heidenhain's book, "If such statements were to occur in the writings of any ordinary observer, they would be at once dismissed—and rightly dismissed—as much too improbable for acceptance. But when they occur in the writings of a man like Heidenhain it is impossible to dismiss them in so summary a fashion. In such a case we have practically but one alternative: either to accept the facts as facts, or to suppose that the observer has been intentionally duped. But in the present case even the last supposition has been practically excluded, for not only were a good many of the experiments performed on the observer's own brother, who, to say the least, would not be likely to stultify his distinguished kinsman before the eyes of Europe; but the experiment appears to have been also performed on a number of other well educated persons, who, as a body, can not reasonably be supposed to have been guilty of intentional deception. Besides, physiologists and medical men in this country at all events, are already well acquainted with what may be called the fundamental facts of hypnotism, and are therefore prepared to receive the more detailed researches of Heidenhain without any of that antecedent presumption against their probability, which they can scarcely fail to encounter in the minds of general readers."

It is not to be supposed that the Breslau professor takes it for granted that his conclusion in this respect

will be accepted by others without argument, for he supports it by illustrations like the following: "A man walking down the street, deep in thought, perceives the passers-by, but owing to inattention does not recognize them. He, however, manages effectually to get out of their way. The retinal pictures he obtains of the passers-by are themselves the cause of imitation of movements resembling in all respects voluntary movements. Hypnotized persons are, at a certain stage of hypnosis, in a similar—though not exactly identical—condition. Unconscious sensations cause them, too, to carry out unconscious, though conscious-like acts, especially such movements of the experimenter as produce in them auditory or visual impressions.

"When a hypnotized person does not follow me on my walking before him with a loud tread, I pull him by the hand a few steps forward—it is usually sufficient to draw lightly with the finger—and he then readily follows me of his own accord, if I continue to tramp before him.

"The secret by virtue of which the experimenter places his medium in complete apparent subjection to his will, is partially explained by this peculiarity which a hypnotized person possesses of performing movements so soon as he obtains an unconscious perception, which is associated in some way with such movements. In a loud voice he commands the medium to do a certain thing; the latter has not the least idea of the order given. The experimenter, at the same time that he gives the order, performs the action himself in such a way that the medium must obtain a sensory impres-

sion of it. The sensory impression leads to no conscious perception, and to no voluntary movement, but suffices to set up unconscious imitation."

This is further instanced by the experiment of placing a raw potato in the subject's mouth, and telling him it is a delicious pear—accompanying the action by ordering him to eat it, and making audible movements of mastication. The subject chews away mechanically, it is claimed, without any idea of the object, and whether he is eating a potato or a pear. So with the common tests of giving him salt or pepper, and calling it sugar. On recovery of the natural state, he at once discovers that he has had something disagreeable or irritating in his mouth."

Deeming it expedient to add further comments on this point, the German professor says: "Normally a conscious idea of the movement through the intermedium of the will, gives rise to the performance of the projected movement; in the hypnotic state the inhibiting power of the will being absent, an 'unconscious perception' of a movement acts as a direct stimulus for the central motor apparatus. The speech automatism and command automatism can be referred to similar processes.

"In the normal state the uttering of a word is preceeded by the development in consciousness of a 'sound picture' (klangbild) of this word, which, with the interaction of the will gives rise to the articulation of the word. In a hypnotized person an unconscious 'sound picture' acts as a direct stimulus for the articulating center, if such conditions are established that the inner-

vation path between the place where the sound-picture arises and the articulating center is free from those inhibitory obstructions which normally exist as the result of the will and consciousness. In a normal person an order to do a thing brings about an idea—a mental picture—of the things ordered, the will allows this to act on the motor-central organs, and the order is carried out. During hypnosis, instead of the conscious mental picture there is established through the impression in the auditory apparatus an unconscious mental picture of the projected action which acts as a stimulus to the motor apparatus, if the nervous path connecting the two mechanisms is, in the absence of the inhibitory influence of the will, easily passable.

"Imitation automatism, speech automatism, and command automatism thus all depend upon similar processes. The unconscious optical impression acts on the motor apparatus; the unconscious auditory perception upon the articulation or motor apparatus, provided the paths between the sensory perception centres and the motor-centres in question are directly free for the transmission of nervous influences. This, however, is the case when the normally active inhibitory power of the will is rendered functionless."

To understand this method of explanation, it is essential that one should have a knowledge of the physiology of the brain, and the relation of the areas of that viscus to the phenomena of nervous sensibility. Taking up the subject of hypnotism as a scientist, Prof. Heidenhain has applied his learning to its elucidation, and it is fair to admit that to a certain extent that learning is helpful.

Mr. Romanes in his Preface to Dr. Heidenhain's book expresses surprise "that so inviting a subject should not long ago have been worked out by men of science," but does not appear to be convinced altogether of the truth of the German savant's theory of inhibition and imitation, notwithstanding that he holds a universally recognized position "in the foremost ranks of investigators." Of Heidenhain's conclusions regarding the physiology of the subject we shall have something to say later, but should note here Mr. Romanes' assent to the position of Heidenhain, agreeing with him, and indeed with all the scientific investigators from Braid downward, in rejecting the hypothesis originally advanced that the phenomena are due to a special kind of force. He takes ground in this view that "the scientific investigation of the facts" has not furnished evidence of any special kind of force being concerned in their occurrence."

For the same reason he is disposed to "dismiss the hypothesis of a 'dominant idea' taking hold of the mind, and through the mind influencing the body." His reason, briefly given, is thus stated:

"We may dismiss this hypothesis because, although the influence of such a dominant idea may assist in the production of some of the phenomena of hypnotism, it is clear to any one who is not himself subject to the influence of a dominant idea that this is not the influence to which we can attribute all the phenomena, or even those which, physiologically speaking, are most characteristic of the hypnotic state. Thus, without going further than the phenomena of hypnotism as

producible in the lower animals, the researches of Czermak, Preyer, and others have shown that many animals, when treated by the appropriate methods, pass into a state of what the last named experimenter calls 'kataplexy.' which is in every way similar to that of hypnotism, and it would clearly be a somewhat difficult matter to indicate the dominant idea which, for instance Athanasius Kircher communicated to a fowl when he made the animal lie motionless upon the ground with its beak resting upon a chalked line, or which Czermak communicated to a cray-fish when he made this animal to stand motionless upon its head."

But those who have observed the higher forms of the hypnotic condition when the secondary or involuntary life is in full activity, and the subject exhibits a variety of expressions, in which his own special qualities of mind and character appear with a sharpness and power far beyond the ordinary, have a problem of pyschology that theories of mere "mental subjectivity," "imitation," "concentration," and "the dominant idea" fail to resolve. This fact is recognized by the disciples of Charcot as voiced in the volume of Binet and Féré, where in catalepsy, it is said, that the subject has no personality, no ego; but the somnambulist is a different person, having character, aversions and preferences. "For this reason the name, secondary condition, in opposition to the waking state, has been given to somnambulism. In this state there is certainly an ego. The somnambulist's intellectual condition may be compared to those dreams in which the sleeper actively intervenes and displays judgment,

critical sense and sometimes mind and will. There are, indeed, somnambulists who dream spontaneously, and then cease to be *en rapport* with the experimenter."

Certain writers claim that the influence exerted by an operator is allied to electricity, and that the effects a magnet is known to produce upon a hypnotized subject are proof of this. The brain say these writers is a powerful galvanic apparatus *sui generis*, wherein nervous energy is generated, and which is discharged in the form of an invisible nervo-vital fluid, through the action of the will and in the involuntary and unconscious processes of systemic and vegetative life. The concentration of one's mind upon the mind of another induces a flow of the nervous fluid until the brain of the latter becomes charged with it, and if a condition of opposite polarity is induced, the magnetic sleep, results; induced molecular changes are essential to the production of the magnetic vital fluid, and these are constantly going on in the cellular structure of brain and nervous system, with the consequent origin and outflow of the fluid.

Dr. McLaury, of New York, ascribes these phenomena to the action of a special sense which he terms the "magnetic sense," and claims that it is manifested in the lower animal as well as man. It is operative in the normal condition of the mental faculties as well as in the hypnotic, and has a wide range. In the trance, he says that the only sense active is the "magnetic sense." It is well known that in the deprivation of one sense the loss is partly made up by the other senses becoming more acute. So, when all the physical

senses are dormant as in sleep, the magnetic sense is so intensely acute, that ideas and thoughts exist that can not be reached in waking movements.

In support of this claim he cites cases of remarkable achievements by persons while asleep, many of which are recorded by the writers on psychology, or intellectual philosophy. He says further— "that all the various phenomena of clairvoyance, mind-reading, mind-cure, faith-cure, prayer-cure, spiritualism, etc., will be scientifically studied and rationally accounted for by the thorough and persistent investigation of the latent magnetic sense. This sense is no special gift to a few, but is latent in every individual, and is capable of being cultivated. There is nothing supernatural in it, for there is a sufficient cause in nature for every event that ever occurred. Science is faith without superstition—a faith that knows what to receive and what to reject."*

If we are to admit an advancement of this nature, then the idea that there is anything abnormal or pathological in the hyponotic condition, anything that intimates an inferiority of organization, that makes one peculiarly susceptible to being thrown into it, is untenable. Like other senses, it may be cultivated and developed, and like the others it has a legitimate funtion in current of life;—and why not?

There are special phenomena in that stage of somnambulism that is termed "clairvoyant" that as yet

*"The Senses, Five or Seven," a paper read before the N. Y. Academy of Anthropology, March 5, 1889.

await explanation. So, too, in "phrenomagnetism" the observer finds his theory of suggestion an incomplete answer to the question, whence these clear and distinct responses to the touch of the operator's finger? Who, that has seen a subject's changes of conduct and facial expression while the fingers of the operator, blindfold though he be, are made to traverse the former's cranium, can doubt that with the latter's touch some influence is exerted upon the cerebral centres? How comes it that the most diverse feelings and emotions may immediately follow each other whose character has nothing in common with the mental state of the operator, who, indeed, may be as passive and nonexpectant as any onlooker?

That we are in the right line of investigation to-day can not be doubted, and in time the careful conscientious observer will probably be rewarded by obtaining a definite and satisfactory analysis of the influence, force or condition that has been so variously named in the literature of psychology. In fine, we agree with Mr. Coates that "if successfully traced to secondary causes, hypnotism, suggestion, imitation and what not —it is a matter of really little importance, so long as the whole phenomena can be lifted out of the misty superstitions and vulgar exaggerations of the past and present, out of the darkness of fraud and self-deception into the light of truth and fact by investigation and demonstration."

## CHAPTER III.

### A PHYSIOLOGICAL SUMMARY.

Having in the preceding section discussed the metaphysical side of this intricate topic, and with aid such as the later observers have endeavored to supply, we should at least give as much attention to the physiological side. It may be expected that the abundance of the data obtained by observers, especially those of the Nancy and Charcot schools, will enable us to point with confidence to certain nervo-functional conditions as essential to the appearance or production of the magnetic or hypnotic phenomena. As yet, however, the precise conditions of the brain and spinal cord are matter for conjecture, and we still await a theory inclusive and logical enough to be convincing to the scientific mind.

Braid ascribed the hypnotic sleep to a disturbance of the cerebral circulation, a theory that may be true to some extent as regards the secondary phenomena attendant upon the hypnosis, but having little or no application to the primary. The fact that many animals of different species are susceptible to hypnotism certainly appears to negative the view that Braid offers, since the types of circulatory organism differ so widely in the lower animals.

Prof. Heidenhain offers a theory which appears to

have a broad application and which he discusses with the force of a learned and liberal physiologist. In order, he says, to attain an hypothesis that will array the recognized facts into causal connection with one another, "I will first bring forward the scarcely disputable statement that hypnotism depends upon a changed condition of the central organs of the nervous system, the brain and spinal cord."

Whether or not such "a changed condition" is possible without some altered circulatory action seems to be a question that may be passed over by our Breslau professor with but little notice; however, this presentation of his theory, is interesting, and deserves careful reading. He goes on:

"By reference to experience gained from experiments on animals and pathological observations on men we can, to a certain extent, particularize this general statement. We know that the functions of consciousness depend on the integrity of the gray cortex of the cerebrum. Since, in the case of a hypnotized person, consciousness is greatly diminished, it is a self-evident and undoubted fact that the cerebral cortex is functionally affected. But how far does this functional disturbance extend to the deeper parts of his brain? The following can be said with certainty:—The activity of the corpora quadrigemina is not lessened, for the pupil of a hypnotized person contracts energetically when light falls upon the eye. This reflex movement, which is initiated by stimulation of the retina, and carried out through the agency of the third cranial nerve, no longer takes place (as is shown experimentally

in animals) when the corpora quadrigemina are rendered functionless. The fact that hypnotized persons never fall down, speaks also in favor of the integrity of this part of the brain." In a footnote this author corrects the last statement by saying: "I have since observed in one person that, in a condition of deepest hypnosis, he was unable to maintain his equilibrium in the upright position. So that the statement in the text is only true for the majority of hypnotized people."

"As soon as the centre of gravity is unsupported, they make a step, by which they recover the lost support. Now, we know from Professor Goltz's admirable researches, that the centre for equilibration—that is, that part of the central organ which co-ordinates the movements necessary for maintaining equilibrium—is situated in the corpora quadrigemina. A frog, whose cerebral hemispheres have been removed, can still crawl up a board held obliquely, and, by appropriate movements of its arms and legs, can balance itself on the edge of the board. But when the corpora quadrigemina (in the frog, corpora bigemina) are extirpated this capacity is lost. Since the power of equilibration is possessed in full degree by hypnotized persons, their corpora quadrigemina must be unaffected, and so, too, are the corpora striata in all probability.

"Concerning the other parts of the brain I can not make such definite assertions. But probably the cerebral cortex is not the sole part whose activity is inhibited, for otherwise the phenomena hypnotized people present would be a repetition of those observed

in animals after the removal of the cerebral cortex. And although points of resemblance do certainly exist between the two series of phenomena, they are by no means identical. This is not the place to enter on this subject, but evidently a complete removal, and a simple functional disturbance of the cerebral cortex, do not necessarily produce a like result.

"This disturbance of functions explains why hypnotized persons neither acquire any conscious perceptions as the result of sensory impressions, nor spontaneously make voluntary movements. It explains, too, the forced movements which occur when such sensations and unconscious perceptions as stand in immediate connection with the movements, are excited. For while, under normal circumstances, movements can be not only initiated by the cerebral cortex, but also inhibited, in the hypnotized subject both powers are absent. Normally, when the idea of a movement presents itself to our consciousness, we can carry the movement into effect or not; in the hypnotic condition, owing to the absence of the inhibitory power of the will, the unconscious perception of the movement irresistibly brings it about, a process in all respects analogous to reflex action."

"But what causes this inhibition of the functions of the cerebral cortex? The first hypothesis that occurred to me was that it might be due to contraction of the arteries supplying the brain, reflexly produced by the sensory stimulation used to induce the hypnotic state, due therefore, I imply, to anæmia affecting definite parts of the brain. That sudden anæmia of the brain does produce unconsciousness, is a daily experience

of the physician. Certain phenomena observed in hypnotized persons appear to render this view of the matter still more probable. When in an animal the arteries supplying the brain are compressed, symptoms occur in the eyes which remind us of those seen in hypnotized persons. After initial contraction of the pupil, follows dilation; after initial slight closure of lids, wider opening of the same; after sinking in, projection of the eye balls. Now, in deep hypnosis widely opened eyes with unusual prominence of the eyeballs is an extremely frequent, if not a constant phenomenon.

"Nerve-fibres are not independent organs; their function depends upon the activity of the nerve-cells (ganglion-cells) with which they are connected. A motor nerve-fibre is only stimulated through the medium of the motor nerve-cell with which it is in connection; and a sensory nerve-fibre only produces a perception by setting in activity a ganglion-cell in the brain, by means of which consciousness is so influenced that perception results.

"A series of facts, however, are known which teach us that the activity of ganglion-cells can be arrested when certain nerve-fibres with which they are connected act upon them. The heart offers the longest known examples of this kind. In the substance of this organ ganglion-cells are situated which, at definite intervals, throw into activity the motor nerve-fibres of the heart, and the rhythmical beat of the heart is the result.

"However, certain fibres go to the heart from the vagus nerve, which have the power, through their action on the ganglion-cells of the organ, of diminishing,

or for a time completely arresting, the action of the heart. Stimulation of these cardiac branches of the vagus causes a slowing, or temporary or complete standstill of the heart. Hence, the vagus is called the inhibitory nerve of the heart. But we have other similar examples. According to Rosenthal's observations the result of stimulation of the sensory nerve of the larynx is to cause relaxation of the respiratory muscles, and consequently to put an end to breathing. We infer that this nerve inhibits the activity of those cells of the medulla oblongata through the rhythmical activity of which the action of the respiratory muscles is caused. Lewisson has observed that when an India-rubber band is applied under the lower jaw of a frog the animal speedily loses the power of voluntary movement. The sensory irritation, through continuous pressure, causes inhibition of the activity of those ganglion-cells by means of which the influence of the will is brought about. In rabbits pressure on the internal organs, such as the kidney, bladder, or loops of intestine, produces for the same reason paralysis of the hind legs.

"Reflex paralyses, as they are called, have long been known to pathologists. They occur especially in hysterical women, and depend on the irritations of sensory nerves of certain regions through which the activity of certain motor ganglion-cells is arrested.

"I have already mentioned the inhibitions of reflex movements by means of the activity of certain parts of the brain. It depends on the fact that the cells through which the reflex action is brought about, are rendered incapable of performing their function, because

certain parts of the brain with which they are automatically connected, are in a state of activity. These examples suffice to show that the functional activity of motor ganglion-cells can be arrested through the interaction of certain nerves which are in connection with them; and not only the activity of ganglion-cells presiding over reflex and involuntary motion, but also of those which bring about voluntary motion.

"Moreover, we have lately learned that the activity of sensory nerve-cells may also, under certain conditions, become inhibited. In continuation of certain observations first made known in France, Adamkiewicz has found that stimulation of certain cutaneous areas e.g. of the arm, by a mustard poultice, diminishes the sensibility of the corresponding part of the other arm. This can only be explained by supposing that the ganglion-cells which are in connection with the sensory fibres of the affected part, are depressed in their activity by means of the sensory fibres of the irritated part of the skin.

"In face of all these facts it appears to me that the hypothesis that the cause of the phenomena of hypnotism lies in the inhibition of the activity of the ganglion-cells of the cerebral cortex is not a too adventurous one; the inhibition being brought about by gentle prolonged stimulation of the sensory nerves of the face, or of the auditory or of the optic nerve.

"These sensory nerves, when in that state of stimulation, which has above been fully described, would behave in regard to to certain physical cells of the cerebral cortex, like the cardiac branches of the vagus

in regard to the ganglion-cells of the heart, or like the fibres of the superior laryngeal nerve toward those cells of the medulla oblongata which preside over respiration, or like those sensory fibres of internal organs which are concerned in Lewisson's experiment and in hysterical paralysis."

While accepting for the most part these views of Prof. Heidenhain's as founded upon profound anatomical and physiological knowledge of the functions of the nervous system, Mr. Romanes cannot but express some surprise at their sweeping conclusions. He therefore ventures to mingle a modicum of criticism with his admiration of the skill shown by the German physiologist in his analysis. Quoting from the Preface, written by Mr. Romanes for the English edition of the German author, as noted before:

"What we require for our explanation to stand upon is some principle of physiology that is known to apply to all the animals which are found to be susceptible to hypnotism. Such a principle is supplied by what is called inhibition—a principle which is known to have a very general application to the nerve-centres of various species of animals, and to which, therefore, most of the more modern investigators of hypnotism have pointed as the probable explanation of the facts. And there can now be little or no doubt that this is the source from which the explanation is to be sought. But when we have said this we have said all. For it appears evident that, although we perceive the direction in which we are, with most promise of success, to seek the explanation, the explanation itself, in any full or scientific sense of the word, is

still a thing of the future. And here I approach the only criticism to which, I think, the following pages are open. In his desire to graft the facts which he details upon the growing structure of physiological knowledge, Heidenhain seems too ready to gloss over the difficulties which attend the attempted assimilation. As a matter of fact, no physiologist from his previous knowledge of inhibition could possibly have anticipated any of the facts which are detailed in this book; and now that they are in our possession, we are for the most part unable to see how they are connected with anything we previously knew concerning the facts of inhibition. The truth appears to be that in hypnotism we are approaching a completely new field of physiological research, in the cultivation of which our previous knowledge of inhibition may properly be taken as the starting-point. But further than this we must meanwhile be content to collect facts merely as facts; and, without attempting to strain these facts into explanations derived from our knowledge of less complex nervous actions, we must patiently wait until explanations which we can feel to be adequate may be found to arise."

No, inhibition, however ingeniously applied, will not explain all the phenomena of magnetism. If the personal consciousness, the individuality, of the subject has been lost, and his state is that of automatism, or rather that of an involuntary actor, certainly his cerebral functions operate in a manner entirely distinct from that which is characteristic in his ordinary state. The inhibition relates to his common order of conduct mentally while the super-sensitivity and extraordinary

play of faculty that he may exhibit indicate a higher phase of sensory activity, a more free and harmonious co-ordination of the cerebral function. The brakes are off, hence the phenomena that are frequently observed in the somnambulist and awaken wonder because so much out of keeping with what is known of his common life.

The fact that trance may be self-induced has force in this connection. Dr. McLaury in the address mentioned elsewhere says:

"Cases are numerous where people spend half their life in trance, but what they learn and know in the normal state is entirely lost and forgotten in the trance state. See the case of Miss Fidelia X———, reported by Dr. Axam; also of Miss Reynolds, of Pennsylvania, fully narrated by Dr. Jerome Kidder in his book on 'Vital Resources.' She was the daughter of a clergyman; in her normal condition she was sedate, pensive, and melancholy; slow and sensible in her intellectual character, but almost destitute of imagination; whereas in the trance state she was gay and lively, full of fun and fond of social life. Dr. A. K. Mitchell reports the case of a young girl, who, in her normal condition, or in her condition of childhood was slow, indolent, and querulous, but in trance life was quick, energetic and witty, even vivacious. The history of these cases portrays almost as great contrasts in the character of these cases as that delineated by 'Dr. Jekyll and Mr. Hyde.'

"The brain does not act as a unit in either the waking or sleeping state, be the sleep natural or of the trance, but the inter-relation of its parts appears to be often

more facile and harmonious in the trance than in the state of natural wakefulness—as we have illustrated."

"How," says one writer in referring to a case reported by a French observer, "can the mental faculties be increased by rendering some of them inoperative? And since Leonore was the offspring of a state of trance deeper than Leontine's, she ought, according to the inhibition theory, to be the least intellectual of the three, whereas, the fact was greatly the reverse."

I was present at some experiments where a young man, one of the subjects, immediately on going into the trance, exhibited unusual liveliness. Being asked to make a speech he struck an orational attitude and broke into a vigorous denunciation of the liquor traffic and of the evils of drinking. His flow of language, the quality of thought expressed were entirely beyond what he was capable of showing in his natural state. In fact he would then have shrunk from any attempt at speaking.

M. Richet offers two or three instances that are analogous to these, the somnambule being metamorphosed into different physical characters. Mme. A— a reputable matron, was made to believe that she was a peasant. "She rubbed her eyes and stretched herself: 'What o'clock is it?' She drags her feet as if wearing sabots. 'I must get up and go to the stable.' She assumes to be milking and does other things peculiar to peasant life realistically.

She is made to believe herself an actress. Her face became smiling and animated, "You see my skirt?" My directors insist that it should be longer. In my

opinion the shorter the better; but these directors are always annoying," and she puts on the airs of the class to which she imagines herself belonging. She is made to believe that she is the archbishop of Paris, and acts in a serious vein with a voice mild and benign: "I must finish writing my charge. Oh, it is you, M. le grand vicaire. What do you want? I do not wish to be disturbed—Yes, this is New Year's Day, and I must go to the Cathedral——This is a very reverent crowd, is it not M. legrande vicaire? There is still a sense of religion in the people whatever happens. Let that child come near that I may bless him.' She presents an imaginary ring for the child to kiss and throughout the scene makes gestures of benediction to the right and left.

We may say that here is but the revival of impressions and knowledge obtained through experience, but whence the complete alteration of the personal character: how is it that the subject rises in the impersonation to a degree of intellectual capability and of moral refinement so much above his or her own plane. It is difficult, indeed, to define the physical nature of such transformations.

Suggestion does not cover it, as the action of the subject may go beyond the experience of the suggestion. The cerebralist might argue our exaltation of the sensory nerves with the effect of awakening to action unused cells and a more extended and harmonious coordination of their functions, but whence the experience and culture of these or any brain centres that the advanced somnambule exhibits?

The inhibition, if any exists in these cases, should, I think, be applied to the function of self consciousness, and be deemed as operating to suppress or render negative the sense of individuality. The mental powers remain meanwhile unimpaired but the effect of the hypnosis may be their enlargement and exercise in proportion as the self-conscious ego is suppressed. A man, in other words, in his ordinary state of mind obstructs the activity of his own powers just as a tight-fitting coat prevents the free play of his chest and complete respiration; and the more intensely he is aware that he is William Jones, the less becomes his ability to exercise the powers that are in his mind. Suppress or annihilate his ego, inhibit it, and, for the time being he may be greatly superior—mentally—to what he is in his so called normal state.

An interesting subject with whom I conversed shortly after some experiments, said, "Would that I could carry into my ordinary life the spirit and mental capacbilities you say I show while magnetized! It must be that I am then truly myself, and not restrained and trammeled as I feel now."

Many observations have been taken of the muscular and nervous conditions of persons while in the different states of hypnosis and the results compared with the results of similar observations on persons in the ordinary state. In the cataleptic it is to be noted that when tested with an instrument the extended arm does not tremble, and the style of Marcy's apparatus traces on the cylinder an even, regular line. His respiration also records a calm, symmetrical movement. But a per-

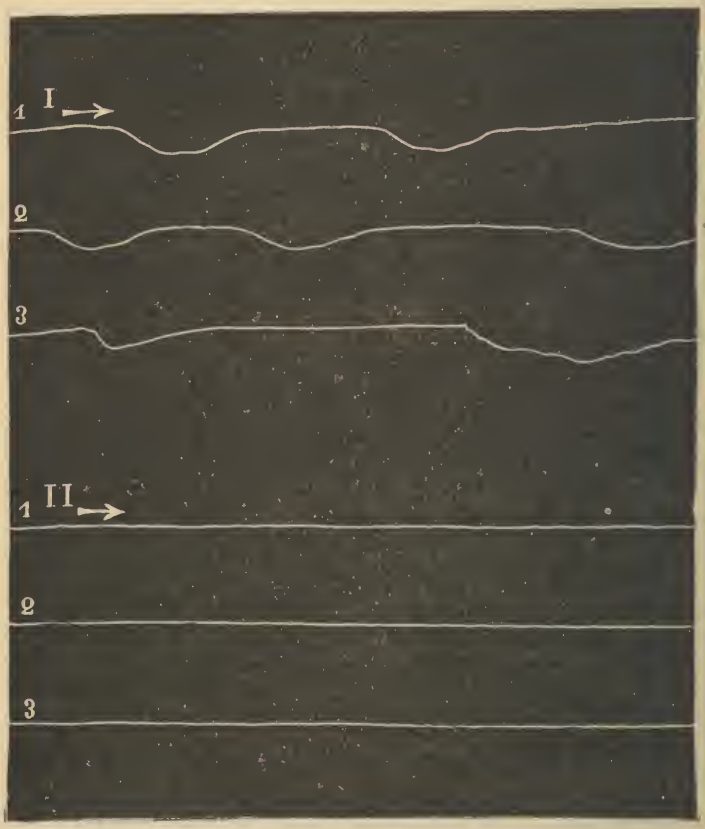
son who voluntarily attempts to keep his arm extended soon becomes fatigued, and an irregular tremor is evident while his breathing steady at first becomes irregular and hurried.

Richet has shown that in cataleptic paralysis "the paralyzed muscle loses its elasticity and becomes elongated, and the influence of the opposing muscles becomes preponderant. For this reason, when the flexors are excited the limb is extended. The cataleptic attitude is therefore the exact contrary of the lethargic attitude produced by the excitement of the same motor point. As, however, there is no contracture, the new attitude is not maintained with any rigidity. Localized faradization rapidly puts an end to cataleptic paralysis if it should continue after sleep is over. It is modified with difficulty by excitement of the antagonists and by suggestion."

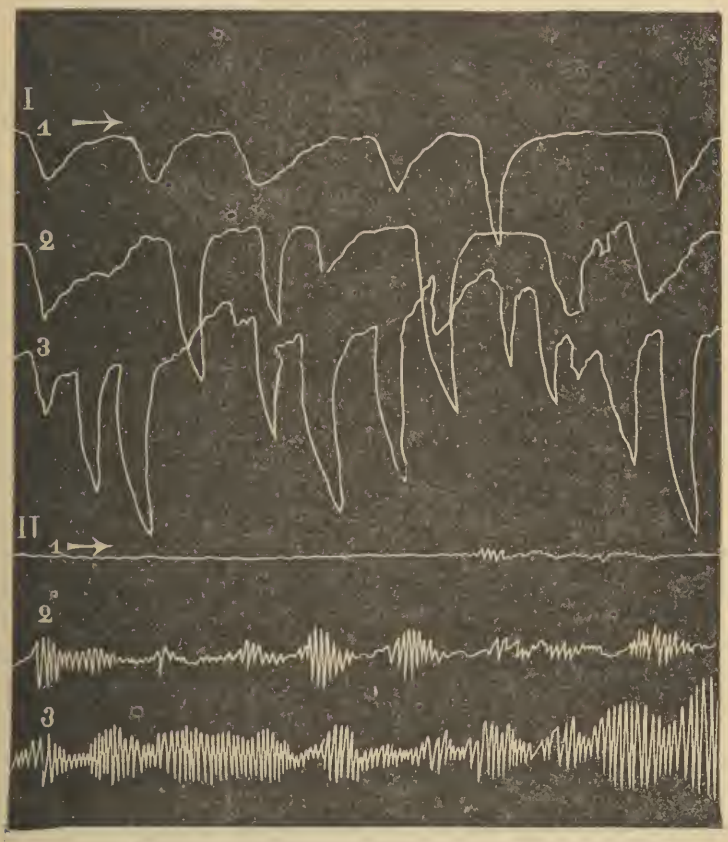
It is possible to limit the catalepsis to one side, as Descourtes* proved in 1878—During catalepsy the eyes are wide open, and if they are closed the patient falls into lethargy. Now, by closing one eye, say the right, a mixed state ensues; the right side continues to be affected by the catalepsy while on the left side lethargy exists. On raising the right arm it retains the position given to it; the left arm drops heavily down again. So mechanical excitement on the right side does not produce reflex movement or contracture, while applied to the left side there immediately results strong contraction.

The states of catalepsy and somnambulism may be

*Progres Medical—Dec. 21, 1878.




TRACINGS.—(I—1, 2, 3) of Respiration, and (II—1, 2, 3) of Oscillations of a limb, from a patient in a state of hypnotic catalepsy.—(Charcot.)




TRACINGS.—(I—1, 2, 3) of the Respiration, and (II—1, 2, 3) of Oscillation of extended limb, from a man who attempted to maintain the cataleptic attitude.—(Charcot.)

combined, and singular results obtained, through excitement of the skin or scalp, in which the differential expression of the two states will be most striking. We may also associate catalepsy and lethargy, and at the end of an experiment have the subject with one eye wide open on the lethargic side, and the other eye closed on the cataleptic side; or the condition may be reversed. Braid noted the characteristic attitudes of a subject in their relation to the trance state and their agreement with the expression of the face when, for instance, a cataleptic is impressed by a hallucination, the fixed attitudes of a limb give way to movements that are perfectly coordinated and correspondent with the nature of the hallucination. The subject acted upon in this way resembles "a statue endowed with animation," so long as the hallucination lasts, but when the impression that produced it loses its force, and the subject is left to himself, he returns to the immovable state of the cataleptic attitude. These peculiar phenomena of changes due to effects that are now psychical and now motor are specially characteristic of catalepsy.

Another interesting item in the long list of physical impressions is the production of an extreme sensitivity of the skin, especially in hysterical subjects. This is shown by muscular contractions that may follow such very slight excitement as light stroking, passing the hand over the hairs of the skin, breathing upon it, or moving the hand at a little distance so as to cause a slight current of air. The susceptibility to contraction by this means is diffused generally over the whole surface. But it has been found possible to limit this sus-

ceptibility, to a definite region by exciting the scalp in different ways. A lateral friction on one side of the head may produce hemi-somnambulism; if restricted to the corresponding side of the body the state of the other side remaining unchanged. Thus, we may have a hemi-somnambulism associated with hemi-lethargy or hemi-catalepsy. If a strong pressure is exerted with the finger on certain points of the scalp that appear to correspond with the motor centres, it is possible to produce a partial "somnambulism" of the limbs to which a motor centre is deemed to belong. In this manner one-half of the face, a leg, an arm or both legs, both arms, etc., may be affected. Results of this nature seem to confirm the theory of cerebral localization, or at least we must resort to some theory of the kind if we would explain them.

An analogy is to be traced between these effects of cranial excitation and the reflex effects producible in hysterical subjects by pressure upon the so called "hysterogenic zones" and "dynamogenic zones," regions ascertained in the course of the experiments at La Salpetriere.* Pressure on the hysterogenic zones in the hypnotized patient produced an hysterical attack which was arrested on the removal of the hand. Excitement of the dynamogenic zones produced an increase of muscular force. Other zones or territories on the body are described by observers as productive of movements or other phenomena, when the skin is touched. The general conclusion of this line of obser-

*Charcot—Maladies du Systeme Nerveux. Ch. Féré—Sensation et Mouvement. "Revue Philosophique," 1886.

vation is that the magnetized subject exhibits a modified cutaneous state, many parts of the body being abnormally excitable.

## CHAPTER IV.

### THE TRANCE STAGES.

The phenomena of hypnotism includes three general classes or types of condition, into any one of which the subject may be thrown, or he may exhibit each, according to the method of procedure, that is adopted; the peculiar nervous state at the time of inducing the trance has much to do with the symptoms that include the special condition.

First—There is the cataleptic state.

Second—The lethargic state.

Third—The state of artificial somnambulism.

Making use of the definitions of Charcot, as given in his essays in the Transactions of the French Academy of Sciences, for 1882, the marked feature of these three states are described as follows:

THE CATALEPTIC STATE.—The subject is motionless, and as it were, fascinated. The eyes are open, the gaze is fixed, the eyelids do not quiver, the tears gather and flow down the cheeks. Often there is insensibility of the eyeball. The limbs and all parts of the body may retain the attitude in which they are placed for a considerable time, even though the position is a difficult one to maintain ordinarily. The limbs appear to be extremely light when raised or displaced. The tendon reflexes disappear and excessive neuro-muscular sensi-

bility is absent. There is complete insensibility to pain, although some senses retain their activity, at least in part, as the muscular sense and sight and hearing. This continuance of sensorial activity may enable the experimenter to influence the cataleptic subject in various ways and produce hallucinations.

The Lethargic State.—At the time of falling into this state the subject often emits a peculiar sound, and a little foam gathers upon the lips. He becomes placid and there is complete insensibility to pain in the skin and the contiguous mucous membrane. The organs of the senses may retain some degree of activity, but attempts made to affect him by means of suggestion or intimidation are usually without effect. The limbs are relaxed so that if raised and then let go they fall back. The pupils are contracted and an almost incessant quivering of the eyelids is commonly noticed. The tendon reflex is exaggerated, and at the same time there is an excessive neuro-muscular excitability, which may extend to all the muscles of the trunk, limbs and face, or be only partial.

The State of Somnambulism.—The phenomena of this state are difficult of precise analysis, because of their complexity; but the following are the leading characteristics: The eyes are closed or half-closed; the eyelids generally quiver; left to himself, the subject appears to be asleep—but even in this case the limbs are not in such a pronounced state of relaxation as in lethargy. The hyperexcitability of the muscles as shown in the lethargic condition—does not exist; in other words, nervous or muscular irritations do not produce contractions. But

on the other hand, light or gentle procedures, such as passing the hand over the surface of a limb, or breathing gently on the skin, cause the limb to become rigid, but in a way that differs from the contraction following muscular irritation in hyperexcitability, since it can not, as in the latter case, be relaxed by mechanical excitement of the antagonistic muscles; it differs from the immobility of catalepsy in the resistance offered by the joints when attempt is made to change the attitude of the rigid limb. The skin is insensible to pain, but this is combined with hyperesthesia of the skin in some form, of the muscular sense and of the special senses. Hence it is easy in most cases to induce the subject to perform very complex actions.

Signiors Tamburini and Sepilli have tabulated the leading physiological conditions indicated by the three primary stages in this comparative manner:

| | LETHARGY. | CATALEPSY. | SOMNAMBULISM. |
|---|---|---|---|
| a. Motility. | Increased muscular contractility; rapidly appearing periodical contraction; sensibility to æsthesic excitation, especially to a magnet. | Plastic flexibility of the joints; lessened reflex irritability; slowly appearing periodical contraction; a magnet without influence. | Generally a continuous contracture which cannot be relieved by repeated excitation or by the activity of the antagonist muscles. |
| b. Sensibility. | Sharpened hearing | Complete insensibility. | |
| c. Respiration, | Quickened and deep; a magnet affects the respiratory muscles. | Slow and superficial; a magnet without influence. | |

| | | | |
|---|---|---|---|
| d. Circulation. | Peripheral vessels distended; the pulse waves change with the phases of respiration. | Peripheral vessels contracted; the pulse waves do not change. | |

These states may be produced successively at the will of the operator, or they may be blended and mixed or transitional conditions result with more or less variation and intricacy of manifestation. These mixed or transitional states may be made permanent or reproduced by the employment of appropriate means. Some authors name six or more of these secondary states, all of which may be developed in one subject, while, of course, a special fitness will be shown in most individuals for one stage or class of manifestations.

"Those adapted for the higher phase of thought transference or sympathetic thought reading would be degraded or injured—that is, their powers obscured—were they reduced to the buffooneries of the public platform, while those most suited for public entertainments seldom or never are fitted for the exhibition of the higher stages of the somnambulistic or sleep-walking stage, and certainly never for the degree of lucid vision or clairvoyance. This explains why the phenomena of the higher degrees have been so fugitive or unreliable. Mesmerists, straining for effect, or carried away by some previous successes, have endeavored to reproduce them, and in doing so have injured their sensitives, not knowing that these phenomena depend more upon certain nervous and psychic conditions in the sensitive than in the mesmeric powers of direction possessed by the operator."

This opinion of Mr. Coates, will, it is probable, receive the sanction of most experienced observers. To the definitions of the three types of trances, we will add a summary of the mental and physical symptoms usually indicated for the better information of the reader who has little or no opportunity for personal observation.

First—Closure of the eyes, the balls being turned somewhat inward and upward; if the eyelids are open there is a characteristic stare.

Second—The attitude is a fixed one, voluntary power being gradually lost.

Third—The face and eyes redden, while a cold perspiration breaks out, with coldness of the extremities.

Fourth—The subject may sigh and moan, as if in pain. There may be violent or mild spasmodic actions of the hands and feet, or jerking and contortion of the head and body, extended even to a furious extreme, and kept up for a long time.

Fifth—Mental activity of an unwonted and involuntary character is manifested—the senses being greatly stimulated—or these may be greatly depressed with corresponding feebleness of mind. Then, too, the muscles may show extraordinary power, and persons comparatively feeble in their normal condition outdo those of athletic mold in feats of activity, strength and endurance. Persons of no recognized intellectual talent, even those who are positively ignorant, when in the trance may exhibit an amazing brilliancy and freedom; although generally close examination of the thought reveals little that is original or worth preservation.

The sense of pain may be lost, while touch is exaggerated, so that the subject will perceive the approach of a

hand by the mere difference of the temperature. To this touch-delicacy can be attributed the feats of somnambulists, who, with closed eyes, go about in the night, safely avoiding obstacles that may be in their way. Dr. Brown Sequard gives an extraordinary instance of delicate balancing while in the trance: "A young lady of Paris was often seized with an ecstacy on Sunday morning. When the attack came on she would get upon a bed, put her toes on the edge, take a worshipper's attitude, and begin to pray. In this position she would remain for a long time like a statue. For her to do this in her normal mind, for even a few moments, was quite impossible."

Sixth—Hallucinations and illusions of different sorts. A subject can be made to see and hear anything the experimenter suggests. "Sensitive temperaments" that are liable to fall into trance easily, when their surroundings are favorable, frequently see the forms of living or dead persons, even when other symptoms of trance are not marked. Such become easy converts to Spiritualism, if they attend "circles" or seances.

Seventh—Hysterical symptoms, among which are the sensations of tingling, pins and needles, numbness, crawling, creeping, etc.

Eighth—Deep sleep, with apparent suspension or diminution of the more active vital functions. This may occur early in trance, but in many cases it never occurs. It is an evidence of the hypnotic condition, but not essential to it. In some cases it may continue for hours or days, unless the subject be awakened

In the most profound form of trance the power of

speech and of motion may be completely lost, while hearing is active. There are instances on record of persons who were almost buried alive, while in this state. One of these, frequently referred to, is that of the Rev. William Tennant, of New Jersey, who several times became entranced, and twice was prepared for the grave, his physicians even concluding that he was dead. Dr. Rosenthal, of Vienna, states a case of a hysterical woman who was declared dead: "The skin was bloodless and cold, the pupils insensitive to light, no pulse could be detected, and the extremities were relaxed. A mirror held over the mouth revealed no moisture; but, on examining her with an electric battery the muscles of the face and extremities contracted, and under the excitement of faradization she was restored to consciousness and recovered." Many other cases are recorded of "suspended animation," which, it is claimed, could be induced almost at will. The stories told of East India fakirs who have voluntarily entered into the trance state and remained apparently dead for even months, have their "witness" testimony, and it is of a character that skepticism respects.

Sir Monier Monier-Williams, Professor of Sanscrit at Oxford, recalls a case that occurred in the Punjab in 1837:*

"A certain Yogi was there, by his own request, buried alive in a vault for forty days, in the presence of Runjit-Singh and Sir Claude Wade; his eyes, ears and every

*Mystical Buddhism in connection with the Yoga philosophy of the Hindus." Address before the Victoria Institute, June 4, 1888.

orifice of his body having been first stopped with plugs of wax. Dr. McGregor, the then residing surgeon, also watched the case. Every precaution was taken to prevent deception. English officials saw the man buried as well as exhumed, and a perpetual guard over the vault was kept night and day, by order of Runjit-Singh himself. At the end of forty days the disinterment took place. The body was dried up like a stick, and the tongue, which had been turned back into the throat, had become like a piece of horn. Those who exhumed him followed his previously given directions for the restoration of animation, and the Yogi told them he had been only conscious of a kind of ecstatic bliss in the society of other Yogis and saints, and was quite ready to be buried over again. What amount of fraud, if any there may be in these feats, it is impossible to say. The phenomena may possibly be accounted for by the fact that Indian Yogis have studied the habits of hibernating animals for ages."

## CHAPTER V.

### OPERATOR AND SUBJECT.

The Agent or Operator.—There is no specialism in this matter; all well organized persons have some degree of power to magnetize. All who exercise influence or control over others in any way, possess some measure of ability that may be effective, in this respect. Temperament has much to do with the exercise of the power, but what the particular type of temperament is we should not attempt to define. We know men of the nervous, the bilious, the vital constitution who are skilful operators—one of the best in New York is a slim, delicate looking man of the reflective, studious class of minds. Another who has gained much repute by his experiments before scientific assemblies, is a man of the bilious-vital type. The man of fairly balanced organization, self-reliant and calm is likely to prove successful. Good nature has much to do with one's capacity, doubtless, just as it has much to do with one's acceptance in general society.

"Whatever contributes to the health, vitality, goodness of heart, and soundness of head of the mesmerist, contribute to his mesmeric powers. Health and vitality being the leading requisites." Prof. Thwing rightly emphasizes confidence, tact, and patience as prime factors of success, saying, "Confidence is of prime

importance. Fear is hardly more contagious that assurance. Men are able because they believe themselves to be able. This confidence in one's self is not so much a gift as it is a growth. 'Nothing is so successful as success.' One gains in self possession, in aptitude, in adroitness and even audacity by continual effort. Each successive victory duplicates power. Even failures not only teach us but they also stimulate us."

In specifying certain requisites that combine in the good operator Mr. Coates deems a full, clear eye as important, with steadiness of gaze. "No one can hope to be a mesmerist who can not look another man or woman straight in the face." Ease and grace of movement are desirable, for awkward, blundering tactics are likely to awaken the sense of ludicrous in the subject as well as in the spectators, and embarrass if not nullify the effort of the operator.

Temperance should govern his daily habits. He should live purely, simply, truly. Early and regular habits, the morning bath, simple diet, adequate physical exercises, calmness or evenness of mind will largely contribute to successful results. Next to health comes self-government and the development of the will, and of power to concentrate his energies. Will can be cultivated to a certain extent (as is taught in all the modern psychologies), but the initial power of will depends upon the phrenological development. A person deficient in firmness, self-esteem, conscientiousness, and continuity is not likely to have a strong will. But in addition to the want of the foregoing they have those faculties that tend to timidity, lack of concentration,

want of courage. As far as will is concerned they would not make mesmerists at all."

The exercise of tact is evidently necessary, as is patience also. He who can not command his faculties of self-reliance and circumspection and be ready to meet and master every emergency that may arise, will not prove competent for general occasions. Tact includes the prompt resort to expedients of one kind or another to accomplish the object in view. In order to exercise this, one must possess good perception and knowledge of character, the ability to draw quick and accurate conclusions from the appearance, manner, voice, attitude of the proposed subject.

Patience implies coolness, and perseverance. Sometimes the person to be magnetized is in so susceptible a condition that a few minutes only are necessary to induce the trance. But the great majority of those who offer themselves for experiment can not be brought under control without prolonged sittings. Often half a dozen successive trials are necessary, and one who appeared in the start a hard subject may become an admirable illustration of the better and more interesting features of the hypnotic trance.

## THE SUBJECT.

"No one," says Richet, "is absolutely insensble to magnetism, but it is certain that there are great variations of susceptibility to the condition." At one time it was thought that the weak and diseased were the special candidates for the trance, and now some observers con-

sider those affected by hysteria as most susceptible. but while a general view of the field of experiment in Europe and America might incline us to the opinion that the sick and feeble more easily fall under mesmeric control than the healthy and strong, no law can be formulated in respect to sex, temperament, age or education. "Strong, bearded men have been by far the best illustrations of psychic control that I have met with in this country or in England," Prof. Thwing says. and he has the experience of others to support the statement that "butchers, policemen, and French gens-d'armes will bow like grass, while the opposite conditions of sex, strength and health have given no encouragement sometimes."

According to Heidenhain "the operator is rewarded with success only in a very small percentage of the total number of persons experimented on. So far as I can see, the 'susceptibility' depends on the existence of a greater or less degree of sensory irritability; consequently pale, anaemic individuals are most liable to hypnosis." But another German experimenter states that active, muscular individuals are specially adapted to his experiments.

A writer in the "Nineteenth Century," after a study of the methods in vogue at Nancy, says, "All physicians practising this system are agreed that men—no feeble valetudinarian, but soldiers, outdoor laborers, artisans of the most commonplace and practical type—are, if anything, more susceptible than women.

This is easily accounted for. Those persons, as a rule, belong to the working classes; they are accustomed

to obey and to conciliate their superiors in social rank; with them the voice of authority falls on ears prepared to receive it, acts upon a brain that is unaccustomed to weigh, to argue, to resist. This is one reason why children are the best subjects. Between the ages of three and fourteen, all children, except idiots, may be considered hypnotizable."

Persons of strong individuality and much knowledge of the world, they who pride themselves in their intellectual culture, and declare their vulnerability to the hypnotic impression, are usually not susceptible, for the very reason that they will not concentrate their attention in the manner required by an operator. Such persons, however, show the same spirit in every relation where it is necessary to subordinate self. Were they ill, they would not be likely to consult a physician because of antagonism to his expected advice.

The fact that a man or woman is superior in physical and mental powers to the operator is no bar to their being hypnotized by him, provided that they are sincerely willing to test in themselves the effect of hypnosis. Therefore, when such a person yields himself to the direction and manipulation of the operator it is to be expected, as in the case of Prof. Agassiz, that he will be put to sleep. Several sittings may be necessary to accomplish it: the submission of the subject and the confidence of the operator will, in the majority of cases, finally succeed.

Of 744 persons of different ages, chiefly peasants and working people, tried by Liebault in one year, 682 were found susceptible. Of the sixty-two with whom

he failed, there were thirty-one each of men and women. Of the 682 the men numbered 256, which showed a greater susceptibility on the part of the women. Race has much to do with the degree of susceptibility, and so has climate; in warm countries the proportion of the hypnotizable is much greater than in cold.

From three to fourteen is regarded the age of highest susceptibility as we have stated, but those in whom it is exhibited may continue susceptible until well advanced in life. In old age, however, it diminishes, or entirely ceases; and in children under three no effect can, as a rule, be produced, it being hardly possible to command their attention. It is also extremely difficult to affect persons whose mind, though not in conscious opposition to the influence, are preoccupied or excited, or who are suffering acute bodily pain, or even some minor discomfort, the thought of which they are not able to put aside. It follows therefore that hypnotism or magnetism can never supplant the ordinary anaesthetics. Before an operation the patient's mind, except in rare cases, is likely to be too much perturbed to be brought under the hypnotic influence; and it is indeed as well that the treatment should be regarded as purely medical, and not as an accessory to surgical practice.

Those who undertake to magnetize are differently impressed by the individuals they may look to for subjects. Hence appearance goes for much. A word may not be spoken, yet the experienced observer will feel a certain confidence in his power when a susceptible person comes under his notice. Physiognomy, which

means temperament, has much to do with it therefore, and yet there is something more than physical signs merely that intimate to the observer the correctness of his diagnosis. M. Binet and Féré incline to the opinion that artificial sleep may be produced in any person by repeated and varied efforts that induce fatigue, and before deciding that it is impossible, the attempts should be made. They consider it certain that most nervous persons and those especially suffering from hysteria are predisposed to the hypnotic state.

It is said by two or three writers that the susceptibility of a person to magnetism may be ascertained by a simple experiment. He is asked to stand erect and place his heels together and his arms and hands at length by his side; then standing behind him the experimenter places his hands upon his shoulders for a few minutes, then makes passes down the back over the spine, meanwhile willing him to fall backward. If he does so he will make a good subject. A little modification of the trial is to place the hands upon the shoulder blades of the person, palms foremost, so that the thumbs are directed toward the spine, and after a few moments to will strongly that he fall toward him.

Our own observations have not verified this statement.

A Polish physician residing in Paris, Dr. Ochorowitz, used a grooved magnet for the purpose of testing susceptibility. This magnet was placed on the index finger of a person, and if, after a few minutes, he experienced strange sensations, as heat or cold, perspiration,

or tingling of the finger, it was inferred that he could be readily magnetized. With this "hypnoscope" Ochorowitz obtained indications that 30 per cent. of those examined were susceptible, and many of these were found by trial to be really so. As a fact it should be stated that it is the hysterical mainly, who as a rule are sensitive to metals and magnets, who show any effect when this hypnoscopic test is tried.

## CHAPTER VI.

### THE PROCEDURE.

There is no set method of producing the magnetic sleep; it may vary with the operator.

The subject may be given some glittering object to gaze at for a time; his hands may be clasped in a certain way, and he be left to their contemplation; or, the operator may place himself before the subject, and taking his hands gaze steadily into his eyes. Manipulations may be made over the forehead downward or backward from the eyebrows, or long sweeping passes may extend from the head to the knees.

The old mesmerists, as we have seen, introduced apparatus and various seeming adjuvants; the modern hypnotist, with this theory of suggestion and concentration, thinks adventitious aid quite unnecessary. All that is required is, that the person chosen for a subject should be closely attentive, obedient and acquiescent. His sincere co-operation being obtained, it will not be long before some intimation or symptom will be noted, showing whether or not he is hypnotizable.

In Mr. Hartshorn's excellent translation of M. Deleuze's large work, we have the method given at some length of that class of mesmerists who believe that from the operator's hands a peculiar force or subtile fluid emanates and affects the subject favorably or

unfavorably. M. Delenze advises his students to pursue the following plan:

"Cause your patient to sit down in the easiest position possible, and place yourself before him, on a seat a little more elevated, so that his knees may be between yours and your feet by the side of his. Demand of him, in the first place, that he give himself up entirely; that he think of nothing; that he do not trouble himself by examining the effects which he experiences; that he banish all fear, and indulge hope; and that he be not disquieted or discouraged if the action of the magnetism produces in him temporary pains.

"After you have brought yourself to a state of self-collectedness, take his thumbs between your two fingers, so that the inside of your thumbs may touch the inside of his. Remain in this situation from two to five minutes, or until you perceive that there is an equal degree of heat between your thumbs and his; that being done, you will withdraw your hands, removing them to the right and left, and waving them so that the interior surface is turned outward, and raise them to his head; then place them upon his shoulders, and leaving them there about a minute; you will then draw them along the arm to the extremity of the fingers, touching lightly. You will repeat this pass five or six times, always turning your hands, and sweeping them off a little, before reascending; you will then place your hands upon the head, hold them there a moment, and bring them down before the face, at the distance of one or two inches, as far as the pit of the stomach; there you will let them remain about two minutes, passing the thumb

along the pit of the stomach, and the other finger down the sides. Then descend slowly along the body as far as the knees, or farther; and, if you can conveniently, as far as the ends of the feet. You may repeat the same process during the greater part of the sitting.

"You may sometimes draw near to the patient, so as to place your hands behind his shoulders, descending slowly along the spine, thence to the hips, and along the thighs as far as the knees, or to the feet. After the first passes, you may dispense with putting your hands upon the head, and make the succeeding passes along the arms, beginning at the shoulder; or along the body, commencing at the stomach.

"When you wish to put an end to the sitting, take care to draw towards the extremity of the hands, and towards the extremity of the feet, prolonging your passes beyond these extremities, and shaking your fingers each time. Finally, make several passes transversely before the face, and also before the breast at the distance of three or four inches: these passes are made by presenting the two hands together, and briskly drawing them from each other, as if to carry off the superabundance of fluid with which the patient may be charged. You see that it is essential to magnetize, always descending from the head to the extremities, and never ascending from the extremities to the head. It is on this account that we turn the hands obliquely when they are raised again from the feet to the head. The descending passes are magnetic; that is, they are accompanied with the intention of magnetizing. The ascending movements are not. Many mag-

netizers shake their fingers slightly after each pass. This method, which is never injurious, is in certain cases advantageous, and for the reason that it is good to get the habit of doing it." *

In making the passes, the movement should be easy and light, without haste, or undue slowness, the distance from the head to the feet being covered, say within about half a minute. The hands should be open, not that this is essential, but for the sake of a graceful gesture. Deleuze, however, deems it important to have the fingers spread apart a little, and bent slightly, so that their ends shall point toward the person magnetized, on the ground that "it is by the ends of the fingers and especially by the thumbs that the fluid escapes with the most activity."

They who advocate the force or fluid theory, make a distinction between mesmerism and hypnotism, defining the latter as a coarse, lower condition, a merely subjective relation being established between the operator and subject, the physical state being frequently disturbed by functional irregularities, such as convulsive movements, nausea, difficult or oppressed breathing, etc., whereas the mesmeric state is one of calmness, and its effect upon the nervous system is sedative and refreshing. It is claimed further, that the action of the mental faculties is more harmonious, and their consequent manifestation more definite and clear, whatever may be the object of consideration. Also, that the mesmer-

*Practical Instruction in Mesmerism. J. P. F. Deleuze. Revised Edition; 12 mo., cloth; price, $2.00.

ized may indicate a high and refined degree of trance, where the operator loses control, at least, to some extent, of the mental phenomena, and a psychic relation is developed with persons and things beyond even the experience and recognition of the operator.

The investigations of the London Society for Psychical Research have elicited many facts in the conduct of magnetized persons, that it is certainly impossible to explain on known physiological grounds. At least the theories of Haidenhain and of Charcot fail to give us a satisfactory analysis of them.

There may be objectionable features in the method of Deleuze. In Dr. Braid's, however, we have a procedure that is quite free from criticism on the score of delicacy and propriety. He, like Vimont of Caen, with regard to Gall's theory of the brain, was led to the investigation of mesmerism by the conviction that it was an imposture, and after a careful series of experiments, he was compelled to admit the reality of the phenomena, and the influence of hypnotism as a curative agent. Braid's plan to induce the sleep, as described by himself, is the following:

"Take any bright object (I generally use my lancet case) between the thumb and fore and middle fingers of the left hand; hold it firmly about eight to fifteen inches from the eyes, at such a position above the forehead as may be necessary to produce the greatest possible strain upon the eyes and the eyelids, and enable the patient to maintain a steady, fixed stare at the object. The patient must be made to understand that he must keep the eyes steadily fixed on the object. It will be

observed that owing to the consensual adjustment of the eyes, the pupils will be at first contracted. They will shortly begin to dilate; and after they have done so to a coniderable extent, and have assumed a very wary position, if the fore and middle fingers of the right hand, extended and a little separated, are carried from the object toward the eyes, most likely the eyelid will close involuntarily with the vibratory motion. If this is not the case, or the patient allows the eyeballs to move, desire him to begin again, giving him to understand that he is to allow the eyelids to close when the fingers are being carried to the eyes, but that the eyeballs must be kept fixed on the same position, and the mind riveted to the one idea of the object held above the eyes."

Richet * states that he hypnotizes his subjects by exerting a strong pressure on their thumbs for three or four minutes, and then by making passes in a downward direction over the head, forehead and shoulders. After a while this manipulation produces, according to Richet, somnambulism, and this state is capable of manifesting three degrees of intensity:—

First, the period of torpor, which occurs after passes have been made, for a time varying form five to fifteen minutes. The subject begins by inability to raise his eyes, and these become red and moist, and the muscles may have a tendency to contract under mechanical excitement.

Second, the period of excitement, which is not attained at once, but after a series of magnetizations, in which

*L. Homme et l'Intelligence. Paris, 1884.

the subject is asleep, yet able to answer questions. During this period, hallucinations may be produced, acts may be suggested, and there is forgetfulness on awaking.

The third degree is shown by stupor, in which there is insensibility to pain, and the muscular phenomena of contracture and of catalepsy; automatism also is indicated in this period.

These are phenomena of hypnosis, occurring in persons regarded as perfectly healthy, whose treatment, according to Richet, should differ from that applicable to the hysterical. Bremaud claims that the same means in use for hysterical hypnosis will produce somnambulism, lethargy, and catalepsy in healthy individuals, and that there is no sensible difference between these states and those produced in hysterical subjects.

Prof. Charcot in his nosographic essay mentions briefly the modes pursued for inducing the three fundamental states, thus:

"The Cataleptic state—This may be produced: (a) primarily, under the influence of an intense and unexpected noise, of a bright light presented to the gaze, or again in some subjects by the more or less prolonged fixing of the eyes on a given subject; (b) consecutively to the lethargic state, when the eyes, which up to that moment had been closed, are exposed to the light by raising the eyelids. The subject thus rendered cataleptic is motionless.

"The Lethargic State.—This is displayed: (a) primarily, under the influence of a fixed gaze at some object

placed within a certain distance of the eyes; (b) in succession to the cataleptic state simply by closing the eyelids, by leading the subject into a perfectly dark place.

"3. The State of Artificial Somnambulism.—This state may in some subjects be immediately produced by fixity of gaze, and also in other ways which it is not now necessary to enumerate. It may be produced at will on subjects who have first been thrown into a state of lethargy or catalepsy, by exerting a simple pressure on the scalp, or by a slight friction. This state seems to correspond with what has been termed the magnetic sleep."

Gessman, of Vienna, in very simple terms explains a method that he has found of good service.

"Preferring a woman, I select from the company one who has a fair complexion, a nervous appearance and dark eyes. I say to her, there is in my organization a strong electivity that enables me to electrify persons who are not too strong. In proof of this, I will let her hold two fingers of my right hand with both of her hands, and after a few seconds, I will inquire whether she feels anything. If she is susceptible, she usually replies that she feels a tingling and later, a numbness of the arms and upper part of the body. Then I say, "hold my hand tight, tighter, tighter,—well, now you can not let go my hand," and the effect is that she can not. By stroking her arm with my left hand, the muscular cramp increases, so that she can not leave hold of my hand even when asked to do so. Blowing on the hands, and the statement that she is free, immediately stops the cramps.

"By this preliminary test, I get a sure proof that the person is susceptible and really hypnotizable, and the effect is produced thus: I sit down beside her, have her close the eyes, take her hands in mine so that her thumbs and mine are pressed against each other, tell her to be quiet and to yield unresistingly to the first inclination to sleep. When she has fallen asleep, generally within ten or twenty minutes, I deepen the sleep by stroking over her head and chest, and then try to induce her to talk. This I easily accomplish by placing a hand on her head, and taking one of hers in my other hand, and while speaking, direct my voice towards the pit of her stomach. I ask, 'Do you hear me?' a question that must often be repeated four or five times before I receive a very weak answer. Now is the time to make further experiments. At the first attempt, however, one should stop here so as not to tire the subject. After twenty minutes at most she should be awakened. This is done by a simple command, "Awake." She may be first asked if she feels well, and be assured that after awaking she will be altogether in good health and normal.

"If she prescribes some way in which she wishes to be awakened, her wishes should be heeded. If a simple order does not succeed, you may blow in her face, or make reverse strokes, but violent means, such as vigorous shaking, sprinkling with water, etc., should never be used, neither should strange persons be permitted to come in contact with her. If she still does not awake, she may be allowed to sleep for ten to twenty minutes longer, provided pulse and respiration do not

give cause for apprehension. Generally she will awaken within that time of her own accord."

Prof. Heidenhain's method, as described in his books,* consists briefly in (1) the monotonous stroking of the temples or nose; (2) in monotonous sounds, like the ticking of a watch. He placed three chairs with their backs against a table upon which he had previously placed his watch. Three persons sat upon the chairs with their attention directed to the monotonous ticking of the watch, and all three fall asleep. Here the sleep and any attending phenomena are brought about by acting first on the physical organism, as the ear, and secondarily upon the mental.

Dr. Braid, as we have noted, caused strain and weariness of the eyes by his tactics, and resultantly of the optic centres in the brain. Heidenhain, in an apparently gentle manner, produces a similar result upon the nerve centres, through inhibition of feeling by stroking the skin, or of the auditory sense by the ticking of a watch. The principle involved in both methods is the same.

"All roads lead to Rome."—So there are many devices for the production of hypnosis, which in essence are identical.

With Mr. Coates, we are inclined to agree that the operator should "act as if some psychic influence was really exerted by the operator." Not that one should assume to be a magician or pretend to possess supernatural powers for the sake of the greater effect that may be

*Hypnotism and Animal Magnetism. Translated by. L. C. Woodridge, M. D., London, 1888.

obtained. No one at this day should tolerate any imposture of the kind, and he who attempts it is likely to find himself a loser in the end; but he should regard his relation to the subject as a serious one, and invested with possible danger. The man who is thoroughly alive to the contingencies of the procedure, and conducts it with care and seriousness, is he who will, other things being equal, accomplish his purpose well. If there be such an influence, and the term "mesmeric" imports it in distinction from "hypnotism," all legitimate aids, like passes, looks, movements are proper to intensify it, and are to be used in conjunction with imitation, suggestion and imagination.

Preparation of the Operator.—A good amount of practical advice, with respect to the inner details that enter into the preparation of one who would practice magnetism satisfactorily, is given by late writers who, like Mr. Coates, believe that one who has aught to do with such a thing should feel that he is dealing with a dangerous power. One author considers it important for the student who would secure expertness in the practice of magnetism to cultivate the gaze, and to do so with mind and body in a fresh, wide-awake condition. Therefore, the best time for such practice is in the morning. A piece of white paper may be placed in the center of a looking-glass, and the student try repeatedly to look steadily at it without winking, until he can do so for ten or fifteen minutes. When out for a walk or other purposes he should select, now and then, some distant object and gaze fixedly at it as long as he can without over-straining the eyes or causing tears to flow. Look-

ing continuously at a brilliant object like a gas jet is trying, but with care, unless there is some organic defect, this mode of practice will improve the person's ability to gaze steadily.

He who can look directly and unblinkingly into the eyes of another, and that without staring, has the eye for magnetism. The vacillating look and unsteady, often winking eye will not accomplish much, for it is a sign of weakness rather than weariness. We know of an incident where a man attempted to magnetize a woman, whose self-possession and steadiness of look proved superior to his own, and who actually put him to sleep.

As to the passes, some practice is necessary to render one easy and graceful in making them. As we have seen, these may be at length, from head to feet, or they may be short and directed at some region. At home, in the privacy of one's room, exercise in this part of the magnetizer's procedure should be frequent and smoothness and ease of action acquired to the extent possible. Commence by making long passes. The hands first being directed toward the eyes of the supposed subject are then lowered slowly and naturally downward to the floor, both hands moving in unison, and on the line of the outer sides of the supposed person's body. Having reached the lower limit of the pass, the hands are to be raised to the head again. They must not be carried up in front of the subject's body over his abdomen or breast, but on each side and further out than the line of the pass downward; a semi-circular, upward movement is the proper one. This process must be repeated again

and again, until it can be done with readiness and ease. Downward passes, it is claimed, are soothing and conducive to sleep; while the upward pass, the more abrupt and sudden the more effective, contributes to wakefulness.

We know a very powerful operator in New York City who has evidently done little in the way of cultivating the pass. When experimenting with a new subject, his movements are course and awkward and so abrupt that it would seem that they often defeat their object. In other respects his method is unobjectionable, and being a man of fine personale he obtains, with a good subject, surprising results.

If one does not stand, while engaged in the magnetic movements, he should sit on a higher chair than his subject, so that the latter shall look in an upward direction, but his effort to look up should not be such as to induce a conscious strain, which must be more or less uncomfortable. It often happens that the procedure is such as to occasion pain to the subject, and there awakens instinctively in his mind a feeling of opposition to, or distrust of, the magnetizer, the effect of which may be to prevent him from succeeding; or if the sleep be induced it may prove quite unsatisfactory. The relations of temperament come into play here and should be considered, as upon temperament depend that unaccountable antagonism felt at the outset, and which is likely to render success impossible.

The local or short passes with contact, belong to the curative phase of magnetism, and, therefore, are to be used especially when it is the object to produce remedial

effects upon the sick and feeble rather than to entrance: but whether short or extended passes are employed, the sleep may be produced if the subject is in a favorable state, since success depends upon him rather than upon the operator. All the practice and exercise of the eyes and hands that are advised, if diligently presented, will tend to the general improvement of the student himself in self-confidence and grace of action, and so render him not only the better able to accomplish his object in obtaining magnetic cotrol of others when it may be desirable, but also develop his manhood.

A Position in Magnetizing.

## CHAPTER VII.

### SUGGESTION AND MENTAL IMPRESSION.

The facts of hypnotism are numerous enough for the consideration of the scientist, but to answer the question—On what do these facts depend? the scientist is not ready with his answer. We have extended comparisons of phenomena, and many more or less elaborate studies of their differential relations. Richet, Beaunis Bernheim, Liebault, the disciples of Charcot and others furnish us with a great assemblage of data bearing on suggestion, and it is not a matter of wonder that the average student of such data is led to ascribe all that the subject does to the impressions made upon his sense by the magnetizer during the artificial sleep.

We know that scarcely a phase of normal life may not be reproduced in the trance by suggestion, just as in the dreams of ordinary sleep a train of ideas or pictures may be induced by a touch on some part of the body, by a sound, by a current of air or other cause, and the dream will have some relation to the nature of the cause.

As regards dreaming in general it is a matter of organization, and this again has as much to do with dream-habits as it has with any other part of our mental life. We are prone to contract ways of thinking; some particular subject will occupy much of our atten-

tion while awake, and if we look carefully into the matter we find that a particular faculty or set of faculties dominant in our psychology is the energizing agent in the representation of that subject People with broad heads and active temperaments are prone to dream of scenes in which there is strong action. A lady friend of the writer with such a head, of great executive ability and remarkable for her skill in household economies, dreams usually of setting her house in order for some family or social occasion, and awakens in the midst of the imagined work with a sense of weakness and nerve excitement. Another frequently dreams of going into cold water. As these dreams have been kept up for twenty years or more they signify nothing more than a mental habit founded upon certain physiological conditions that are explicable.

How dreams may be produced by simple causes M. Maury's experiments upon himself will illustrate, although in principle they offer nothing essentially new. Having arranged with an acquaintance to remain with him at night, and after he had fallen asleep to excite certain sensations and not to awaken him until sufficient time had been given for a dream if any should follow the excitation, the following results were noted. His assistant on one occasion put some eau-de-cologne to his nostrils: he dreamed of being in a perfumer's shop at Cairo. Tickling the lips with a feather suggested the very disagreeable sensation of having (on his face) a mask of pitch. The back of his neck was slightly pinched; he dreamed that a blister was applied to it, and of seeing a physician who had attended him when

a child. A hot iron was brought near his face: he dreamed of seeing men attending a furnace. At another time when asleep he was ordered in a loud voice to get a match; he dreamed that he went somewhere to find one.*

A comparison of the effects of suggestion in producing dreams in normal sleep with the phenomena of hypnosis show a similarity. Another resemblance of a different kind may be shown to exist between the psychical manifestations of normal sleep and those of hypnotism. As Mr. Chas. Féré has demonstrated in the case of many patients "the pathogenic idea, the first manifestation of delirum may originate in the waking state, but it is generally confirmed by the dreams of natural sleep, in which it is reechoed with added strength. Clinical observation therefore shows that the experiments so easily performed during the artificial sleep may be spontaneously realized in the normal sleep."

A definition of Suggestion will enable us the better to understand the meaning of the illustrations already given and those which will be described hereafter. Strictly speaking, suggestion is an operation producing a given effect on a subject by acting on his intelligence, or to use language more in the style of the dictionary, by suggestion we prompt or call up ideas and impressions that have been lying in the memory by statements or actions that are analogous. Prof.

*Sommeil et Reves: "Sleep and Dreams."
†La Medicine d' imagination.—(Progrés Medical, 1881.)

Bernheim considers the hypnotic state as a psychical condition in which the subject is influenced by suggestion to an increased degree: hence the extraordinary play of the mental powers that is often seen in one who is called "a good subject."*

What is and what is not suggestion may be illustrated thus: When striking the tendons of the arm or leg causes a contracture of the muscles and a consequent movement of the limb of a hypnotized subject no suggestion is made. The contracture is the result of physical action with which the subject's mind has nothing to do. It is an unexpected, involuntary action that occurs, we may say, in advance of any thought relating to it. But when the experimenter says to the subject, "Your arm is bent and stiff; you can not raise or extend it," the contracture that then occurs is the result of psychical action. The idea of contact on entering the subject's mind produces the movement of contracture, and this is a procedure of suggestion. Ideas may be transmitted to or aroused in a subject's mind by the production of physical sensations, as we have already illustrated in the causation of dreams; but unless the subject's intelligence takes part in the physical action that results from the excitement or stimulus of a part there is no true suggestion.

Hence there are two classes of hypnotic phenomena: (1.) that produced by physical excitements or sensations; (2.) that produced by ideas. The latter belongs strictly

*De La Suggestion et ses Applications a la Therapeutique, Paris, 1887.

to the department of suggestion, although the two methods of experimentation are parallel and have a very wide range.

The aptitude to receive suggestions is variously shown by people in the normal state: in hypnotism it is strongly developed, but it does not occur in all phases of the artificial trance, only in those of catalepsy and somnambulism. The suggestions made to a cataleptic are simple, automatic, inevitable; the reason takes part in those of somnambulism; the subject discusses and enlarges on them and sometimes indicates in a strong degree the personal factor by a disposition to act for himself.

The forms of suggestion are necessarily very numerous. The simplest is the spoken or written form. We say to the subject "See that tiger!" Immediately he exhibits fear and looks about for a way of escape or for means of defence. Without uttering a word the hallucination of a snake at one's feet may be produced by making a wriggling movement with the finger, or simply by directing the eyes of the subject downward. So orders may be given by gestures and the subject made to walk, run, dance, etc. Some subjects manifest great quickness in divining the purpose of the experimenter from slight movements of a finger, the lips or eyes. The psychical character of the movement is interpreted—i. e., it arouses ideas that are correspondent with the thought of the experimenter,—and we have a phase of "thought transference." We say this because we are not able to explain by suggestion how mere passes or gestures are productive of conduct of an intricate mental character.

"In all cases in which the idea awakened in the subject emanates from the experimenter's direct suggestion the subject is in a state of direct subjection to him. This state is not opposed to that which we may observe in the waking state, there is only an exaggeration of phenomena which makes it easier to understand what occurs in subjects held to be of sound mind, who are unconsciously influenced by the will of another person substituted for their own."

Emotion in Expression.—The play of the emotions is rendered markedly distinct in a subject, strong faculties displaying their special natures in a manner that enables the student of mind to differentiate them with nice minuteness. Furthermore the relation of attitude or action to a mental state is strikingly expressed, the muscular movement through its nerve connection with the centers of stimulus in the brain inducing the psychical activity that is correspondent. For instance, if the subject's limbs are placed in a tragic attitude, we find depicted upon his face the feeling that belongs naturally to it; if we clench his fingers he frowns with the expression of anger; if his limbs are disposed so as to begin any action he carries it into effect, and so will go on all fours or climb, or if a broom is placed in his hand he will sweep, or if a pen is placed in his hand he will write. If the hands of a woman are crossed upon her bosom the idea of holding an infant is usually suggested; if placed on her knees she will assume the position of prayer, and so on.

It has been suggested that the best studies of attitude and facial expression may be obtained in this way

using the ready facilities of photography. The desired effect having been obtained by the awakened sensorial excitement the subject can be easily fixed in the midst of the play of facial expression, and a copy made by the camera.

How "auto-suggestion," or an impression that has its origin in the subject's own intelligence, may arise is illustrated by Messieurs Binet and Féré as follows: A subject imagined that she was opposing by force the hallucination suggested by one of the present writers, and that she had given him a blow on the face. When her supposed adversary entered the room on the following day she imagined that she saw a bruise upon his cheek. This hallucination was derived from the former one just as a conclusion is derived from its premises, and it may be taken as a fair type of auto-suggestion. The subject must have unconsciously argued after this fashion: I gave him a blow in the cheek, of which, therefore, he must bear the mark. Another subject coming out of a state of profound lethargy that had lasted only five or six minutes, imagined that she had been asleep or several hours. We encouraged the illusion by saying that it was two o'clock in the afternoon, although it was in reality nine in the morning. When she heard this the patient felt extremely hungry and begged us to let her go for some food. This was a kind of organic hallucination—the hallucination of hunger suggested to the subject by herself. She reasoned unconsciously somewhat after this manner: "It is two o'clock in the afternoon; I have eaten nothing since I got up, and am therefore dying of hunger."

This imaginary hunger was soon satisfied by an equally imaginary meal. We suggested that there was a plate of cakes on a corner of the table of which the subject might partake, and at the end of five minutes her hunger was appeased. These examples of auto-magnetism are derived from hallucination."

A different order of ideas prompted, however, in an analogous manner, and carried farther by the subject is illustrated thus: "We appointed a hypnotized subject and addressed her as follows: 'A serious accident has just befallen you. Do you remember it? Your foot slipped in crossing the court yard and you fell upon your hip. You must have hurt yourself very much.' The subject instantly felt a severe pain in the hip and began to moan, and also suggesting to herself the natural consequences of the fall she gave herself a slight paralysis of the limb and limped on awaking.

The general conclusion derived from the phenomena of hypnotism is that suggestion consists for the most part of introducing an idea in the mind of a subject and cultivating it by such apt and natural means as the circumstances indicate. The idea received by the subject revives sensations and experiences both physical and mental kindred to it, and these are manifested in a vivid fashion: the subject lives over again what has been once experienced; the hallucination is to him a reality. Suggestion we know, may have a most pōwerful effect upon one in the full possession of his senses, even to the extent of producing paralysis, and death. The flavored water-and-bread pills of the shrewd physi-

cian have produced marvelous effects in maladies that have resisted prolonged dosage *secundum artem*, the patient thinking that the new prescription masked some most potent medicament.

A specialist in electropathy informed me that he applied the electrodes of an old and long unused battery to the spinal column of a lady who had been an invalid for years on account of nervous disorders. She had visited Europe and consulted with famous physicians and surgeons without obtaining more then temporary relief from any. His "treatment," however was remarkably effective. She professed to experience unexpected benefit at the first sitting, and after the second walked out a short distance in the street, a thing she had not attempted for a year or more. Later "treatment" conduced to further improvement. All this with the wires of a dead galvanic battery.

It is common enough for people who read or study medical books to feel symptoms of the diseases they may be reading about. The professors of pathology and therapeutics in our larger medical schools can furnish many instances of students who complained of heart or lung or kidney disorders at the time of their study of such maladies. The venders of quack medicines reap a rich harvest from the hallucinations of invalidism their over-drawn advertisements produce upon thousands.

So suggestion performs its part in the effects obtained by the physician and his prescription for a sick person. What is that "confidence" in one's medical attendant that so much promotes improvement

but the idea impressing the mind of the sick that his physician will "cure" him?

We think of smiling and we smile. One yawns and those around him involuntarily follow suit. We think of a delicious article of food and our mouth immediately "waters."

So strong is the conviction in the minds of many that suggestion is a power of almost unlimited capabilities that they have ascribed to it the action of aesthesiogenic and dynamogenic agents, etc., employed for peripheral excitement. But "the reality of the process of cure by these agents has been denied, and it is thought that suggestion will explain the singular phenomena of transfer discovered by Gelli, and afterward studied by a commission of the Société de Biologie. What Carpenter ascribed to expectant attention is now ascribed to suggestion. This error is chiefly due to the idea that if suggestion will reproduce any given phenomena that was previously ascribed to a physical excitement, therefore, suggestion is its true cause. But this argument is weak. It might as well be said that since it is possible to satisfy a somnambulistic hunger with an imaginary meal, nourishment is at all times unnecessary for him.

"Moreover this opinion does not possess the merit of simplicity claimed for it, since it is difficult to understand why the simple idea of paralysis should paralyze as to understand why a shock to the skull should produce the same effect. Besides in ascribing everything to the idea we ignore the fact that it is a secondary derivative phenomenon. To maintain that the

idea is everything and the peripheral excitement nothing would be equivalent to maintaining that the idea is a phenomena entirely independent of the sensorial functions. It is, in fact, a revolt against the grand theory of the relations between sensations and images which dominates modern psychology. Such an opinion is also opposed to physiology which teaches us that the several functions—the secretions of sweat, tears, etc., may become active by means both of physical and mental causes, and that the reality of the one does not exclude the other."

The hallucinations or delusions of the senses, and consequently of the mind, induced by suggestion, form a most interesting field. By deception of sight a room may be changed into a street, a forest, a lake; persons present may be altered in appearance, name, etc.: objects of all sorts, made to appear. The hypnotized can be made to hear all manner of sounds, although there is complete silence; his taste can be deceived in so far that the most nauseous, bitter and pungent things will seem delicious; he will, by direction, smell the strongest odors where no odor exists; his sense of touch may be exaggerated, neutralized and deceived variously, and so on.

One-sided hallucinations of the senses can be produced also. For instance, the subject is led to believe that on a piece of blank paper he perceives a picture with his right eye only. Closing that eye he can not see the picture. If he be awakened he will see the picture still but only with the right eye as before.

Dissimilar or contrary suggestions may be impar-

ted to corresponding senses with striking effect. We say to the right ear, the weather is very fine; the sun is shining brightly; to the other ear we say, it is raining heavily, very unpleasant weather. A contrast of expression follows: the right half of the face smiles, while the left half frowns. So two different scenes may be pictured to the right and left eyes respectively and there will be a double view.

Still more interesting facts of optical hallucination are recorded by different observers. A piece of blank paper, alike on both sides, may be shown the subject and he may be made to believe that he sees a picture on one side. Turning the paper over he will not see the picture, unless he is made to believe that it is there also. But as the experiment does not include that, of course, it is not done. Now he will remember exactly the side on which he saw the imagined picture and it does not matter how often or in what way the paper is shown him he will not fail to see the picture on that one side and say whether it is right side up or reversed or oblique, etc.

Féré experimented in a similar manner. On a piece of white paper he placed a visiting card and then traced the outline of it with a pen in the air close to the paper but leaving no marks, making the hypnotized person meanwhile believe, that he drew black lines upon the paper. After the patient had been awakened he was asked to fold the paper where the fictitious lines were. He at once took the paper and folded it in a parallelogram closely corresponding to the shape and size of the card which he was not allowed then to see.

This performance is a step in advance of the first noted, since the subject carried the hallucinations into his normal state, but it is but one of many like experiments that have been made and its explanation is not yet compassed by the scientist, although he may attribute the wonderful power of seeing thus manifested by a subject to some association of ideas with a certain mark or peculiarity of the side of the paper on which he was led to believe a picture or outline existed. But in such an attempted explanation the suggestion theory itself fails.

Neither do we find a solution in the fact that a close and steady gaze on an object will fix the object upon the retina, so that after the eye has been removed from it an image will remain visible for a brief space, since the hypnotized sees no real picture, and the retina of his eyes is not impressed or excited by light rays from it. The impression is only a mental one. Brewster tested the relation of optical conditions to the hallucinations of the subject and found to his surprise a strange correspondence between the real and unreal in such an experiment as we have just noted. For instance, having at hand a person who was affected by visual hallucinations he pushed one eyeball inward thus deflecting the axis of vision and producing artificial strabismus (cross eye); the patient saw the spectral object double. On removing the finger the imaginary object was single again. Other observers have proved this extraordinary effect by various devices. A magnifying glass placed before the eyes of the subject will magnify the suggested picture; a mirror will

reflect it and the hypnotized will see it reversed in the glass in conformity with the law of optics.

So, too, suggestions of color are easily made upon the mind of the subject, but it should be said that if he is color blind he can not be made to see the color in respect to which his optical sense is deficient.

The false impressions made upon the visual sense of the hypnotized person may last for a time after his awaking, although as a rule he has forgotten every experience while in the abnormal state. It is not essential that the subject should be directed to remember what he sees the hallucination may continue without it and sometimes in spite of his being told that it is mere imagination. One experimenter assured his patient before putting her to sleep that she would have a vision which, upon awaking, she should positively reject, because it was not real. In spite of this, however, when awoke she still saw the ten-franc gold piece on the table, and in spite of remonstrance insisted that she could both see and feel it. Such a case as this, it must be said, is rare, for generally a resolute statement that nothing is there will dispel the hallucination.

Another form of visual deception is noteworthy, which is illustrated thus: A real bottle standing on a table was shown to a subject; it was then removed and she was told that it was there still. After awaking she saw only the spectral bottle, and although the real one was placed before her eyes she could not see it, and placed into her hand she could not feel it. Her perception of the real bottle appeared to be entirely obliterated by the imaginary one.

## CHAPTER VIII.

### MIND TRANSFERENCE.

The phenomena of hypnotism include effects of mental impression such as indicated by what is known as "mind transference" or "mind reading." No doubt can be entertained now, by any one conversant with the facts, regarding the marvelous power in man to communicate thought in what may be called an immaterial manner, and that without any manifestation that is perceptible to the common physical senses. The experiments that have been made in this connection are very numerous. Those that should command respect specially were undertaken under the auspices of the London Society for Psychical Research, and by the Societé Physio-Psychologique in Paris. The Psychical Research Society of Boston has also made investigations in the same line with results that point to the same positive conclusions and confirm statements that scientists formerly were accustomed to relegate to mediaeval tales of miracle and obsession.

Citing an experiment of Liebault. This physician wrote on a slip—"When she (the subject) awakens she will see her hat changed from black to red."—The hat was shown to the company, and then Liebault and the company put their hands on her forehead and repeated

mentally the words that had been written. She was told that on awaking she would see something strange. After being awakened she immediately stared at her hat and laughed aloud, and exclamed, "That is not my hat; it has the same shape, indeed, but it is not mine. Give me my hat."

On being asked what the matter was, and her questioners insisting that she should tell them—she finally said, "You certainly see that it is all red," and she refused to acknowledge the hat as her own until the true color had been restored by suggestion.

Many other instances of a similar nature might be related, but they are deemed unnecessary since the fact of thought transference has been demonstrated without the intervention of hypnotism. Mr. Stuart Cumberland and Mr. Irving Bishop made one branch of the subject a feature of popular interest a few years ago by their public performances and it became not uncommon in English and American drawing-rooms for an evening company to devote an hour or two to experiments. The method followed is usually this: One person is chosen as the thought reader, and leaves the room; then the others select some object in the room that the thought reader is to find, or decide upon some act which he is to perform. This object or act they are all to keep constantly in mind and silently "will" the "percipient" to point out or do. It may be agreed that he is to take a certain book out of the bookcase, seat himself on a certain chair, ask some one to tell him the time, find an article that has been concealed, etc. Having decided upon the test, the thought reader

is admitted. He may be blind-folded to carry the trial farther; if so he is led by one of the company as "the agent," who concentrates his mind upon the thing to be done endeavoring, of course, to impart no clue by any movement.

It is found, however, that such experiments as these while they often lead to surprising results have little scientific value so long as contact of the agent with the percipient is permitted, since the latter may get his clue from involuntary pressure or movement on the part of the agent and succeed. By the unconscious "musculation," as it is called, of the agent a percipient has repeatedly found an object that required them to leave the house in which the company was assembled and go to another with the rooms and furniture of which the percipient was entirely unacquainted. Messrs. Cumberland and Bishop's experiments were usually of the contact variety.

But when there is no contact between those "willing," or the one selected as agent, and the thought reader, and perfect silence is maintained we have in the frequent successes that experiment records either feats of guessing extraordinary, or a procedure of a legitimate although mysterious nature.

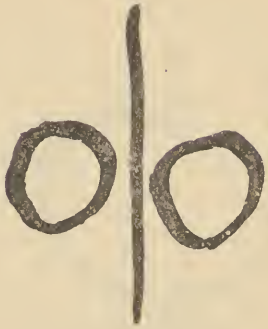
Mr. Guthrie, a jurist of London, reported a series of experiments to the Society for Psychical Research, that were conducted in the following manner: A number of diagrams, roughly drawn off-hand at the time, were shown to the agent, Mr. G., the subject, a lady, being blindfold. During the process of transference, the agent looked steadily and in silence at a drawing, the

subject meanwhile sitting opposite to him and behind the stand on which the drawing lay, so that it was entirely out of her range of vision, had her eyes not been bandaged. The agent stopped looking at the drawing when the subject professed herself ready to make the attempt to reproduce it. The time occupied thus was from half a minute to two or three minutes. Then the handkerchief was removed, and she drew with a pencil what had occurred to her thought. The reproductions were made generally without the agent following or watching the process. Several of the attempts are given here; both successes and failures for the sake of comparison, and in observing the latter, we are struck with the effect that the agent had produced upon the percipient's mind.

No. 1. ORIGINAL.

No. 2. REPRODUCTION.

No. 3. ORIGINAL.

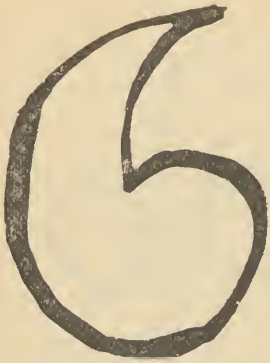


No. 4. REPRODUCTION.

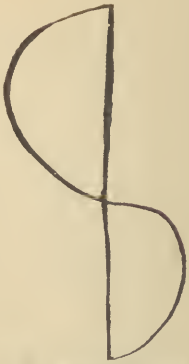
No. 5. ORIGINAL.

No. 6. REPRODUCTION.

RESULTS OF EXPERIMENT IN MIND TRANSFERENCE.



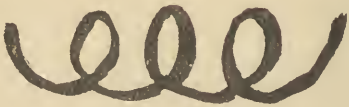
No. 7. ORIGINAL.



No. 8. REPRODUCTION.

No. 9. ORIGINAL.

No. 10. REPRODUCTION.



No. 11. ORIGINAL.

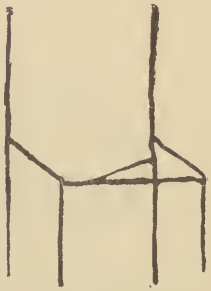
No. 12. REPRODUCTION.

RESULTS OF EXPERIMENT IN MIND TRANSFERENCE.

No. 13. ORIGINAL.

No. 14. REPRODUCTION.

No. 15. ORIGINAL.



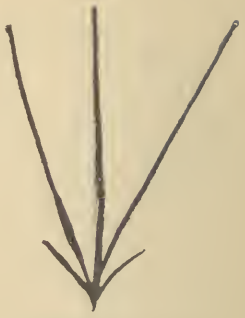
No. 16. REPRODUCTION.

No. 17. ORIGINAL.

No. 18. REPRODUCTION.

RESULTS OF EXPERIMENT IN MIND TRANSFERENCE.

No. 19. ORIGINAL.



No. 20. REPRODUCTION.

No. 21. ORIGINAL.

No. 22. REPRODUCTION.

RESULTS OF EXPERIMENT IN MIND TRANSFERENCE.

TELEPATHY.—If one mind can thus, by an effort of concentration, transfer pictures that may be mirrored upon it to another mind, does it seem impossible to carry the process a step farther and establish telepathic communication between minds that may be separated by a considerable distance? What if we are told that this singular power has been reduced to a practical system? In India the "Secret Mail" has puzzled Europeans for years, and during the recent Afghan troubles it eluded all effort on the part of the British Government to discover the nature of its operation. It was stated by the New York *Tribune* of March 18, 1885: "Anglo Indians and all who have lived in Asiatic countries are aware that the natives have means of conveying news which, at important junctures, enables them to forestall the Government. Thus, throughout the Indian mutiny, the intelligence of all the important events, such as battles, captures of cities, massacres, and investments, was in possession of the bazaars usually hours, and frequently days, before it reached the authorities, and this, notwithstanding the fact that the latter had often taken special measures to insure the quickest transmission possible; and it is also well known that this 'Secret Mail" is so trustworthy that the natives invariably act upon it with implicit confidence, speculating, for example, to the full extent of their fortunes. How the news is sent, however, has never been discovered; or, at least, no explanation comprehensible or credited by the average Western mind, has been reached.

"The London *Spectator* of a recent date discusses this question at much length, and suggests the employment

by the Asiatics of carefully laid 'dawks' or stages. This, no doubt, has the appearance of a common-sense explanation, but the difficulty about it is that no European, during the whole time that Hindustan has been occupied, has ever seen such a stage in operation or come across any of its machinery."*

It is found that the percipient usually obtains clearer impressions when there are several persons looking at or thinking of the same thing at the same time. It happens obviously enough, on the other hand, that if several persons in the presence of the percipient are thinking of different things at the same time, he becomes confused and no satisfactory result is likely. Prof. Lodge, of University Coll., Liverpool, when experimenting on one occasion, obtained a double result with his thought reader, that proved the possibility of transmitting mutually two definite images. Two persons were requested each to look at a different figure, one was a square, the other an oblique cross. Neither person knew what the other's figure was. The percipient, after a short interval, said: "I see two figures—first I see one and then below that another; I do not know which I am to draw; I can not see either plainly." Being requested to draw what she saw the bandage was removed from her eyes, and she drew a square with an oblique cross inside of it.

Afterward she said she did not know why she placed the cross inside the square.

*From a lecture on "The Evolution of a Sixth Sense," delivered from the New York Academy of Anthropology, February 12, 1889, by the author.

With an exposition of the facts of mental or thought transference before us, it is not difficult to believe the possibility of the transmission of physical and mental sensations from one individual to another, in which pain or pleaure are exhibited, and the varying moods of human character. It is but a simple experiment for an operator to cause his subject, when in the hypnotic trance, to have a sour or sweet taste in their mouth, according as the former puts lemon juice or sugar into his mouth. If the operator is pinched or pricked with a pin, the subject may feel the same sensation, although not in the immediate presence of the former. For a very full report of an investigation into phenomena of this kind, and which certainly leaves no room for doubt as to their validity, I will refer the reader to the reports of "Proceedings" of the London Society for Psychical Research, published in 1883 and 1884; Trubner & Co., London.*

*Also Phantoms of the living : Gurney, Meyers, & Podmore, London, 1886.

## CHAPTER IX.

### THE EXTENSION OF CONTROL.

The survival of impressions made upon the hypnotized after return to the waking state, is a feature of the most interesting character, showing, as it does, that it is within the power of the operator to cause a subject when in his ordinary state, to carry into effective and precise execution a command given during hypnosis. A somnambulist, it has been said in a previous chapter, is not devoid of an intelligent personality, by no means a mere machine, doing the will of the operator mechanically but may exercise tact and skill in performing the order of the operator. Among the instances bearing on this part of our subject, one mentioned by M. Féré is an experiment in which the subject was ordered to steal a pocket handkerchief from one of those present. She was hardly awake when she feigned to be dizzy, staggering toward X— fell against him, at the same time hastily snatched his handkerchief. Another subject was told to commit a similar theft and approaching X—, she abruptly asked him what he had on his hand. While X—, somewhat startled, looked at his hand, the subject quickly possessed herself of his handkerchief.

A contributor to the *Phrenological Journal* relates a very humorous incident of a similar kind that occurred

in an experiment which he and a friend tried on a ready subject in Ireland:

Danny was under the influence one day and we were trying to find a task for him. He was under the control of Henry Baily at the time, and an acquaintance who was present, Mr. John Casey, said to Baily in a low voice, "Did not my father buy a new hat from you yesterday?" "Yes," answered Baily, "I sold him an eighteen shilling tile." "Then make Danny go for it to-night at thirty-one minutes past seven. You can make some excuse to father for sending for it." To this Baily agreed, and the usual question being put to Danny as to his willingness to do as requested when out of the trance, and being answered in the affirmative, he was told he was to go to the house of Mr. Casey and tell him that he, Baily, had sent for the new hat he had bought, and not to return without it. "You are to go at thirty-one minutes past seven to-night." "And," added Casey, "Kick it before you all the way home." "Yes, sir," answered Danny. "Now, John Casey," said Baily, "he will do this as sure as light is light, and you will have to pay for a new hat to replace it." "All right," said Casey, "If he does as I told you I'll pay for it, but you musn't tell father I had anything to do with it."

Exactly as the clock hands pointed to the indicated time Danny dashed out of doors and down the street, without once looking at the clock or taking the least notice of any of us who had been watching his movemens for some time. In all such cases we were most particular not to give the subject the least hint as to what

he had promised to do, nor at what time, and took good care that none of the witnesses did so either. He reaches Mr. Casey's house almost breathless, and having received the hat, the first thing he did with it was to toss it up and as it came down give it a vicious kick which divided the crown; then he kept kicking it before him until he reached the hat store, being followed by one of the old-fashioned "guardians of the night," and Mr. Casey, Sr., who, in their turn, were followed by a mob of men, women and boys, who had congregated to "see de fun."

The night guardian wanted to carry Danny to the "Watchus," but on a British shilling being slipped into his not unwilling hand, it had the power of making him change his mind. The whole affair was explained to Mr. Casey, who, when assured that a new hat was at his service, enjoyed the joke as well as any of us. The mob finding nothing further to engage its attention sneaked away, not, however, before one old lady gave it as her sincere opinion that "musmurism" was a pure invention of the devil, and advised us very strongly to give up its practice or it would surely convey us all down to a certain hot place "in double quick time."

A case occurred under the writer's observation that illustrates the fact that a person who has been directed to perform a certain act at some future time, may carry it into effect when the times comes, even to the letter, although in the interval between the hypnosis and the time of performance he has no knowledge or expectation concerning it. A man, while in the sleep, was directed to put a handkerchief that was handed to him into one of his pockets, and not to take it out

until some days later, when, at a certain hour in the afternoon he was to present himself at a designated house in Brooklyn, inquire for Mr. S— and hand him the handkerchief. At the appointed time he did what was ordered, and being asked where he had found the handkerchief, said that he did not know, only that while he was in another part of that city, the thought sprang into his head that he must go to No.— —Street and deliver a handkerchief that he had in his pocket, and he immediately made his way thither.

So it is with acts that have the revolting character of violence or murder, the hypnotized subject may execute them with promptness and exactness; he is invested seemingly with a consciousness that the act must be done. He may show resistance, offer scrupulous objections to its performance, and even insist that he is not compelled to do it, yet he goes and does it.

When a subject is ordered to steal he may reply: "No, I will not steal; I am no thief." The suggestion of murder may provoke similar objections. If Z— is armed with a paper knife and ordered to kill X— she says, "Why should I do it? He has done me no harm." But if the experimenter insists, this scruple is overcome, and she says, "If it must be done, I will do it." On awaking she regards X— with a malignant smile, looks around her and suddenly strikes him with the supposed dagger. But neither this subject nor any other would be impelled to murder an unspecified person.

One of M. Charcot's hystero-epileptic patients, when in the state of somnambulism, was ordered on awak-

ening to stab M. B.— with a pasteboard knife. As soon as she awoke, she rushed toward him and struck him in the region of the heart M. B— feigned to fall down. The subject was asked why she had killed the man. Looking at him fixedly for a few moments she replied, with a ferocious expression, "He's an old villain and wished to insult me."

A series of experiments made in Paris about three years ago, by a committee of physicians representing the Faculty of Medicine, and employing as their subjects not sickly or hysterical persons, but robust men from the police, resulted in the exhibition of similar phenomena. Men whose province it was to maintain public order and enforce the execution of law under hypnotic control committed imaginary acts of violence and crime; in some instances the gendarme, although awake, was so possessed with the delusion that he had done a great wrong, that he was filled with remorse and would surrender himself to justice as a guilty man.

Epileptic subjects who have involuntarily committed a crime may, like the subjects of suggestion, admit it, but explain it by more or less rational motives. The student of mental discourses can trace a resemblance between these acts of a somnambule and the irresistible impulses of insanity in two important features: the subject's excitement and distress when restrained from doing them, and his relief when they have been done.

How long such a hallucination may be latent and preserve its predetermined, so to speak, efficacy, is not yet ascertained, but experiment has shown that it

may be entertained a year or more. Liegeois, of Nancy, hypnotized a young man named Paul M., who had previously been a subject on Oct. 12, 1885, and directed him to go to M. Liebault on the same day of 1886, and say that his eyes had been well for the whole year, and to thank M. Liebault and M. Liegeois, and embrace them both. This subject was further told that after this expression of gratitude, he would see a dog and a monkey enter the room and play various pranks. A little later a man would come in with a tame bear and the bear would dance. For this amusement the young man was to pay the bear trainer ten centimes which he would borrow from M. Liegeois.

The details of this experiment were kept carefully secret by M. Liegeois and Liebault, and no communication, of course, was had with the somnambule about it. Nevertheless, on the day appointed, Oct. 12, 1886, at ten minutes past ten o'clock, the young man came to Liebault, thanked him for his kindness to him, and asked for Liegeois. In the presence of several persons the program was mainly carried out, Paul seeing the dog, monkey and man in the order of their appearance as had been previously announced to him, but no bear, He also failed to embrace the physicians, and later, while hypnotic, explained as the reason for not doing this that he had been told only once to do it, whereas he had been told twice of the other things.

These are certainly wonderful phenomena, and whether science can resolve them on the much exercised principles of suggestion, or on any principles, they compel us to reflect seriously with regard to their

bearing on social ethics and criminal jurisprudence. May not many of the cases of "disappearance" that are reported almost daily be due to the malevolent suggestion of unprincipled persons, who secretly exercise the power of hypnotic control obtained somehow over the lost?

The author of this volume has several times been asked to interfere in behalf of persons who believed that they had been magnetized, and rendered subject to the will of others, and they sought relief from a dreadful bondage, from which, unaided, they felt utterly unable to extricate themselves. A letter on my file, received but recently from the pastor of a church not far from New York city, asks my counsel in behalf of a woman of his congregation, who, he says, has been magnetized by a man known to both. Most experts in insanity would be disposed to attribute such cases to a pathological disturbance affecting the brain, and inducing temporary aberration, or the initial phases of an insanity that might become permanent. That there is some change in the physiological relations of the brain is doubtless true, and the projection of one thus "obsessed" into positive insanity would be probable if no relief were obtained.

Mm. Binet and Féré very properly say, "It can not be denied that all these facts have disquieting consequences with respect to the existence of free will," and take ground with Spinoza who remarked that "the consciousness of free will is only ignorance of the causes of our acts." The philosophers of hypnotism apply these words to the acts of the somnambule

in the sense that he believes himself to be a free agent, because he has forgotten the suggestion by which he is impelled.

## CERTAIN LEADING QUESTIONS.

If we can answer the question—Can any one be hypnotized without knowing it, or against his will? in the affirmative, as many reported experiments appear to establish, another reason is given for moral reflection on the nature of this wonderful medium of will control. Bernheim, to be sure, takes negative grounds with respect to this question, but fails to prove his position. We know that artificial trance can be induced while the subject is in normal sleep. A young man, not long since, applied to me for advice, insisting that he had been magnetized by a certain person while he was sleeping in his room at a boarding-house, and he desired to be released from the influence of that person, a complete stranger, as he knew that it had been obtained for an evil purpose.

Ochorowicz* mentions several cases, one of which is the following: A young girl whom I had hypnotized for experiment, was persuaded by her friends not to submit herself to O. any longer.—So one day she refused positively not to permit him to attempt the procedure at all. "Well, Miss, said O., do you not think that I can hypnotize you against your will?" "No, sir. I shall not sit beside you any more." O. then took his handkerchief which was lying on the table and threw it at her, saying, "Well, now it is done; in five minutes you will be asleep."

*De la suggestion mentale. Paris. 1887.

"That will make no difference to me," the girl said, and withdrew, afraid of meeting his gaze.

"It will not help you to run away," said O. "you will return of your own accord." Half an hour later she returned in a perfectly somnambulistic state.

It must be admitted, however, that those of strong will, and moderate sensitivity can oppose or delay the sleep, just as their willingness and co-operation always promotes it, and it is the general opinion of experts that no person can hypnotize another for the first time without his consent.

Perronet in his "Force Psychique et Suggestion mental" (Paris 1886) describes several cases to illustrate the effect of mere willing to accomplish the hypnosis.

He gradually omitted the passes, strokes, eye-closure, etc. in obtaining control of his patients until it was sufficient merely to concentrate his will upon them. One whom he had found susceptible to the effect he put to sleep as she sat at her work or was engaged in conversation. And in the same manner she was awakened. Attempts of this nature are likely to prove of little avail if the mind of the operator is abstracted or agitated so that he can not fix his attention on the subject.

Is it possible to exert the hypnotic control at a distance?

In reply to this important question it must be said that the scientific evidences are in favor of the affirmative. As long as the magnetizer is in the immediate presence of the subject it may be alleged that the latter's sharpened senses may perceive some indica-

tion or sign of the operator's will that suggests his action, although the indication may be imperceptible to others and unconsciously given by the operator himself. But when the operator and subject are in different rooms or places and out of sight and hearing of each other, any such objection to the control being obtained by mere exercise of the unexpressed, inaudible will cannot lie. The writer has witnessed experiments in which a subject went into the trance while engaged in conversation with a group of gentlemen and awaked five minutes later to continue the talk, the operator being meanwhile in another part of the house.

It was arranged that the operator should will him to sleep at a certain time, and awake him five minutes later, watches being compared to make the time certain. The experiment was successful. When the subject went into the trance I noted the time, and when he awoke the time was observed, and in both cases the performance was strikingly exact.

M. Dupotet, a physician of the well known hospital Hotel Dieu, Paris, tells of experiments that were undertaken there in 1820, and remarks incidentally—"Subjects are sometimes found of such sensitiveness that they can be acted upon through walls and partitions on occasions when it could not possibly be supposed that they have any knowledge of your intention. They feel your presence; they know when you absent yourself; they go to sleep and awake according to your will."

Dusart relates that he once put a patient to sleep

at night but neglected to direct her about awaking next morning. Remembering his negligence a little later when he was nearly half a mile distant from her, and it was very inconvenient for him to return, he conceived the idea of trying to affect her from a considerable distance, as he had been successful at a short distance, say six feet. So he willed her to awake at 8 A. M. At half past seven the next morning he visited the hospital, and found the patient still asleep. He asked her, "How is it that you are still asleep?"

"I only obey you," she replied.

"You mistake, for I left you yesterday without giving you any order."

"Very true, but five minutes after you left me I heard you say that I was to sleep till 8 A. M." He scarcely dared to believe that she was more than guessing and that his will had been effective at so great a distance.

Another experiment, however, in which he actually controlled the same patient by a mental order given when he was seven kilometres (over five miles) distant from her, and still another of the same kind but made eleven days after he had visited the patient and when he was at a distance of seven miles from her home convinced him of the fact of control.

Occurrences of this description could be multiplied from the books and scientific periodicals, so that no doubt can exist regarding the ability of an experienced operator to overcome by mental suggestion both distance and time. By "time" it may be here explained that the will of the agent can be executed at a future

time as prescribed by him and not only at the same moment. We have given instances of this.

Phenomena of this kind certainly intimate more than simple suggestion. In fact, this explanation to be at all valid must recognize the transmission of some power or influence from the magnetizer to the subject. The theory of coincidence will not apply because the data in this line of observation are too numerous and explicit. They are not of to-day's production but have a historical value like much of the phenomena of magnetism. Modern science has applied new names and invented new theories in this as in many other departments of anthropological investigations, but has not developed much that is new in this particular field.

## CHAPTER X.

### PHRENO-MAGNETISM.

Braid was one of the first to make magnetic observations in connection with the mental philosophy of Dr. Gall, which, in his time, was receiving much attention. He, and others attempted to show that special centres or regions of the brain can be affected by the methods of hypnotism so that the pressure on the skull, or merely directing the finger toward parts of it will produce phenomena of a varied mental character according to the special function of the brain region subject to the pressure or assumed influence. By many leading phrenologists these phenomena have been taken as demonstrating the claims of Gall, while those who are skeptical regarding the phrenological system have endeavored to explain the phenomena on the broad ground of suggestion, and that the chief exciting influence is not anything proceeding from the magnetizer's fingers but merely his thought and will directed to the mind of the subject.

The experiment of a French physician is quoted in support of this view, as follows: Recognizing the anterior lobe of the brain on the left side as the center of articulate language the experimenter directed his atten-

tion to this, and alternately pressed upon the left and on the right sides of a subject's forehead. When he pressed upon the left side the patient became speechless, but when he pressed upon the right side speech returned. During these experiments the experimenter's attention was interrupted so that he unintentionally pressed upon the right side. The patient then also, became speechless. This result was assumed to be a proof that the conduct of the subject depended upon the experimenter's thought and not upon the region his hand was touching.

This mode of demonstrating the existence of a speech center, or any psychic center, can scarcely be considered perfectly legitimate, since it is sufficiently established that a speech centre exists in the right hemisphere of the brain. Furthermore, such a mode would militate against some of the conclusions with regard to suggestion itself, if we are to accept phenomena as proving anything, when the experimenter's mind because of an interruption or some disturbance has been drawn from his purpose.

From the record of phreno-magnetic experiment the following accounts are taken that are deserving of consideration.

Capt. James writes:*

"One day I was mesmerising one of my servants, a country girl, who, I need scarcely say, had never studied phrenology. A lady was seated next to her and I touched the sensitive's head on the right side,

*"Mesmerism," by John James, formerly captain in the 19th Light infantry. London, 1885.

on the spot marked by phrenological writers as the organ of adhesiveness. The girl immediately clasped the lady's hand in her own right hand, struck out violently with her left hand, and showed by signs very strong attachment to her. I then touched with the forefinger of my other hand the organ of combativeness, on the left side of her head, without withdrawing my finger from the organ of adhesiveness, and the result was very remarkable. The sensitive still holding the lady's hand in her own right hand, struck out violently with her left hand, the right side of her face wearing a most amiable expression while the left side was distorted with anger. Any one who has seen the picture of David Garrick standing between tragedy and comedy, may imagine the effect produced in this case, where each side of the face exhibited the play of a different passion. Perhaps, according to the law of reflex action, the sensitive ought to have struck out with her right hand, and the other manifestations have been reversed, but the girl was no physiologist.

"When the famous case of the amputation of a leg at Wellow during mesmeric sleep was read at the Royal Medical and Chirurgical Society of London, Dr. Marshall Hall considered the case to be one of imposture, because the poor man's sound leg did not start or contract when the diseased one was cut, i. e., did not 'enact the reflex motion.' Unfortunately for the interests of science Dr. Marshall Hall had neglected to inform himself by repeated experiments as to whether a human being during the mesmeric sleep, and a horse

struck on the head with a pole-ax, are in precisely the same condition.

"This same patient, on another occasion, had the organ of imitation touched. A lady *en rapport* with her spoke a long sentence in German, which the girl repeated without making a mistake, and, I was assured by the lady, with good pronunciation. Dr. Braid, in his work on 'Hypnotism' mentions that two of his patients, country girls, on the organ of imitation being touched, spoke five languages correctly. I presume it is meant they repeated the words after hearing some one recite them; but that was an extraordinary feat, as any one may judge by trying the experiment even on an educated person wide awake, provided he be not a good linguist."

Quoting further from Braid, Capt. James recites a curious instance:

"I was informed that a child, five years and a half old, who had been present when I exhibited some experiments, had proposed to operate upon her nurse. The nurse had no objection to indulging the child, never suspecting any effect could take place. However, it appeared that she speedily closed her eyes when the child, imitating what she had seen me do, placed a finger on her forehead and asked her what she would like, the patient answered, 'To dance.' On trying another point the answer was 'To sing,' and the two had a song together, after which the juvenile experimenter roused the patient by the same method she had seen me use. The circumstances being related to me, I felt curious to ascertain whether there might

not be some mistake, as there had been no third party present, and I depended entirely upon the statement of the child, which induced me when visiting the family next day to request permission to test the patient. This was readily granted, and to my astonishment she manifested the phenomena in a degree far beyond any case I had tried, indeed she did so with a degree of perfection which baffles description."

The objection already noted that the subject, when under control, especially if he be a very responsive one, but reflects the thought or will of the operator in these manifestations of the mental faculties, it must be admitted, does apply to the results of many so called experiments in phreno-magnetism. Such a case, however, as that related by Dr. Braid, may be offered as showing that the centres will respond when the circumstances of experimenting are such that the magnetizer's will can have little or no effect.

Some observations of the writer's, recently made, in which care was taken to avoid the communication of a hint or suggestion to either agent or subject are illustrated by the following account of an evening's experiment at a meeting of the West Side Medical Association of New York city.*

In the outset I endeavored to awaken the subjects and to obtain their attention, but entirely without result; there was no plan of operating agreed upon between the operator and myself, and he was quite

*See *Phrenological Journal* and *Science of Health*, May, 1889.

ignorant of what I intended to do. He was carefully blindfolded by one of the physicians, and without remark I took his hands in mine and placed the tips of his forefingers over corresponding parts of the right and left hemispheres of the brain of one or other of the subjects, and waited for the response.

All the subjects were new to me, and one fresh to the operator—the others he had experimented with before and knew their susceptibility. Two were men and one a young woman, all three evidently in good health and of marked organizations. A dozen or more tests were made in the manner described and comparisons of effect instituted by stimulating, if stimulating it can be termed, in this apparently passive way, the same region of head in the three subjects successively.

For instance, the region assigned to cautiousness on the phrenological bust when touched by the finger ends on No. 1, who was merely asked by the operator "what he saw?" produced the remark— "I see two boys fighting—they'll hurt themselves—oh, there comes some one: they're running away." No. 2, when touched, said promptly: "Take care! look out!" and rose up as if to get out of the way of something that threatened him.

No. 3, the young woman, after a minute or two, said: "Oh, take me away," and kept pushing her chair back farther and farther, her face wearing the expression of great fear, as if some horrid spectacle were seen.

Touched in the region ascribed to combativeness, No. 1 immediately assumed the attitude and expression of strong resentment, his hands being clenched as if to

strike an imaginary assailant. No. 2, a much younger man than No. 1, and to the average observer possessed of a more pacific temper naturally, responded by the exclamation: "Look out! don't do that again!" spoken with much emphasis, while his head was raised and thrown back in the attitude of defence. No. 3 exclaimed: "Oh, what a shame! what a shame! You boys will get it. You had better stop. If you don't I'll come and make you. I'll give you what you deserve. Don't let me get at you." The latter part of this remark was made in the rising key, her hands clenched and drawn back in angry emphasis. Tone and manner suggested the school teacher of an old type speaking to a group of noisy, quarrelsome boys who regarded her authority lightly.

This line of investigation may be open to the objection that the operator, although blind folded, after the trial of one subject, gets the clue to the nature of the manifestation required and so may affect the integrity of the result. But in this particular instance I did not intimate my purpose to the operator, nor did I explain the meaning of the phenomena until after all three subjects had been tried. I do not think the operator could tell with any degree of accuracy the part of the head that his fingers were touching, and as a fact he is but slightly acquainted with the phrenological system, and much more likely to make a mistake in attempting to indicate the location of a designated organ than to find it.

The differential expression following transfer of influence as exerted through the fingers was well shown.

Having placed the operator's fingers on a part of the sincipital region, No. 1 said: "Why, I see some men; they are acting in a theatre." "Imitation," said a gentleman in the audience, and imitation it was, as shown by the mapping of a bust that I had at hand. "What do they say," asked the operator. "They say"—then the subject, a man of little education, began to recite a piece from Shakespeare in a voice and manner that intimated little elocutionary culture but much affectation of the tragic actor. Interrupting this a minute later, I transferred the passive fingers to the region of tune. After a moment's silence the subject said in a tone of surprise: "Why, I made a mistake. No, it's an opera: they're singing."

Transferring the operator's fingers to the head of the lady, who it is proper to say appeared to be less sensitive to impressions than the others, perhaps because of a deeper state of trance, I remarked in an undertone "Benevolence." If this afforded any warrant for an influence or impression, consciously or unconsciously exercised by the operator upon the subject, it certainly did not appear in the result. In this case as in two other attempts I myself failed to place the fingers on the region I had in view, that of imitation, for the subject remarked: "Oh, I'm in church and there's a man preaching." On examination I discovered that the fingers were considerably higher up toward the center of the head than the place of imitation, as designated on the model bust. Here my own purpose had miscarried with a result that must bear its own evidence of the truth, for if there were any rapport

subsisting between the operator, and myself, it failed entirely to influence his relation to the mental expression of the subject.

A similar differentiation of result occurred in a double way later. Wishing to give a sharper expression to tune, if possible, I placed the fingers of Dr. Gunn upon that organ, as I supposed, but the subject commenced talking about seeing men at work and wanted to know what they were doing. Some one present suggested "Constructiveness," and it was found that the fingers were too far back, or they were more upon that organ than upon the neighboring organ of tune. Noting that the temples of the young woman or, No. 3, were wide and full, I placed the operator's fingers as near as I could estimate in the off-hand fashion that rapidity of change required over the seat of constructiveness, but the assembly was amused by the subject who smacked her lips, and said "Oh, how nice!"

"What is nice?" inquired Dr. Gunn. "Don't you see," she replied, "that table? It is loaded with good thing. Cakes and wines, and everything. And nobody there to eat. Oh, I wish I had some." The fingers were placed too low and were over the part alloted to alimentiveness.

The closing experiment of the series was made upon the new subject, No. 2, whose head was comparatively well developed in the coronal region. Taking the operator's fingers, he was still closely blindfolded, I carefully placed the tips over the center of the forehead. After a minute of silence, the young man commenced to relate an incident concerning an old friend, and

for two minutes appeared to be in conversation with him. Memory was at work and the exhibition of detail in recital was excellent. Transferring the fingers to the region of benevolence he went on in a kind, philanthropical strain about "treating him well. I wouldn't do that, I'd do the best I could for him." Pushing the fingers directly backward about an inch, he continued in a different tone. "You're doing what God requires, we ought to do what the ministers say; even Henry Ward Beecher—" Switching the fingers farther backward upon the prominence of firmness, he raised his hand and brought it down with energy saying, "Yes I will say that it is the way to do, stand on your own ground and see to it that you are not made the tool of others. I believe in every man sticking to what he thinks best." Here I had pushed the fingers outward over the region ascribed to conscientiousness, he went on, "When a man has made up his mind that he is in the right why should he not keep on? Is there any thing better? Let others say what they please, if the thing is right, it's your business to—" Again I pushed the finger an inch or so further downward and backward, when he continued, "but we must take it into consideration that other people may not see it in the same light, and try and please them as far as we can. We don't own the earth, and I guess that most other people are as good as we are." Again the fingers were pushed backward until they covered the central part of the occiput. The young man's face became tender and tears started in his eyes, and he spoke of friends, and what he owed his mother, and how much he loved the relations of home.

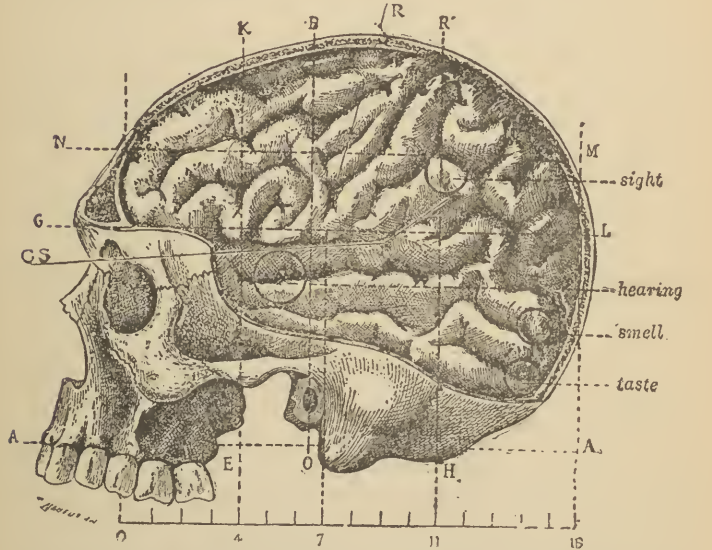
One feature of the experiment, to which my attention was called by one of the company, was the abrupt termination of the mental expression in every case where the fingers were taken off. It was also noted that when I had placed the operator's fingers at another point here was a brief interval during which the subject's face was more or less agitated, at times indicating an experience of pain, and suggesting changes of cerebral circulation and cellular activity of so abrupt a nature that the nerve centres were subjected to extraordinary strain, and consequent suffering until equilibrium had been restored.

Féré used â magnet in testing the sensibility of some hysterical subjects, and obtained many curious results, for the detail of which I must refer the reader to his contributions to the proceedings of the Société de Biologie (Bulletin for 1885), and to the *Revue Philosophique*, ot the same year. He found that by the very slight stimulation of the cranium, due to the weak electrical current of a magnet, that the point where pain is confidently indicated by the subject, coincides in the case of certain forms of hallucination with the sensory centres of the cerebral convolutions, as they have been located by the researches of physiologists in late years.

The coincidences are most marked in hallucinations of sight and hearing. Quoting his own words:

In the transfer of a visual hallucination, the point is a little behind the pinna of the ear corresponding with the region which, if destroyed, causes blindness, or hemianopia, (half sight); this is, therefore, the posterior part of the lower parietal lobule.

"In the transfer of an hallucination of hearing, the pain is seated in the centre of the space included between the anterior part of the pinna of the ear and the external angular process of the frontal bone. The




Cerebro Cranial Topography.—B. Bregma, L. Lamdba, at parieto occipital fissure; C. S. fissure of Sylvius; R. R. fissure Rolando; A, A. Condylo-alveolar plane; B. O. Auriculo bregmatic plane; G. L. line passing from fronto-basal margin to Lambda; N M., plane passing over upper surface of corpus callosum; K. E., vertical line corresponding with external extremity of coronal suture, and touching head of caudate nucleus; R. H., vertical line passing through posterior extremity of fissure Rolando, and posterior border of the optic thalamus; the scale represents centimetres.—(Binet and Féré.)

pain almost corresponds with the centre of the tempero-sphenoidal lobe and approximately with that region which, if destroyed, causes deafness. For the

sense of taste, the point is above the external occipital crest two centimeters from the median line. For the sense of smell it is one centimeter above that line. These two latter localizations are not in agreement with the result of anatomical and clinical researches and demand revision." *

The accompanying illustration of an open skull with the brain in situ, shows the relative locations of the nervous centres of sensation as indicated by the experiments above mentioned. The centres for smell and taste as accepted by many physiologists widely differ from those marked in the diagram. For smell, the anterior extremity of the uncinate, or hook—formed, convolution of the medial surface of the temporal lobe is regarded as the probable region. As regards the centre for taste there is diversity of opinion, although a central position is generally considered as properly belonging to it.

If such a method of observation be legitimate for the purpose of discovery or confirmation of a special functional centre or sense perception, why is it not proper also for the discovery or confirmation of the psychic or ideational centres? Among those who recognized the facts of magnetism fifty years ago were many who had accepted the teachings of Gall and Spurzheim and some of these believed that the best demonstration of the existence of special mental centres in the brain convolutions was obtained through experiments with a person in the somnambulic trance. Besides

*Anatomie Medicale du Systeme Nerveux, 1886.

Braid there were Elliotson, Teste, Davey and others who obtained results that were very striking and convincing to their own minds.

This department of the subject is interesting enough to warrant its further discussion, but we have given it thus far much more space than modern writers on hypnotism generally accord. It certainly appears reasonable that if this remarkable power can be used to develop the psychological activities of a person in any other respect, and the resultant phenomena are to be regarded of substantial value in a scientific sense, experiments that have a relation to the determining of special areas of cerebral function, undertaken with a due regard to the avoidance of collusion or the unconscious imparting of a clue or intimation to the subject, should be equally valid.

No special plea is offered here in behalf of the phrenological system, but merely the expression of a desire for candor and firmness in the treatment of a theory that is accepted by thousands. Mr Coates is right in saying that to appreciate phreno-mesmerism some knowledge of phrenology is requisite. "The successful mesmerist must either be a keen physiognomist or a good phrenologist. In the latter case his psychological experiments will be the most satisfactory and fascinating."

## CHAPTER XI.

### CLAIRVOYANCE.

This name is given to the power indicated by some persons when in the advanced stages of somnambulism to "see clearly," while the eyes are closed or blindfolded, things that are beyond the common domain of the senses. It is explained by some observers as but the extension of the capacity induced in a subject to read the unspoken thought of the magnetizer or others who may be present. It has been applied to divination, prophecy, and attempts to disclose lost or stolen property, and it is unnecessary to remark *en passant* more than that it has been a favorite term with multitudes of charlatans and impostors who have made capital of the credulity of the ignorant and of the curiosity of the intelligent.

Hypnotism probably furnishes the best key to the nature of clairvoyance but does not explain it. Science has yet to define its factors. Certain of the phenomena that are included under this term, but not all, come under the category of "mind-reading." For instance, a somnambulist may manifest remarkable ability to make the diagnosis of a case of sickness, and to advise with regard to the treatment. The presence of a physician could be alleged as accounting for this, his knowledge and experience being in some unaccountable way

transferred to the somnambulist's brain. Telling the secrets and thoughts of others, although entire strangers and present for the first time, may receive a like solution. Such a performance is wonderful enough in itself, but it is unnecessary to appeal to the supernatural to account for it.

Robert Houdin, the prestidigitator, and juggler, who, as the reader probably remembers, was very successful in imitating the arts of socalled mediums and diviners, relates an experiment he made with a famous somnambulist known by the name of Alexis;

"After Alexis had taken hold of my wife's hands he spoke to her of past events that chiefly concerned her, mentioning especially the loss of one of her children, all the circumstances being described with perfect exactness. * * * Those were not like my usual tricks—neither dexterity nor escarmotage. Here I witnessed a higher, more incomprehensible power of which I did not have the slightest conception, and in which I should never have believed had I not with my own eyes seen the clear facts. I was so overcome that the perspiration dripped from my eyes."

Houdin states that there was at the time in the company a physician, Dr. Chomel, who was very skeptical on the subject; he gave Alexis a small box. The latter felt of it and said "it is a medal you received under peculiar circumstances. You were then a poor student living in Lyons. A laborer to whom you had done some service found this medal in some rubbish, and thinking that you would like to have it, he climbed six flights of stairs to offer it to you. All this was literally true.

The somnambule had read the physician's mind while the latter was more carefully noting him and was being, as it were reminded by Alexis of his own past experience. This procedure is akin to the "psychometry" of recent enunciation.

An acquaintance of the author, Dr. G——, related an instance which is in keeping here. A lady whom he had magnetized several times for the purpose of affording relief from the pain of a nervous malady, on one occasion suddenly exhibited a remarkable disposition to prophecy, and that without prompting on his part. She said—"You are going to Brooklyn this afternoon to see a gentleman, but you will not find him there; he has gone away. He has changed his mind and will not join you in what you propose to do. But he will be willing to join you after a while—and then it will be too late."

The fact was that he had an important negotiation on foot and intended to call on a gentleman, by appointment, that very afternoon. His patient had, doubtless, read his mind in that respect as he could scarcely avoid thinking more or less of the matter; but he was skeptical regarding the the prediction, because he believed that he had reason to expect a favorable denoument. On going to the house of the gentleman he found that he had indeed gone away having been summoned unexpectedly to a distant city. Soon afterward he received a letter from him stating that he had concluded to withdraw from the negotiation. Later he received a proposition from the same gentleman to enter into a new arrangement, but it was too late, Dr. G. having concluded terms with others.

Another American observer, C. S. Weeks, mentions a subject of his who frequently manifested the singular power of seeing at a distance—"Several times he saw from his forehead, reading with his eyes thoroughly bandaged, and also described things at a distance some of which descriptions I verify. On one occasion he described the interior of my father-in-law's house, near my own, telling what was in the upper part of it, the furniture, which way the doors swung, and every minute particular, including the fact that my wife's brother, a boy about his own age, was in bed asleep. He told where and how the bed stood, on which side or arm the boy lay, which way his head was, and other matters of detail, though he had never been in the house but once, some years before, and then only in one room. I immediately afterward went to the house and found everything as he had said, even to the unusual fact that both head and side of the bed on which the boy lay were between two and three feet from the walls. I was strongly of the opinion that his description was wrong as to the bed, for I had often been in the room and never saw it in that position; and I was quite sure also that the boy would not be in bed asleep, as it was only half past seven in the evening. I told my subject that he was guessing, for the boy would not be in bed so early, and that I knew where the bed stood and that he was wrong; but he insisted that he could see clearly and was right. And so I found it. The bed had been moved to clean the room, and had not been moved back again."

Among the most curious illustrations of the clair-

voyance that have come to my notice, are some that have the witness of scientific names. For example, Dr. Anton Stecker, whose explorations in Africa have given his name prominence, relates an incident that occurred under his personal observation while in the country of the Gallas.

"Having returned at the end of 1882, after the war between Schoa and Todsham, from the southern Galla countries to the camp of the Emperor Joassnes of Abyssinia, I had the good luck to meet the King of Schoa, Melinek, who had come there at the command of the Emperor Joassnes for the purpose of arranging the peace with Todsham.

"King Melinek gave me a very friendly reception this time, trying by all means within his power to make up for the evil he had done to me during that campaign in the Galla countries. I paid him several visits, and at one of them I had an opportunity of hearing wonderful things related about an officer of the king, to whom the faculty was attributed of easily ferreting out thieves, which has produced for him the title of "Liewascha," that is "thief-catcher." The reports I heard seemed so incredible to me that I looked out with intense curiosity to an occasion for witnessing one of these performances of the Liewascha, in order to expose the frauds which, I was sure, were at the bottom of them. My wish was soon to be satisfied. From a tent which was assigned to a part of my servants, a number of garments had been stolen, and disappeared without any trace. A close investigation had failed to discover the thief, and this vexed me the

more, as in my opinion one of my own servants must have committed the crime, since on that day in question no stranger had visited my camp, and during the night no one was allowed to enter the camp grounds. Fortunately I remembered what I had been told about the Liewascha; I therefore paid a visit to the King of Schoa and told him what had occurred, and asked him to order the Liewascha to assist in finding the culprit. King Melinek readily acceded to my request, the more so, as a few days ago I had not hesitated to express my incredulity concerning the boasted dexterity of his officer.

"I returned to my camp, and a short time after the Liewascha made his appearance, accompanied by a little Galla boy of about eight years.

"After the exchange of the lengthy phrases and ceremonies of the courtesy usual among the Orientals, I told the thief-catcher what I knew about the robbery, not omitting to flatter him by stating how happy it would make me to become an eye-witness of his wonderful gift. The Liewascha, visibly pleased with my compliments, had now called the robbed servant, questioned him about the theft and had him swear by the Emperor Joassnes that the clothes had really been stolen from him. Then the thief-hunting immediately commenced. First of all, the Liewascha asked for some fresh milk and a waterpipe (Nargileh). As soon as these articles had been furnished, we left the tent. The whole corps of my servants was then summoned together and placed on a carpet spread before the tent, on which I and the Liewascha were sitting, while the

Galla boy took a position between us opposite to the robbed servant. The Liewäscha took the milk, poured it into a larger vessel, drew from a leather-bag two packages and emptied their contents into the milk. It was a pulverized mass, one part black, the other of the color of red cinnabar, both soon dissolving in the milk. Of this mixture one part was poured into a goblet; with the other, however, instead of water, the Nargileh was filled. Then the boy had to be stripped of his clothes, which was done with difficulty, for, as I observed, the little Galla trembled all over, and dreadful anxiety was expressed in his face.

"Then one end of the body-girdle of the robbed man was fastened round the left hand of the boy while the man kept the loose end, and was commanded not to let it slip. The Liewascha then reached the goblet to the boy and commanded him to empty it at one draught, while the robbed one had to hold the head of the boy between his hands. The boy, however, whose features betrayed the greatest fright, refused to drink, and could only be brought to do it by promises. He hastily grasped the goblet, drank the contents at one draught, put the mouth-piece of the Nargileh, handed to him by the Liewascha, into his mouth, drew a few puffs from the pipe, but breathing heavily, he soon threw it away.

"After some convulsive motions of his whole frame, the boy seemed to have fallen asleep. He lay motionless on the floor, his staring eyes closed gradually and the only signs of his being alive were the deep inspirations, which from time to time heaved his chest.

"Suddenly he arose, led by the servant by the body-girdle. With closed eyes he slowly approached the tent from which the clothes had been stolen in the preceding night, and stepped right up to the spot where the robbed servant had slept. Cautiously he pulled out three tent-poles, reached with his hand into the tent as if taking something from it, and softly retracing his steps as if he were carrying some stolen burden. Thus he went about a hundred paces and stopped in front of a rock below by which there was a hole, probably dug out by some beast of prey; then he went down and acted as if he intended to hide the things stolen in the tent. With a rock lying near by he then cautiously covered up the hole. Upon this he returned into the tent, lay down and feigned to sleep. After awhile, however, he woke up again, left the tent, and at a distance of about fifty paces from it, cowering down he apparently performed the ablutions which, immediately before daybreak are done everywhere in the Orient, and here even by the women. As soon as the Liewascha observed this, he announced that the thief was certainly to be found among my female servants. The boy then crouched into several of the servant's tents, erected in front of my tent, and acted as if he was grinding corn, one of the duties which, in Abyssinia, belong exclusively to the women.

"After having been occupied in this way for a few minutes he went again to the hole above mentioned, acted as if he was taking something from it, and carried it to one of the huts in front of my tent, in order to hide it there. He then made another circuit, tak-

ing the direction toward the neighboring camp of a distinguished Abyssinian. There some female servants were just busy with bread-baking. The boy here cowered down again, then sprang suddenly up and apprehended the hand of one of the females who sat opposite to him, gave her three blows in the neck, and in the same moment fell down as in a swoon.

"The Liewascha, glowing with joy, then announced to me that this maid was the thief. She was one of my servants, and indeed at once confessed having committed the theft in the previous night and to have concealed the things in the hole, and then hidden them in the daytime in the hut the boy had indicated. The boy had, therefore, imitated everything which the girl had performed, from the moment of stealing up to her being caught, or as she had at least confessed, he had visited all those places where she had remained some time—in one word he had followed her every step.

"When the boy awoke about two hours after he seemed to ignore everything that had occurred during the whole time. He only owned to remembering the moment when the milk had been handed to him by the Liewascha."

The *modus operandi* of inducing the trance in this case savors, as would be expected, of the magical arts of the East, while the conduct of the subject reminds one of the "thought reader." The procedure might, indeed, be interpreted as a most peculiar phase of thought reading, in which the thief's mind had in some occult manner been approached and read by the boy subject's intelligence.

The exalted sensibility of the nervous organism of a somnambulist, by which he is enabled to receive impressions of thought and purpose from the magnetizer goes far toward explaining much of the phenomena that are ascribed to clairvoyance. Prof. Bzörnström fitly says:—"After we have become acquainted with the silently working, purely mental suggestion which plays pranks both known and unknown to the operator, but generally unknown to the subject, and always unknown to the onlookers, it is by no means difficult to explain numerous 'wonders' of clairvoyance. The many cases wherein a somnambulist has exhibited unusual, and, considering her culture, inexplicable medical knowledge, might be explained best, when a physician was present, by the fact that it was the knowledge and ideas of the physician that were transmitted to her brain, by mental suggestion, unconsciously so far as the physician was concerned, and which for the moment made her so learned. When, like a prophetess, she tells the thoughts, secrets or past experiences of those present who are entire strangers to her, she has most likely received her information in the same way—and thus vanishes the nimbus of the supernatural with which she has been surrounded."

## CHAPTER XII.

### AS A MEDICAL AGENCY.

In all time of which there is any positive record, mankind has used magnetism in some way as a theraputic agent. The ancient oracles and wonder workers and magicians who obtained renown in curing people of diseases knew of the magnetic sleep. It was to this that Aesculapius, in the old time, owed his success as well as Mesmer and the present school of hypnotism at Nancy, in the modern. But the magic of the East has given way to the science of the West, and supernaturalism to mental "suggestion." Call it imagination, expectancy, faith, or what we will, it is a fact that relief can be obtained in maladies of the most painful character through abstraction of self, or the influence of will, and that with no exertion of hypnotic control. But when the aid of magnetism is invoked the effects are more marked, and diseased conditions that resist the drugs of the pharmacopœia may yield to the magnetizer's hand. For sleeplessness, pain, nervous unrest, disturbed organic function, for the production of anaesthesia when a surgical operation is to be performed, the hypnotic sleep is a most valuable boon.

Mesmer, Puysegur, Braid and others, as I have already noted, were very successful in using this method for the cure or improvement of those suffering with

nerve maladies, and there were some bold spirits like Cloquet, Loysel, Velpeau, Elliotson and Esdaile, who in the days when the scientific world at large looked upon magnetism as an imposture and delusion, treated many of their patients surgically with its help. Between 1850 and 1860 Esdaile, surgeon-in-chief to the Calcutta hospital, performed upward of six hundred operations on Indian patients. Many of these operations were most difficult and painful, yet, as a rule, the patients on awaking from the sleep had no memory of what had been done to them.

To-day the beneficent nature of hypnosis as a medicinal instrumentality has become known through systematic application. The physicians at Nancy, the eminent Voisin, Luys, Fontan, Charcot, Bernheim, Delboeuf, besides several physicians of reputation in America, employ it as a most human and suitable means of relief and cure when the condition of their patients appears to require it. Voisin relates a very interesting incident that may be taken as illustrative of many similar cases in the experience of "hypnotic medicine."

"On the 13th of December, 1885," he says, "I was loitering about the square of a country town in the South of France, while waiting for a train. A peasant woman forty years old was led to me who had been paralyzed in her right arm for six months. Besides, she had been for two years a sufferer with various nervous ailments indicative of hysteria. After an attack that occurred six months before she become paralyzed in the right arm, and after a second attack she had a

contracture in it. The arm was now hanging helplessly and not able to make the slighest movement; the wrist and fingers were so much bent inward that the nails had grown long and caused wounds in the palms; the articulation of the fingers were swollen and tender. Any attempt to straighten the fingers produced severe pain and increased the trouble. Feeling remained in the arm and the muscles were not wasted. I hypnotized her within a quarter of an hour. She fell into a deep sleep and was quite insensible and her limbs became completely relaxed. With a loud voice I ordered her to straighten the little finger of her right hand. She did so, but with great difficulty and signs of pain. Encouraged by this success I asked her to straighten the ring-finger; which she did also; then the middle finger; this seemed to be more difficult, but it was done at last, after which the forefinger and thumb were easily extended. The hand was now fully stretched although the swollen joints were painful; but she moved the fingers with increasing facility, until the contracture had entirely disappeared.

"Her arm was still immovable. I then ordered the sick woman to move her arm and encouraged her to think that she could do it. She succeeded, at first with much difficulty, but finally so that she moved it as readily as the left one. The spectators regarded the cure as a miracle. Four months later I received the information that the woman was well and could use the arm for any purpose."

The successes attending the application of hypnotism to hysteria are as wonderful as this. Cases that

had baffled the skill of specialists for years are recorded by the physicians of La Salpetriere in which the amendment following the establishment of the trance was far greater than they could expect with the patients' histories before them. Voisin relates one:

The subject was a woman twenty-five years old, a hystero-epileptic. For five years she had suffered with frequent maniacal attacks of a severe nature, accompanied with hallucinations and delirium. She was hypnotized during an attack with great difficulty, five nurses being required to hold her, and her eyelids were forced open to look at the magnesian light. Two hours were spent in putting her to sleep. Afterward suggestion determined the length of the sleep, and during attacks she would be kept in the state of unconsciousness for over twenty three hours, as at the end of that time she began to show signs of mania. For seven days, in fact, this woman was kept in the sleep, with the interval only of a half-hour in the twenty-four. During this time she took food and medicine, which she had always previously refused during an attack. The treatment of this case lasted four months with the effect of the entire abatement of the attacks, and they had not returned at the time of Voisin's report, fifteen months later. The woman had become "polite," "sociable," and "amiable" and useful, being employed as a laundress.

Hallucinations, illusions and other forms of cerebral disturbance have been cured at La Salpetriere and in private practice; often but two or three sittings being sufficient to effect the improvement desired. Hysterical persons prove most susceptible to the method,

and even epileptics, whose malady is due mainly to functional weakness, are greatly benefited by it.

A list of the diseases that have been found corrigible by magnetism, besides the serious disorders already mentioned, includes dipso-mania or inebriety, tonic spasms, writer's cramp, anaesthesia, excessive sensitiveness, chorea, disorders of indigestion, menstruation and other nerve affections.

The French physicians regard true epilepsy, however, as beyond reach by this as by other means. A few cases that have come under the observation of the writer have indicated so clear an amelioration that they are briefly detailed as follows:

Mr. S. F. came to me with a history of *petit mal* of about fifteen years' continuance. He had received treatment from several physicians and specialists without more than temporary benefit, and had come to the conclusion that his malady, which had the unfortunate phase of seizing him without any prodomal or warning signs, and rendering him unconscious for variable times, was incurable. It was likely to appear at any time, yet was very irregular. He would not have an attack for weeks, then there would be a series occurring, perhaps, with more or less violence, bordering on *grand mal*, for several days in succession. This uncertain state of course debarred him from obtaining any settled or remunerative employment. His mind was not seriously impaired, aside from a shade of melancholy that brooded over it, a result natural enough.

My first step was to obtain a degree of hypnotic

control, and this proved successful. My object, it scarcely needs to be said, was to impress the mind of the patient with a strong sentiment of opposition to the attack, to animate his will, and so arouse such nerve activity as would oppose or compensate in a physiological manner the abnormal condition of those centers that contributed to the recurrence of the fits. He complained of frequent sensations of dullness in his forehead, as if there were a want of blood in that part of the head, while there was a feeling of heat and fullness in the side and back parts. It seemed to me that a newly awakened or reinforced activity of the circulation in the anterior of the cerebrum, if it were possible to induce it, would be productive of a better balance of the centers, and bring about a state of the brain that in itself would prove inhibitory of the dreaded seizures.

This, in brief, was the principle on which I acted after the first interview. He came to me once or twice a week and I simply applied my hands in the magnetic fashion to his head, that being placed in an attitude of repose with the eyes shut. Meanwhile he observed such rules of eating, dressing, sleeping, etc., as I deemed it expedient to advise, as much for the purpose of giving him something to think of as to correct habits that were faulty in but a minor degree.

The effect of this treatment exceeded my expectations. Mr. F. in a month began to improve. The attacks occurred less frequently, and his health in every respect showed amendment. After a time the treatment was given at irregular intervals, two or three weeks being

allowed to intervene between a sitting, and when the patient's last report was made to me, he had had no recurrence of the fits for three months, and had undertaken the transaction of business that required travel and exposure, a venture that previously would have been regarded by his friends as entirely out of consideration. It the course of my observation of this case there were developed certain phenomena that will, I think, be considered extraordinary by the reader, ever if familiar with hypnotic cases. I have said that when the patient first came under notice, his attacks occurred without warning. He would drop suddenly to the floor or ground as if struck by lightning, and on reviving a severe headache usually compelled him to rest awhile, if not to sleep. During my treatment if an attack occurred he would be likely to come out of it with little more than a sensation of dullness that soon wore off. Twice the seizure occurred when I was within ready call, and then, to my surprise, I found that I could in a few seconds check the spasmodic jerks by almost a touch, and restore him to consciousness. On one occasion he fell to the floor in the presence of several persons, and was struggling violently when I came to his side. A sweep of my hands from the head to the knee suspended the convulsions, and at my command he opened his eyes and rose to his feet, and within ten minutes was able to continue the business transaction he was engaged upon when he fell.

Another noteworthy feature developed subsequently to the beginning of the treatment was that, previous to an attack, Mr. F. experienced peculiar sensations,

or an aura, which he could not describe definitely. These sensations were a general nervous unrest, with dullness and heaviness of the head, and perhaps some aching, which continued for a few minutes or longer until the fit came on. If he came to me during this initial period, a few minutes' application of my hands would dissipate the sensations and prevent an attack. Fully six times this procedure was repeated with a successful result, so that little doubt on my part and that of the patient and his family is entertained as to the efficacy of the magnetic influence in his case. Certainly on the pathological side it is reasonable to infer that an improved circulatory relation had been produced in the brain, the permanency of which, however, could not be assured.

Mr. P—, a gentleman fifty years of age, came under my notice about a year ago, as a sufferer from the *grand mal* type of epilepsy. He had ten years previously sustained a severe injury by which the nasal, malar, and other bones contiguous to the inner canthus of the left eye had been driven inward, and the muscular attachments of the eyeball internally had been lacerated, so that in healing the co-ordination of the axis of vision was rendered permanently imperfect. A few years after this accident the epilepsy developed itself, and at the time I first saw him it had asssumed an aggravated form. He was then under the treatment of a distinguished specialist of New York City, whose diagnosis of the case referred its origin to the accident and the abnormality of the left eye.

Mr. P— had learned to distinguish certain physical and mental symptoms as antecedent to an explosion of his malady, and therefore knew for at least ten minutes before that one was imminent. There was a metallic taste in his mouth, a sense of congestion in the head, and a play of color. This last phenomenon, as the professional reader knows, is by no means uncommon in epilepsy and other forms of nerve disease, and it is deemed that some disturbance of the visual center produces it.

Mr. P— was very willing to try the magnetic passes, and as his attacks occurred frequently, for two or three months I saw him at least once a week. No attempt was made to induce the hypnotic trance, but simply hand manipulation was tried, the result being as successful in its way as in the first case I have described. Mr. P— frequently declared, as stated by acquaintances, that if he could only reach Dr. Drayton's office in time, he would be saved from a fit.

I have had him come to me in a dazed mental state, his face turgid with blood, his respiration and voice thick, his pulse rapid and bounding, and with an anxious, excited manner, all intimating a nervous crisis. Placing him in a chair, I have at once administered the manual tactics, and in a few minutes his excitement would subdue, his skin clear up, his pulse become calm and moderate, and he would pronounce himself greatly relieved and ready to go out upon the street. After this treatment he would be safe from an attack certainly for a day or two, and as the spasms were of a severe character, the relief he experienced was

most gratefully acknowledged, although the prognosis on my part from the first was unfavorable as regards a cure.

An attempt to analyze the process by which the effect was obtained in this second case, if an attempt were made to be minute, would trend upon the speculative, especially if at the beginning it was assumed to define the peculiar "force" or effect that is called animal magnetism. That some derivative influence is exercised by the hand movements no one at all familiar with massage will deny, and that the consequent reduction of the pressure at the nerve centers may abort an attack whose prodomal symptoms have become well marked, is not too much to claim.

A New York specialist in surgery of the nose and throat, Dr. Jarvis has tested the anaesthetic property of hypnotism by performing severe operations on patients who were found susceptible to hypnotic control, and who on emerging from the sleep declared that they had felt no pain. It has been noticed that the wounds of surgical treatment upon magnetized subjects heal more rapidly than those of ordinary occurrence. The absence of pain through suggestion aids the process of repair. Prof. Delboeuf, of Liege, burned with a hot iron both arms of a patient, saying beforehand that the wounds on the right arm would never be felt. Removing the bandages the following day, only a scorch remained, while the left arm showed inflammation and a vesicular sore. The applications of the iron were the same on both arms. Prof. Delboeuf argues, therefore, that "healing wounds by

mental impression is a legitimate function of the surgeon when he discovers his susceptibility. This principle is a key to the healing of the wounds of African dervishes, and not a few faith cures." *

A writer in the "Nineteenth Century" describes the procedure of Dr. Liebault in treating his patients, and as it applies in all similar cases it is appropriately given here with most of the details. This writer speaks of a visit that he made to Nancy, for the purpose of studying the hypnotic methods, and it is in Dr. L's dispensary that the following occurs. "A new patient enters. His medical history is inquired into, with any side facts which may bear upon it; his present symptoms are investigated; he is, if necessary, examined, and every detail of his case is entered for future reference. He is then desired to sit down and watch the treatment applied to other sufferers: this is found to have a quieting effect upon patients, and to give them confidence. In half an hour or so his turn comes, and Dr. Liebault calls him to take his place in the large arm-chair, which probably has held more devotees of Morpheus than any other chair in the world. The doctor speaks kindly and reassuringly to him, tells him to banish all fear and, as far as possible, all extraneous thoughts, but to follow closely his words and suggestions.

"One by one the phenomena that attend the oncoming of sleep are suggested to him. "Your eyelids," says the Doctor," are becoming heavy; you can hardly keep

*"Mental Automatism." E. P. Thwing, M. D.

them open. My voice sounds more and more distant. Your sight grows dim, and objects appear indistinct to you. A numbness is creeping over your limbs. It is impossible for you to keep awake: your eyes are shut." (Here the eyes are held closed by the operator's hand.) "You are fast asleep." If the subject is of average sensibility, he will indeed be asleep by this time, and his appearance will be exactly that of one slumbering naturally and peacefully.

"It is now that the treatment commences. Taking a very common case, and supposing that we have before us a sufferer from chronic indigestion. For years he has not eaten a meal with healthy appetite nor without feeling some uneasiness after it. He has constant nausea, tightness across the chest, headache, sleeplessness, and depression of spirits—in short, all the miserable symptoms of dyspepsia. With these his appearance fully agrees. He is heavy and apathetic; his eyes are dull, his body wasted, his skin dry and discolored.

"The Doctor begins by rubbing and gently pressing the parts chiefly affected; at the same time telling the patient that the pain he now feels is to pass away; that his digestion is to become easy; that he is to take food with appetite; that the secretions and functions are to become natural; the circulation is to improve; the chilliness and nausea are to be replaced by warmth and well-being. He next touches the head, saying that the dull aching and heaviness are to disappear; that sleep is to come at night, quickly and naturally; that the complaint is to be entirely cured.

"These suggestions given, the sleeper is allowed

but a few moments more of oblivion. Patients are still coming in and the chair is wanted. So the doctor arouses him with a word or a few passes of a fan, and his place is taken by another. He will most likely feel all the better for his short sleep. The pain has vanished, and in its stead is a comfortable sensation of warmth; his head feels cool and clear, and he returns home with a more natural appetite than he has known for a long time. Before leaving he is told to come again next day, when the same process will be gone through; but he probably will be more quickly influenced, and on subsequent visits it may be enough for him to sit down, to have Dr. Liebault look at him, close his eyes and say *Dormez* for him to fall into a profound sleep. This sleep is apt to become more sound each time it is induced, and the sounder it is the better for the patient. But even when only a slight torpor can be obtained good results may be expected.

"If possible the treatment is repeated every morning for several days, and all that the Doctor has foretold comes to pass. The dyspeptic recovers his appetite, his cheeks begin to fill out, he loses the cadaverous hue of chronic ill-health, the distressing symptoms disappear, and in a short time he is cured."

We may doubt the wisdom of treating everything by magnetism, but for nervous diseases, functional disorders and such conditions that have not proved amenable to the ordinary methods of the physician, it appears to possess a remedial potency.

NOT A PANACEA.

With the astonishing results that have been detailed by those who employ it systematically before us we are not ready to claim for magnetism that creative capacity that will reinstruct what disease has actually destroyed. It will do one very important thing and that a most efficient means of cure in our common sicknesses, that is, induce a calm and cheerful mind, and strengthen self reliance and hope. Thousands are ill simply because their spirits are depressed and they feel little interest in life. Acute maladies like pneumonia, diphtheria, small-pox, scarlatina will run their course until the systemic causes of their development are removed, but if hypnotism be associated with their intelligent treatment, according to the best known procedure, we should expect a more speedy termination of the morbid or pathological charges that give a special character to disease.

## CHAPTER XIII.

### VICES OF HABIT AND EDUCATION.

"Canst thou minister to a mind diseased"?

The magnetizer says "I can, even as I can minister to the body diseased," and the record of philanthropic effort on his part includes many accomplishments in the improvement of habit and character as well as of feeble and diseased bodies. Dr. John Elliotson nearly fifty years ago affirmed that in mesmerism there existed an agency that was of use in the overcoming of corrupting habits, and the observers of the effects of modern hypnosis, especially Durand, Hement, and Liebault, have certified that it is a very potent agency in intellectual and moral education.

Mme. Fontan and Legard* cite the successful treatment of dipso-mania in several very aggravated cases. And not only has relief been given to the crazed victims of alcoholic habits, but hypnotism has been found of singular potency in reforming drinkers; the suggestions of self-control and of dislike to liquor given in the sleep have been carried into the waking life and antagonized the old craving for stimulants. In the *Revue de l'Hypnotisme* for August and September, 1887, M. Voisin published accounts of four cases of confirmed inebriety, three women and one man, that had been cured.

*Elements de medicine suggestive. Paris, 1887.

Men who are under the influence of liquor can not be hypnotized as a rule, and in some cases the impression made upon the mind of an inebriate to counteract his habit is transient, although it is believed that if the hypnotic suggestion of antagonism to alcohol can be repeated often it may be made permanent and therefore reformatory.

Professor Beaunis reported a case where a great smoker was told, while in a hypnotic state, that he must not drink or smoke again. He followed this idea and was able to break away, but was hypnotized and impressed many times, and the repeated suggestions came at last to be fixed thoughts.

A theory offered to explain this is, that alcohol paralyzes the higher inhibitory centers, while hypnotism strengthens these centers; also hypnotism paralyzes the appetite centers, and thus counteracts alcoholic action. It is further stated that repeated pressure of the idea of alcoholic repulsion produces a shock to the brain centers, and thus alterations take place, causing permanent changes of character.

Dr. Gunn recently gave the writer an account of a case of opium addiction that had come under his charge, and which was successfully treated, so that the patient, who had become a miserable wreck of her former self, and the despair and shame of her friends, was rescued and restored to her former position of independence.

In School Methods.—As children are more susceptible than adults to the magnetic influence, it should be expected that their minds will more readily receive the

impressions of suggestions tending to the growth of moral stability and industry; so that the stupid, dull, lazy and inattentive child may be greatly improved.

Berillon, in a report to the Congress of Scientists, at Nancy, in 1886, discussed the application of hypnotism to teaching, and gave several instances of its happy effects in quickening the faculties of the dull and feeble, and in bettering the conduct of the obstinate and vicious. In concluding his address, this observer said: "I do not hesitate to affirm that while it is not desirable to practice hypnotism upon healthy and well-organized minds, it is justifiable from the point of view of pedagogy to deal thus with subjects bad, vicious or diseased. But even here it is to be discreetly resorted to, only or especially in cases where other pedagogic means have failed, and it is to be practiced only under the direction of a competent and experienced person."

There were not wanting objectors to the employment of such a method of child training, who declared that it involved "the moral liberty of the child," a position that certainly has a force that no psychologist may ignore. The conclusions of M. Berillon were, however, earnestly approved by several eminent physicians and jurists. The President of the Section of Pedagogy, M. Hement, said: "Without doubt education should respect the personality of the human soul: it should not regard the child as an automaton, but it may and it should do for the lunatic, who is a defective being, and for the child, who is an incomplete being, all that is of a nature to correct the former and to develop the

latter. If the hypnotizer fails to confine his power within wise limits, if he abuses it, if he injures the being whom he should benefit, the law is there to punish him as it punishes the meanest of malefactors.

"The benevolent establishments of MM. Boujean and de Metz for the benefit of abandoned and vicious children proceed upon the same principle as that of hypnotism. They assume, to a certain degree, the mastery of the individual will and conscience. They do in a moral sense what the gardener does physically when he trains and supports the feeble branch upon a white and sun-warmed wall. The tree receives under these conditions the greatest possible amount of heat and light; it is also shielded against storms, and, in consequence, instead of bearing inferior, colorless, bitter or tasteless fruit, it bears a delicious and nourishing kind, the honor and delight of the table. In like manner the true educator supports and trains the human mind, and his success and that only justify the means.

"Let it be understood, in conclusion, that we are not discussing a method of education for all, but a treatment, a curative process, applicable to weak or vicious natures. It is and should be limited to a chosen few who are worthy of the name of educators, and of physicians of the soul. We do not accept without discrimination a person to treat a child physically ill, why then should we summon without care the one who is to treat those morally unsound?"

Habits that children fall into, often unconsciously and through imitation of associates, are therefore amenable to correction. Tricks, like those of biting

the nails, sucking the fingers, hawking and spitting, and practises that are more disrespectable and injurious in effect upon both mind and body, may be stopped altogether. The parents of a boy eleven years old had found it impossible to correct a habit he persisted in from babyhood of putting his fingers in his mouth and sucking them. They brought him to M. Berillon who put him into the magnetic sleep, and then ordered him to go to sleep of his own accord at night without putting his fingers in his mouth, which was his custom. This order was repeated three times, and then the boy was awakened. On the next day the father reported that the night previous the boy had gone to sleep without putting his fingers into his mouth. During the day the old temptation occurred to him from time to time but was resisted, and being asked how it was that he did not repeat the habit, he answered: "It is strange that every moment I have a desire to put my fingers in my mouth, but I feel that I can not do it."

A second hypnotization by strengthening the resistance thus strangely awakened to the habit completely overcame his inclination to practise it.

## CHAPTER XIV.

### MORAL AND LEGAL ISSUES.

The exercise of this power for good or evil, as all the facts testify, rests with the operator, and hence his responsibility is no mean consideration. In the hands of an unscrupulous and vicious magnetizer, a subject might be easily led to do mean acts, as his low instincts and impulses can be as easily stimulated as his higher sentiments. There can be no doubt that much evil has been consummated by the employment of magnetized victims, and these poor victims have in some cases borne the punishment of broken laws, while the doubly villainous principal has escaped. The medico-legal records of France contain cases of shocking immorality in which the perpetrators of the crime were associated with the exercise of the hypnotic impression.

If the imagination of a person not at all afflicted by magnetic influence may be so wrought upon, as to cause disease and even death, much more can the trance subject be influenced disastrously. A girl in good health is said to have been frightened almost to death by being made to believe that she had taken poison instead of a harmless drug, the usual symptoms of poisoning being well developed. The story of the French criminal in the days of the Third empire, who actually died of terror

and imagined pain supposing that he was being bled to death, when in fact the surgeon had only scratched him a trifle on the neck, is too well known to be repeated in this place. The fagging and petty terrorism that have been rife in some universities have led to fatal results, as was the case not long ago, when a coarse joke was played by some students in a Scottish university on the janitor. But these things occurred to unhypnotized persons. How much more easily, say the moralists, may the hypnotized subject be influenced to his injury in both physical and mental ways.

M. Bottey relates an experiment in which the commission of a theft was suggested:*

Mlle. S. R. was the subject. He said to her: "At about four o'clock to-day you will see a gold watch on the table and you will not be able to resist the temptation to steal it."

At the hour named, which was seven hours after the hypnosis, Bottey saw the girl hovering about the table on which he had placed a gold watch. She took it up, put it back, and repeated this action several times; finally, after what was apparently a long internal struggle, she seized the watch and put it in her pocket, looking around meanwhile to see if she were watched. Afterward, when B. asked her to return the watch she was so oppressed by regret for the deed that he felt compelled to remove by suggestion her remembrance of it.

While this volume was in preparation an acquaint-

*Le Magnetism Animal. Paris, 1884.

ance of the author related an incident that occurred to him when a boy. He attended an exhibition given by a travelling magnetizer, and offered himself as a subject. He proved a susceptible one. The next night he also went to the hall where the experimenter was lecturing, but this time carried a barrel from his home and deposited it on the platform. He was asked by members of the family what he was going to do with the barrel. He replied that he was going to carry it to the hall of Prof. ——. He could not say why. He remembered well the impression that possessed him at the time—a powerful, imperious determination to get that barrel and take it to the place of meeting. Of course he had been ordered to do that while in the sleep the night before.

It is just as practicable to induce a person to state things that never occurred, commit perjury or swear falsely, being made to believe that what they say is true or to misrepresent with the full consciousness that they are lying. Bottey convinced a woman that she had seen a certain gentleman poison an old lady with opium, and when she awoke she hastened to the proper officer to make the accusation.

But it is unnecessary to cite further instances; the reader, if he would look into the criminal aspects of the subject will find in the French and German authors from whom we have quoted a wealth of such material, abundantly sufficient to establish beyond any doubt that it is possible to use others through the magnetic sleep for the performance of deeds of nearly every shade of criminality.

The fact should be noted as a dangerous feature that the somnambule does not, on awaking, remember the cause of suggestion or from whom he received it, but in a judicial inquiry concerning the act of one known to be susceptible the ends of justice may be promoted by obtaining testimony from him while in the hypnotic state, since the memory of what has occurred during one period of hypnosis revives in the next; however, it must be stated that the hypnotizer can neutralize even this tendency to revival by an order that the subject shall forget entirely all that was said and done when under control.

The government in some countries has recognized the dangers possibly arising from the indiscriminate practice of hypnotism and has passed laws by which the public exhibitions of local or travelling magnetizers are prohibited. This is the case in Italy, Austria, and Switzerland. Leading experts in psychological medicine, and many prominent jurists in Europe, who have taken the trouble to acquaint themselves with the nature of magnetism, are agreed that none but licensed physicians should be allowed to employ it for any purpose, and then only as a medicinal or restorative agent. In the United States this stand will probably be taken also when the far reaching effects of a dishonest magnetizer's operations become as well known as they are in Germany and France.

When experiments are carefully conducted by an experienced and gentle operator no injury can result to the subject; on the contrary, most of those whom I have questioned in regard to their after feelings have stated

they felt refreshed and better. I have known skeptical onlookers who were invited to test the sleep of a subject to treat him cruelly, and even barbarously in their effort to arouse him or to secure some indication of sensibility. It is in this way that injury is done for which the magnetizer is unfairly made responsible. But the experienced, trustworthy operator will not allow any trifling, and as for heroic tests—the time has passed for their requirement.

To entertain an audience there may be experiments made that are innocent enough and to which no objection can be made, but inquiry need not be pursued very far before it is found that in many of our cities there are disreputable persons, mainly of foreign importation, who make it a *quasi* profession to give public and private seances with the assistance of paid or servile subjects. These people give advice with regard to diseases, business, social and domestic matters, tell fortunes, etc., for pay, of course. In Boston, New York, Philadelphia, Chicago, San Francisco, and other cities the trade these people drive is increasing, and it is not altogether drawn from the ignorant and poor.

One importation from France especially, as concerns the ostensible method, is the magnetizer—masseur, who combines magnetism with rubbing or massage, and degrades by practises of deceit and jugglery a branch of curative art that has a real value.

---

In closing this brief summary let me add that all the evidences declare that animal magnetism is a force

(or something) not to be touched unguardedly—not to be investigated without precaution. To whatsoever its phenomena may be attributed, the obligation rests upon every one who would make use of it to be sincere in his purpose to benefit others and to aid in surrounding the practice with all proper guards. The welfare of society demands that only qualified persons should use it, and that without any affectation of the arts of the juggler or magician.

# WORKS ON MAGNETISM.

THERE is now an increasing interest in the facts relating to Magnetism, etc., and as the people are awakening to the importance of a knowledge of the subject, we present below a list of the most important Works published.

**How to Magnetize**; or, Magnetism and Clairvoyance.—A practical Treatise on the Choice, Management, and Capabilities of Subjects, with Instructions on the Method of Procedure. By JAMES VICTOR WILSON. 18mo, paper, 25c.

A very complete little Manual on this subject, and containing more than has before been published in so small a space.

**The Philosophy of Electrical Psychology.** B. JOHN BOVEE DODS. $1.25.

**Philosophy of Mesmerism and Clairvoyance.** By the same. 50 cts.

**Fascination**; or, The Philosophy of Charming. Principles of Life in connection with Spirit and Matter. By J. B. NEWMAN, M.D. $1.00.

**History of Salem Witchcraft.**—A review of Charles W. Upham's great Work from the *Edinburgh Review*, with Notes; containing, also, The Planchette Mystery, Spiritualism, by MRS. HARRIET BEECHER STOWE, and Dr. Doddridge's Dream. 125 pp. Cloth, $1.

**The Planchette Mystery.**—Being a Candid Inquiry into the Nature, Origin, Import, and Tendencies of Modern Signs and Wonders. 20c.

**Medical Electricity.**—A Manual Showing the most Scientific and Rational Application to all Forms of Disease of the different combinations of Electricity, Galvanism, Electro-Magnetism, Magneto-Electricity and Human Magnetism. By WM. WHITE, M.D. $2.

**Practical Instructions in Animal Magnetism.** By J. P. F. DELEUZE. Translated by Thomas C. Hartshorn. New and revised ed. Over 500 12mo pp. Price $2. Nearly ready.

This is a most comprehensive work, and covers the subject very fully. It has long been out of print, and repeated calls for a work containing practical instructions, have led to the publication of a new and revised edition of this valuable book.

**The Library of Mesmerism and Psychology.**—Comprising the PHILOSOPHY OF MESMERISM, CLAIRVOYANCE, MENTAL ELECTRICITY.—FASCINATION, or the Power of Charming. Illustrating the Principles of Life in connection with Spirit and Matter.—THE MACROCOSM, or the Universe Without: being an unfolding of the plan of Creation and the Correspondence of Truths.—THE PHILOSOPHY OF ELECTRICAL PSYCHOLOGY; the Doctrine of Impressions; including the connection between Mind and Matter; also, the Treatment of Disease.—PSYCHOLOGY, or the Science of the Soul, considered Physiologically and Philosophically; with an Appendix containing Notes of Mesmeric and Psychical experience, and Illustrations of the Brain and Nervous System. 1 vol. 12mo, extra cloth. $3.50.

This work contains several of the smaller works, and also some others which can not be supplied separately.

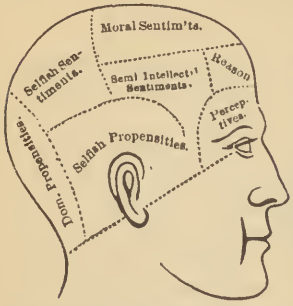
**Vital Magnetism**: Its Power over Disease. By FRED. T. PARSON. Cloth, $1.25.

These comprise a list of the works we now have on this fascinating subject. Copies will be sent by mail, post-paid, on receipt of price. Address

FOWLER & WELLS, Publishers,

775 **Broadway, New York.**

# Brain and Mind,




OR, MENTAL SCIENCE CONSIDERED IN ACCORDANCE WITH THE PRINCIPLES OF PHRENOLOGY AND IN RELATION TO MODERN PHILOSOPHY.

By H. S. Drayton, A.M., M.D., and James McNeill, A.B. Illustrated with over One Hundred Portraits and Diagrams. $1.50.

The authors state in their preface: "In preparing this volume it has been the aim to meet an existing want, viz: that of a treatise which not only gives the reader a complete view of the system of mental science known as Phrenology, but also exhibits its relation to Anatomy and Physiology, as those sciences are represented to-day by standard authority."

The following, from the Table of Contents, shows the scope and character of the work:



## Notices of the Press.

Phrenology is no longer a thing laughed at. The scientific researches of the last twenty years have demonstrated the fearful and wonderful complication of matter, not only with mind, but with what we call moral qualities. Thereby, we believe, the divine origin of "our frame" has been newly illustrated, and the Scriptural psychology confirmed; and in the Phrenological Chart we are disposed to find a species of "urim and thummim," revealing, if not the Creator's will concerning us, at least His revelation of essential character. One thing is certain, that the discoveries of physical science must ere long force all men to the single alternative of Calvinism or Atheism. When they see that God has written Himself sovereign, absolute, and predestinating, on the records of His creation, they will be ready to find His writing as clearly in the Word; and the analogical argument, meeting the difficulties and the objections on the side of Faith by those admitted as existing on the side of Sight, will avail as well in one case as in the other. We will only add, the above work is, without doubt, the best popular presentation of the science which has yet been made. It confines itself strictly to facts, and is not written in the interest of any pet "theory." It is made very interesting by its copious illustrations, pictorial and narrative, and the whole is brought down to the latest information on this curious and suggestive department of knowledge.—*Christian Intelligencer.*

As far as a comprehensive view of the teachings of Combe can be embodied into a system that the popular mind can understand, this book is as satisfactory an exposition of its kind as has yet been published. The definitions are clear, exhaustive, and spirited.—*Philadelphia Enquirer.*

In style and treatment it is adapted to the general reader, abounds with valuable instruction expressed in clear, practical terms, and the work constitutes by far the best Text-book on Phrenology published, and is adapted to both private and class study.

The illustrations of the Special Organs and Faculties are for the most part from portraits of men and women whose characters are known, and great pains have been taken to exemplify with accuracy the significance of the text in each case. For the student of human nature and character the work is of the highest value.

It is printed on fine paper, and substantially bound in extra cloth, by mail postpaid, on receipt of price, $1.50. Address

**FOWLER & WELLS CO., Publishers, 775 Broadway, New York**

# HOW TO LEARN PHRENOLOGY.

We are frequently asked: In what way can a practical knowledge of Phrenology be obtained? In answering this we must say, that the best results can be obtained by taking a thorough course of instruction at the American Institute of Phrenology; but where this is not practical, the published textbooks on the subject should be carefully studied. To meet the wants of those who wish to pursue the subject personally and become familiar with the application of the subject to the various sides of life, we have arranged the following list of books, called

## THE STUDENT'S SET:

**Brain and Mind**; or, Mental Science Considered in Accordance with the Principles of Phrenology and in Relation to Modern Physiology. Illustrated. By H. S. DRAYTON, A. M., M. D., and JAS. MCNIEL, A. M. $1.50.

**Forty Years in Phrenology**; Embracing Recollections of History, Anecdotes, and Experience. $1.50.

**How to Read Character.** A New Illustrated Handbook of Phrenology and Physiognomy, for students and examiners, with a Chart for recording the sizes of the different organs of the brain in the delineation of character; with upward of one hundred and seventy engravings. $1.25.

**Popular Physiology.** A Familiar Exposition of the Structures, Functions, and Relations of the Human System and the preservation of health. $1.00.

**The Phrenological Bust**, showing the location of each of the Organs. Large size. $1.00.

**New Physiognomy**; or, Signs of Character, as manifested through temperament and external forms, and especially in the "Human Face Divine." With more than one thousand illustrations. $5.00

**Choice of Pursuits**; or, What to do and Why. Describing seventy-five trades and professions, and the temperaments and talents required for each. Also, how to educate on phrenological principles—each man for his proper work; together with portraits and biographies of many successful thinkers and workers. $1.75.

**Constitution of Man**; Considered in relation to external objects. The only authorized American edition. With twenty engravings and a portrait of the author. $1.25.

**Heads and Faces and How to** STUDY THEM. A manual of Phrenology and physiognomy for the people. By NELSON SIZER and H. S. DRAYTON. Oct., paper, 40c.

This list is commended to those who wish to pursue the subject at home, and to those who propose to attend the Institute.

Either of the above will be sent on receipt of price, or the complete "STUDENT'S SET," amounting to $14.65, will be sent by express for $10.00. Address,

FOWLER & WELLS CO., Publishers, 775 Broadway, New York.

# PHYSICAL CULTURE.

For Home and School. Scientific and Practical. By D. L. Dowd, Professor of Physical Culture. 322 12mo. pages. 300 Illustrations. Fine Binding. Price $1.50.

## CONTENTS.

Physical Culture, Scientific and Practical, for the Home and School. Pure Air and Foul Air.

Questions Constantly Being Asked:

No 1. Does massage treatment strengthen muscular tissue?
No. 2. Are boat-racing and horseback-riding good exercises?
No. 3. Are athletic sports conducive to health?
No. 4. Why do you object to developing with heavy weights?
No. 5. How long a time will it take to reach the limit of development?
No. 6. Is there a limit to muscular development, and is it possible to gain an abnormal development?
No. 7 What is meant by being muscle bound?
No. 8. Why are some small men stronger than others of nearly double their size?
No. 9. Why is a person taller with less weight in the morning than in the evening?
No. 10. How should a person breathe while racing or walking up-stairs or up-hill?
No. 11. Is there any advantage gained by weighting the shoes of sprinters and horses?
No. 12. What kind of food is best for us to eat?
No. 13. What form of bathing is best?
No. 14. How can I best reduce my weight, or how increase it?
No. 15. Can you determine the size of one's lungs by blowing in a spirometer?

Personal Experience of the Author in Physical Training.
Physical Culture for the Voice. Practice of Deep Breathing.
Facial and Neck Development. A few Hints for the Complexion.
The Graceful and Ungraceful Figure, and Improvement of Deformities, such as Bow-Leg, Knock-Knee, Wry-Neck, Round Shoulders, Lateral Curvature of the Spine, etc.
A few Brief Rules. The Normal Man. Specific Exercises for the Development of Every Set of Muscles of the Body, Arms and Legs, also Exercises for Deepening and Broadening the Chest and Strengthening the Lungs.
These 34 Specific Exercises are each illustrated by a full length figure (taken from life) showing the set of muscles in contraction, which can be developed by each of them.] Dumb Bell Exercises.
Ten Appendices showing the relative gain of pupils from 9 years of age to 40.
All who value Health, Strength and Happiness should procure and read this work; it will be found by far the best work ever written on this important subject. Sent by mail, postpaid, on receipt of price. $1.50.

**Address, Fowler & Wells Co., Publishers, 775 Broadway New York.**

# Men and Women Differ in Character.

[PORTRAITS FROM LIFE IN "HEADS AND FACES."]

No. 1. James Parton.
No. 2. A. M. Rice.
No. 3. Wm. M. Evarts.
No. 4. General Wisewell.
No. 5. Emperor Paul of Russia.
No. 6. George Eliot.
No. 7. King Frederick the Strong.
No. 8. Prof. George Bush.
No. 9. General Napier.
No. 10. Otho the Great
No. 11. African.

## IF YOU WANT SOMETHING

that will interest you more than anything you have ever read and enable you to understand all the differences in people at a glance, by the "SIGNS OF CHARACTER," send for a copy of

## HEADS AND FACES; How to Study Them.

A new Manual of Character Reading for the people, by Prof. Nelson Sizer, the Examiner in the phrenological office of Fowler & Wells Co., New York, and H. S. Drayton, M.D., Editor of the PHRENOLOGICAL JOURNAL. The authors know what they are writing about, Prof. Sizer having devoted nearly fifty years almost exclusively to the reading of character and he here lays down the rules employed by him in his professional work. It will show you how to read people as you would a book, and to see if they are inclined to be good, upright, honest, true, kind, charitable, loving, joyous, happy and trustworthy people, such as you would like to know.

A knowledge of Human Nature would save many disappointments in social and business life.

This is the most comprehensive and popular work ever published for the price, 25,000 copies having been sold the first year. Contains 200 large octavo pages and 250 portraits. Send for it and study the people you see and your own character. If you are not satisfied after examining the book, you may return it, in good condition, and money will be returned to you.

We will send it carefully by mail, postpaid, on receipt of price, 40 cents, in paper, or $1 in cloth binding. Agents wanted. Address

**FOWLER & WELLS CO., Publishers, 775 Broadway, New York.**