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# PSYCHOPATHOLOGICAL RESEARCHES

## STUDIES IN MENTAL DISSOCIATION

WITH TEXT FIGURES AND TEN PLATES

BORIS SIDIS, M.A., PH.D., M.D.

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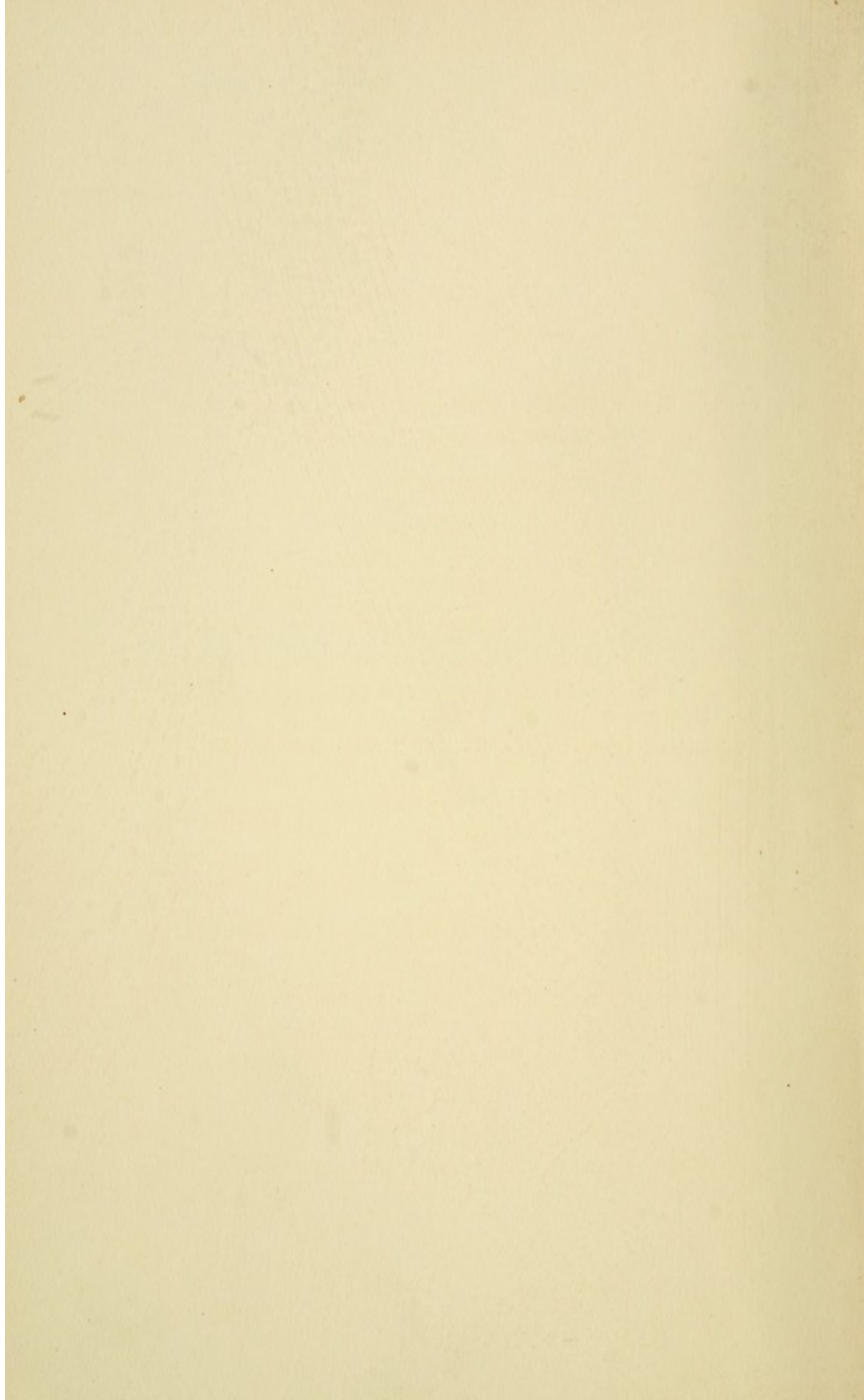
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PSYCHOPATHOLOGICAL RESEARCHES





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## INTRODUCTION

THE present researches form a series of cases the investigation of which is undertaken with the object of studying the problems presented by the phenomena of functional psychosis. Out of a mass of material we have selected a few cases typical of many others, each case standing for a type. As much as possible we have tried to avoid theories and principles and give simply a *résumé* of the facts and experiments. The more general aspects of these cases and the conclusions flowing from similar observations and experiments are relegated to another work soon to appear under the title of *Principles of Psychology and Psychopathology*. The cases are more in the nature of laboratory researches, each case standing on its own individual merits; they are all, however, intimately interconnected, representing various phases and stages of the processes of mental dissociation.

The methods of work of this series, as well as of the series to come, have all of them been developed in the psychopathological laboratory,—the researches being carried on in the laboratory or at other places under its direction.



The first study of the series presents an investigation of the main phenomena observed in dissociative states of functional psychosis. An account is given of some of the methods of bringing about a synthesis of subconscious dissociated systems. The study specially relates to psychomotor reactions of subconscious systems. Different methods are worked out to obtain subconscious reactions to stimulations. The extent and intelligence of the dissociated subconscious systems are tapped in various ways. The results clearly reveal the nature of the phenomena of functional psychosis. Psychologically, *functional psychosis is coextensive with the whole domain of the subconscious*. Physiologically, *functional psychosis is correlated not with organic neuron degeneration, but with functional disaggregation of whole systems of neuron-aggregates*. In functional psychosis, the function apparently lost and destroyed is found to be present in the subconscious,—the loss of function is purely dissociative. The activity is preserved and the system is really unaffected,—it is only dissociated from other functioning systems.

If the psychomotor manifestations of the pathological process of neuron disaggregation and neuron degeneration be formed into a series, then the first stages of this process constitute the phenomena of functional psychosis concomitant with the pathological conditions in which only the *associations*, the interrelations of neuron systems are affected by dissociation,—the



neurons, the dissociated aggregates themselves remain unaffected. The whole domain of the subconscious belongs to these stages of disaggregation in the course of the pathological process, such as the phenomena of hypnosis, of somnambulism, of motor and sensory automatisms, of the so-called "hysterical" sensori-motor disturbances of various organs, the functions of which are found on examination in the regions of the subconscious over which the personal consciousness has lost control by reason of neuron disaggregation or dissociation. Here belong the phenomena of double and multiple consciousness, the various forms of amnesias, the lost content of which can be revealed in the strata of subconscious life. The domain of functional psychosis also includes the phenomena of the different forms of so-called "psychic epilepsy." Here also belongs the great class of psychomotor manifestations known as "degeneracies," such as the phobias, impulses, obsessions, fixed ideas, and a still greater class of psychic derangements,—a class that opens to the psychopathologist almost an infinite vista for investigation, namely, the *functional insanities*, forms of functional psychosis which simulate and apparently closely reproduce different types of insanity.

With the further progress of the pathological process the neuron itself becomes affected. In the early stages of the process of neuron degeneration, the function of the neuron is interfered with,



although restitution is still possible. These stages include the vast domain of *functional* neuropathic disturbances, such as paralysis agitans, choreas, idiopathic epilepsy, and the neuropathic insanities, such as the various neuropathic forms of manias and melancholias, of periodical and circular insanities, of dementia præcox, of paranoias, and so on.

Finally, in the last stages of the process of degeneration, the neuron is destroyed and restitution is no longer possible. Tabes, general paresis, syringomyelia, the chronic insanities, amyotrophic lateral sclerosis, acute ascending paralysis, multiple sclerosis, secondary dementia—that sad terminus of the chronic insanities,—and many other nervous and mental affections in which the body cell of the neuron—cytoplasm and nucleus—has become destroyed, all belong to the last stages of the pathological process of neuron degeneration, stages which for lack of a better name may be termed *necrotic* neuropathies. The whole pathological process, with its stages and concomitant psychomotor manifestations, may thus be conveniently subdivided into three great classes, one passing into the other by imperceptible degrees: *functional psychosis*, *functional neuropathy*, and *necrotic neuropathy*.

At the same time, as already pointed out in a former study, the important fact must be kept clearly in view that various groups and systems of neurons may reach different degrees of disaggregation and degeneration, may be simultaneously in different stages of the one



continuous descending pathological process. Communities, clusters, or constellations of neuron-aggregates may be in the upper levels of the psychopathic state, in the first stages of functional psychosis; others in the deeper levels or further stages of the same state; others may be in various stages of the functional neuropathic state; while still others may have reached the last stages of the necrotic neuropathic conditions. The fact that various systems of neurons are often in different stages of disaggregation or degeneration frequently gives rise to a mixed and complex symptomatology, the malady presenting psychomotor manifestations belonging to different stages of the descending pathological process. The psychomotor manifestations may thus vary endlessly, like colors in the kaleidoscope. From this standpoint it may be said that *the symptomatic side of disease, the total psychomotor aspect of the pathological process, is a function of location, number, and degree of dissociation or degeneration. The total complex of psychomotor manifestations depends on the location and, number of neuron-aggregates involved and on the stage or degree of the pathological process of disaggregation, dissociation, or degeneration.* In other words the psychomotor manifestations depend on three main factors: *location, number of neuron aggregates, or quantity of functioning neuron energy, depth of level descended, or intensity of the process of neuron energy liberation; and also on a fourth factor, which*



may be regarded as secondary, namely, *dissociation*, whether this dissociation takes place among the neuron systems in the early stages, or in the parenchyma of the neuron in the later stages of the process of degeneration.

Now once the neuropathic stages are reached, whether they be the early or the last ones, whether they be the functional neuropathies or the necrotic neuropathies, the functions of the affected neuron-aggregates are gone and lost, temporarily or permanently, according to the stages of the process. In any of the neuropathic stages of the pathological process the disturbed, arrested, or lost functions are not present in the subconscious. The neuropathies, functional and necrotic, are essentially organic in character. Unlike functional psychosis, the neuropathies have no subconscious "equivalents." The functions of the neuron-aggregates that have entered the neuropathic stages of the pathological process of neuron degeneration are also lost *subconsciously*. Hence in the neuropathies, even in the early functional stages, no synthesis is possible, because no corresponding subconscious states are present. *The neuropathies have no subconsciousness.*

The phenomena of functional psychosis form the borderland between the neuropathies of limited neuron-aggregate degenerations on the one hand and neuropathic insanities on the other. Functional psychosis is the common ground of neurology and psychiatry. The joint efforts of the neurologist and the



psychiatrist, directed towards a thorough investigation of these phenomena, will, no doubt, shed additional light both on psychiatry and neurology, and will help to open up an important domain of psychomotor manifestations apparently of obscure origin, but which the weight of facts and the whole trend of psychopathological research seem clearly to refer to definite conditions of dissociated mental systems with concomitant disaggregation of neuron-aggregates.

The psychiatrist who deals with highly complex phenomena of neuron degeneration, such as the different forms of mental alienation, will, from a study of functional psychosis, get a deeper insight into neuropathic psychosis. From a practical therapeutic standpoint, a thorough knowledge of functional psychosis means also the possibility of restitution, of cure. Both from a theoretical and practical point of view, the psychiatrist should lay special stress on the study and investigation of functional psychosis in general and of functional insanity in particular. *Functional psychosis, functional insanities, should become a special research field of the psychopathologist. Functional psychosis is specially characterized by psychophysiological disaggregation where synthesis is still possible.* The only way of restoring the disturbed equilibrium is to bring about a synthesis of the disaggregated groups with the functioning systems of the upper active personality. Such a synthesis is here brought about by the method of *intermediary* states.



This method was utilized with great success in other cases presenting phenomena of functional psychosis. The subconscious psychomotor reactions and the process of synthesis of disaggregated systems are certainly not unimportant subjects in the domain of psychopathology.

The second study, that of alcoholic amnesia, deals with the bringing out of subconscious memories. Mental experiences of a moment-consciousness, however low and degenerate, are not lost, but present in the subconscious in a diffused dissociated form and can be brought out in hypnoidal states induced by the method of hypnoidization. The patient is practically in his waking state and the subconscious memories surge up in fragments. The study at the same time tends to show that amnesia in general, and alcoholic amnesia in particular, does not necessarily imply a state of unconsciousness.

The study coming next in order traces the growth and development of a *persistent* dissociated subconscious system and the disturbances brought about by its *periodic eruptions* into the upper strata of mental life. The case with its psychic manifestations would have ordinarily been classified under the term of "psychic epilepsy." This term, though ambiguous, may be accepted, if understood not in the sense of epileptic origin or, as it is put, "psychic equivalent" of epilepsy, but as epileptoid disturbances of a purely mental character due to dissociative states of func-



tional neuropsychosis; in the same way as, for instance, psychic anæsthesias of functional diseases are not equivalents of organic neuron degenerations. Functional psychosis often simulates, mimics closely forms of diseases of purely organic nature. It may be said that in the pathological world one meets with manifestations somewhat akin to the phenomena of mimicry observed in the biological world, such, for instance, as the mimicry of colored markings found among the different species of *Lepidoptera* which, according to Darwin, belong not only to distinct genera, but also to distinct families. *The phenomena of "psychic" epilepsy are of the nature of post-hypnotic automatisms.* This point of view is corroborated by extensive researches in other cases which will appear shortly in the series. From a theoretical standpoint it may be said that all these phenomena under investigation are the manifestations of reproduction of dissociated moments-consciousness of the desultory type. The various types of moments-consciousness and their different forms of reproduction are not discussed here; they are worked out in detail in the *Principles*.

The fourth study consists of two parts: the first<sup>1</sup> reviews and discusses phenomena of mental dissociation in an interesting case of depressive delusional states; the second gives experimental data. The main interest centres round the formation of a highly

<sup>1</sup> Read in extract before the New York Neurological Society, May, 1902.



organized and remarkably stable delusional system with its characteristic power of assimilation. The manifestations of affective personalities and the process of their elimination, fusion, and synthesis as well as their relation to the dominant delusional system, the persistence of the dissociated groups and their insistent recurrence make the study of some value to the psychologist and psychopathologist. Finally, the course of dissolution of the dominant system and the elimination and fusion of the affective personalities make the research interesting not only from a theoretical, but also from a practical standpoint.

The fifth study is on mental dissociation observed in a case presenting limited psychomotor disturbances. The dissociated subconscious systems may possess as content some moments of the life activity of the organism as a whole; in that case the state of dissociation may give rise to the phenomena of so-called "psychic" epilepsy of the sensory or of the motor type. The content, however, may be limited and refer only to the activity or function of some particular organ. In such a case the result is that the central functionally affected neuron system gives rise to more or less profound disturbances in the psychomotor activity of the special organ. Specific peripheral sensori-motor derangements—anæsthesia, paræsthesia, hyperæsthesia, hypoæsthesia, paralysis, contractures, convulsions — may arise, all having the distinct features of functional psychosis. These



traits of functional psychosis, traced under many different conditions and followed through various phases, are certainly of great value to the science of abnormal psychology.

The last study,<sup>1</sup> that of dissociated states in psychomotor epilepsy, deals with the growth and development of a whole system presenting psychomotor disturbances apparently of an epileptic character. The psychomotor manifestations or attacks are traced to dissociated mental states. The attacks, however, on examination, are found to be not of an epileptic nature, but of the character of functional psychosis. As in the third study, the phenomena prove to belong to the type of "psychic" epilepsy in the sense of epileptoid manifestations of functional psychosis. The peculiarity of the case under investigation is that the psychomotor manifestations approach closely to the typical psychomotor derangements of organic epilepsy. The touchy spot of the subconscious system, the aura, serving as the trigger of the detached system characteristic of the reproduced moment, the impulsive form and vigor of onset of the psychomotor manifestations, all present to the student of psychology and psychopathology many points of interest. Finally, the method of bringing the buried subconscious memories to the foreground of consciousness, the progress of synthesis of the detached systems and groups and the

<sup>1</sup> Read before the American Neurological Association, June, 1902.



greater stability of that synthesis by means of the method of hypnoidization, forming an organic union of the disaggregated systems, and from a practical standpoint resulting in the disappearance of the attacks, are all points of scientific value to the psychologist and psychopathologist. These points are all the more valuable as they are fully corroborated by other investigations and cases worked on parallel lines and on similar principles.

Throughout the researches the processes both of disintegration and synthesis are followed out. Great stress is laid *on reassociation, or synthesis of dissociated systems and groups in the active personal consciousness*. The processes and modes of synthesis should be closely observed and experimented upon, because they often reveal the character of the constituent elements of the psychic phenomena under investigation, and give an insight into the nature of the synthetized psychic compound. The psychologist and the psychopathologist, like the physicist and the chemist, are interested not only in the processes of decomposition and analysis, but also in those of recomposition and synthesis. Synthesis verifies analysis. Moreover, if the psychologist and the psychopathologist are interested in the processes of synthesis of disintegrated systems from a purely theoretical standpoint, the physician and the psychiatrist find in the modes and processes of synthesis a very important practical aspect. For from a therapeutic standpoint *synthesis is cure*.



We sincerely hope that the psychologist, psychopathologist, psychiatrist, and the medical man of science who may happen to be interested in this line of research will realize the obstacles and difficulties encountered in the investigations of psychopathic cases, and thus come to realize the necessary shortcomings pertinent to the very nature of psychopathological research work.

It seems to us fit to open this series with a brief discussion concerning the difficulties, methods, and nature of psychopathological research, since a knowledge of them is of vital importance to the student of psychopathology in general and to that of psychiatry in particular, and also because in many quarters they have given rise to mistaken notions about the phenomena of mental life and to fallacious views regarding the nature of the methods employed in psychopathological investigations.

We wish to take this opportunity to make our acknowledgments to the former Pathological Institute of the New York State Hospitals founded by the first President of the New York State Commission in Lunacy, Dr. Carlos F. MacDonald, where, under the liberal conditions provided by the former Director, Dr. Ira van Gieson, this line of research was developed, and this series of experiments was conducted. The newly appointed head of the State Commission in Lunacy, in his destruction of the work of the Pathological Institute, has officially



"abolished" this line of psychopathological research. We wish here to express our gratitude to the Trustees of the New York Infirmary for Women and Children, and especially to Dr. Alexander Lambert, for their establishing a Psychopathic Hospital and Laboratory where this line of research is continued, and under whose auspices this series is published.

BORIS SIDIS.

NEW YORK, 1902.

# Some General Remarks Concerning Psychopathological Research

*By*  
BORIS SIDIS

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## CHAPTER I

### THE PRINCIPLE OF REDUCTION

THE entrance to the province of psychopathology lies through the domain of so-called functional psychosis. It is in functional psychosis that we find the initial stages of the more advanced states of mental degeneration. This necessity of investigating first the initial stages holds true in the experimental scientific investigation of all natural phenomena. Whenever we want to determine the relations and laws of certain types of facts, we do not study them in their manifestations on a grand scale. To grasp the laws of phenomena, the latter must be entirely under our control, but such control is impossible when the phenomena under investigation are displayed in their full force and grandeur. We do not study electrical phenomena in the lightnings of the storm, nor do we



study the laws regulating the tides in the grand sweeping waves of the ocean. The laws of electricity would never have been discovered had we been confined to the direct observation of electrical storms, nor would the laws of tides ever have been revealed in the observations of floods. It is by getting hold of similar phenomena reduced to a more insignificant state, and having them isolated, getting them thus under efficient control, ascertaining the conditions, and having them manipulated, changed, modified, and observing the effects—it is only under such circumstances that the nature of the phenomena can be clearly comprehended. The nature and laws of galvanism and magnetism become revealed in the feeble current of a small battery, and it is from this that we gain an insight into the nature of electrical storms. The electrical spark explains the lightning. The majestic sweep of the awe-inspiring billows of the ocean is replaced in the laboratory by waves produced in a bowl of water. The aurora borealis is explained by the glowing of the cathode ray in a small glass tube. The chemist does not require an ocean to find out the constitution of water,—a drop of water in a test tube is all that is requisite. Combustion is not explained in the great fires sweeping over a prairie,—a candle suffices. Composition of light was not learned from the observation of the rainbow, but on the contrary the rainbow found its explanation in the refraction phenomena of the prism



by which a ray of white light is decomposed. An insight into the nature of phenomena is given by a study of the processes on a reduced scale in their feeble initiatory stages. Universal gravitation and the movements of solar systems are, as the story runs, learned from the fall of an apple. The scientist can study his phenomena only when they are on a reduced scale, and only under such conditions can he handle his material efficiently.

In the study of the nervous system, we do not put a whole brain under a microscope,—a single section, often limited to but a few isolated neurons, suffices. In the investigation of the causes and laws of biology, we do not carry on researches on elephants or hippopotami,—amœbæ, cells give us a far better insight. In geology, the formation of strata, of islands, of mountains and continents is learned from the actions of rills, brooks, and from the sediment slowly formed in glasses and jars. Great effects are often wrought by the persistent action of small, insignificant causes. The theories of grand catastrophes had to be abandoned, and the slow and gradual action of infinitely small forces recognized; these alone were sufficient to reveal the mechanism of grand and complex manifestations.

In this respect the very theory of evolution may serve as an excellent illustration. The pre-Darwinian biologist worked with whole species and genera, and as such his work was a failure. Darwin started with



observations and experimentations of initial stages of insignificant variations produced in domestic animals, especially in pigeons. The study of insignificantly small differences known as individual variations and divergencies gave him a deep insight into the origin of species. Modern biology goes even farther into the minutiae of cell structure, and the slightest differentiae in the stages of cell development are followed up and experimented upon, with the result, that the insight into the relations, laws, and conditions of biological phenomena becomes wider and deeper. The study of the initial stages of cell life permits the biologist to get for the first time a glimpse into the great problems of biological science, those of heredity and variation. It is in the seemingly insignificant that science discovers the secrets of the most potent natural forces ; it is in the apparently trivial that the scientist finds the key to the deepest mysteries of nature.

This principle of reduction is all the more important in the domain of abnormal mental life, because the phenomena presented to the investigator are of extreme complexity. Great scientific caution must therefore be exercised in the study of psychosis, and only the strictest application of the principle of reduction can help us to gain an insight into the nature and laws of abnormal mental life. Moreover he who deals with the investigation of mental phenomena, whether normal or abnormal, has the dis-

advantage that his material cannot be directly modified at will without extreme caution, since the factors entering into the problem are complex and form an organic whole the least disturbance of which may produce permanent injury to the mental or physical constitution of the organism.



## CHAPTER II

### THE METHODS OF PSYCHOLOGY AND PSYCHOPATHOLOGY

THE investigator of mental life has two methods of procedure, one more of an external, the other more of an internal character. Without the least direct modification in the psychophysiological organization, one may study the effects consequent on the modification of certain conditions of the external environment, changing the external stimuli and their incoming impressions. This method is of an indirect character, inasmuch as it does not directly modify the material under investigation. In endeavoring to find the threshold of sensibility to touch or to sound stimuli, as when trying to discover the relation of appreciation of stimulations to their objective increase, we do not in the least change the sensitivity itself—in fact, a change in sensitivity would destroy the object of the inquiry. Sensitivity is left alone, unchanged; no anæsthesia, no hypoæsthesia, no hyperæsthesia is produced. The function of sensitivity remaining unchanged, we may find that within certain limits in the muscular sense, for instance, the increase of a weight stimulus is appreciated with the increase of  $\frac{1}{20}$  of its magnitude; that in strain sensibility such as the ap-

preciation of lifted weights the increase required is  $\frac{1}{40}$ ; that in sound it is  $\frac{1}{3}$ ; that in vision it is  $\frac{1}{100}$ , and finally we may arrive at Weber's law that the subjective appreciation of an increase in an external stimulus is brought about when that increase bears a constant proportion to the given objective stimulus; or one may generalize further with Fechner that sensation varies as the logarithm of the stimulus. If similarly we try to study memory, for instance, by the external method, we may try to find out the span of memory by memorizing in a given time a definite series of words, numbers, or so-called "nonsense" syllables; in a similar way we may study the elements of time in the lapses of memory—how much, for instance, of a given series can be repeated after a certain interval of time, and how long it takes to relearn it. The function of recall remaining unchanged, one may experimentally arrive with Ebbinghaus and Wolfe at the general law that the quotients of retention and forgetfulness are inversely proportional to the logarithms of the times passed since the first memorization. Here once more the modifications effected are not in the psychic function itself, since the function of remembering, of recall, is from the very nature of the experiment left unchanged, — no amnesia, no hypomnesia, no paramnesia, no hypermnesia is produced. In other words, the indirect external method leaves the psychic functions unaltered and modifies only the conditions of the



external environment. The indirect method of external modification is adapted to the study of the *normal* psychic function.

In our researches into the nature and laws of psychic life, we may proceed by a different way,—we may leave the external conditions unaltered and have the modification produced in the psychic function itself. We may study directly the function of sensitivity in its various forms by producing or observing the various changes and modifications occurring in the very function under investigation. We may study how the same stimuli work on a sensibility whose threshold is greatly changed, lowered, raised, or altogether lost; in other words, we can study the function of sensibility in the various gradations of hypoesthesia, hyperesthesia, and paræsthesia. The changes in the function of sensibility give us an insight into the relations of sensations and the modes of their aggregations and combinations. The modifications or eliminations of definite elements of visceral sensibility give us an insight into the nature of emotions and moods, whether in normal or abnormal states, such as are found in the different forms of mental alienation,—mania, melancholia, periodical and circular insanity, paranoia, general paresis, etc. Modifications of the external senses, such as touch, vision, audition, kinæsthesia, etc., give us an insight into perception, normal or fallacious, such as the perception of spatial relationships, movement, extension, position, local-



ization, distance, magnitude, translocation, etc., with their numerous illusions and hallucinations. Modifications in the function of presentation and representation by the observation and induction of illusions and hallucinations furnish an explanation to the mode of change and combination of their various constituent psychic elements and processes, and we may, for instance, arrive at the conclusion that hallucinations are of the nature of secondary sensations,—that hallucinations are really secondary percepts. These may in turn unravel the nature of the different forms of mental aberrations accompanied by illusions and hallucinations of the different senses. In the mental derangements as manifested in the different forms of sensory aphasia, apraxia, general and specific amnesia of an organic character, we discover the isolated factors that enter into the organic tissue of our psychic activity. In the delusions of the insane, in the psychomotor manifestations of insistent and fixed ideas, of imperative impulses and uncontrollable emotional states, we find a mine of valuable modifications of mental functions the investigation of which gives a deep insight into the nature of mental processes. Finally, in the phenomena manifested by the infinite number of variations presented by functional psychic derangements, we find an inexhaustible wealth of material for the study of mental life, both in its normal and abnormal phases. Mental functions known under the collective names of memory, will,



personality in its various aspects, and the vast domain of the subconscious with its multifarious manifestations, open an infinite vista to the pioneer investigator. We may, for instance, find the relation of suggestibility to the suggestion-stimulus; that normal suggestibility varies as indirect and abnormal suggestibility as direct suggestion. The phenomena of psychopathic anæsthesia, aboulia, amnesia, psychopathic fixed ideas, recurrent dissociated moments, multiple personality—all form an inexhaustible mine for the study of the laws and relations of mental processes and the various types of mental activity, and we may arrive at the important generalization that functional psychosis is a disaggregation of psychophysiological constellations, a dissociation of moments-consciousness accompanied by a corresponding dissociation, or possibly retraction, of neuron systems. It is in functional psychic manifestations that the principle of reduction is most fully exemplified, since they present the initial stages of psychic modifications, and hence they lend themselves best to the scientist for the gaining of an entrance into the regions of psychomotor life.

We must discriminate between two methods—that of observation and that of experimentation. All the cases presenting modifications of an organic character fall chiefly under the method of observation, since their production is not in our control; they are taken as given, the conditions of their origin and develop-



ment being often obscure or entirely unknown. These cases are, however, subject to the indirect method of investigation of external stimulations, the altered mental functions remaining further unmodified, thus giving rise to a new norm of sensitivity. Modifications of an organic character are also subject to direct modification by means of physiological stimulations, such, for instance, as are brought about by some toxic stimuli, and they are, although to a very slight degree, directly modified by psychopathic methods of investigation. Psychic cases presenting organic degeneration are nature's own experiments and as such they are of extreme value, but they often present advanced stages of modification where the changes are too great and intense. The gap produced by organic degeneration is often too wide to be directly of full service to the investigator. In order, therefore, to have organic cases utilized to their full extent, the only way is to find cases presenting intermediary stages of modifications, thus filling up the impassable gaps in the series of the process of degeneration. It is in functional psychic derangements that one can find the proper material for investigation,—material that lends itself readily for control and manipulation. It is in functional psychic diseases that one finds the initial stages of psychomotor modifications, and it is here, in the functional psychopathic diseases, that the principle of reduction is fully manifested,—the psychomotor phenomena appear on



a small reduced scale manageable and controllable by the hand of the experimenter. That is why the investigation of functional psychopathic changes is so important in the unravelling of the relations and laws that obtain among the phenomena of mental life. This line of research is all the more valuable, because in the artificial subconscious states functional psychopathic phenomena can be reproduced experimentally and the conditions of their states can be closely studied. Functional psychosis is therefore of the highest moment in the study of psychomotor life phenomena.

## CHAPTER III

### PSYCHOSIS AND INTROSPECTION

IF from a general scientific standpoint we find that we can penetrate into the nature of psychosis by studying the initial stages of mental dissolution, a closer inspection shows that there is a special reason why this procedure is absolutely indispensable. The phenomena of psychosis are not of the same nature as physical phenomena, and do not lend themselves to immediate observation and still less to direct manipulation and experimentation. Psychic phenomena are not of an objective, but of a subjective nature, and as such must be largely studied by subjective methods of investigation. Sensations, images, ideas, thoughts, judgments, feelings, emotions, the material of the sciences dealing with mental life, can not be touched, handled, cut, fixed, stained, and inspected under a microscope. An idea, a feeling, can not be measured in millimetres, nor weighed in scales, nor dipped into a fixing fluid for further reference. Sensations, feelings, ideas, and emotions do not admit of being touched, seen, smelled, heard, nor tasted, for they have no physical properties. A psychic phenomenon has no resistance, no elasticity, no weight, no extension, nor can it be measured by lines, squares, and



cubes. An idea does not sound, nor has it odor, nor taste, nor is it black, blue, green, red, yellow, or violet.

Being of a subjective character psychic phenomena require subjective methods of investigation, those of introspection. Introspection is the most important instrument of psychological research; it is the microscope of the psychologist and psychopathologist; it is the powerful instrument of mental analysis and synthesis, the scalpel and microtome for psychic dissection and the means for mental fixation and preservation. We can know of what is going on in our mind by our own introspection, and we can find out what is going on in other people's minds by the account of their own introspection, or by what is far less certain, the introspective interpretation of their motor manifestations. In no other way can we possibly gain access to mental phenomena. In the study of perception, conception, and memory, in the investigation of illusions, hallucinations, insistent concepts, fixed ideas, imperative and recurrent but repressed impulses, delusions systematized and unsystematized, amnesia, aphasias, etc., on what else do we fall back ultimately but introspection, the main instrument of psychology and psychopathology? If it were not for the patient's account of his experiences; if it were not for the introspective interpretation of his various actions based on his accounts, statements, and reactions, what could we possibly know of all those experiences the psychologists, the



psychopathologists, the psychiatrists tell us? Introspection alone can reveal a psychic fact.

If we turn to those branches of neurology that are concerned with psychic processes, we find the same truth illustrated—the introspective method is the main guide in the inquiry. Neurological investigations of aphasia are really based on the introspective method of psychological analysis. The percept is resolved into its psychic constituents, into so-called “images,” by means of introspection alone. Take the stock example of the “bell images.” What are the mental images aroused on hearing a bell ring, on seeing a bell, on hearing the word “bell,” on pronouncing or on writing the word “bell”? Introspection alone can give us the answer. Sensations, “memory images,” representations can not possibly be measured in microns, nor fixed in hardening fluids; they are essentially psychic in character, gained from an introspective analysis. And still the neurologist does not hesitate a moment to base his scientific work of aphasia on such introspective accounts. Whether the psychophysiological association theory of localized “images” accepted by the neurologist is right or wrong, one thing is sure and clear that there is no possibility, even for people with a strong objective bent in their investigations, such as presented by the neurologist, to get at psychic phenomena by any other method than that of introspection. How else can a psychic fact be reached? A psychic fact can not possibly be magnified by a



microscope, nor dissolved out of the brain by means of chemical reagents, nor seen by the light of a Roentgen ray, nor revealed by the aid of spectral analysis. The contents of a psychic state can be reached through introspection alone.

Turning to the analysis of cases, we find that the neurologist is guided by the patient's introspective account interpreted in the light of the general psychological theory maintained by the neurologist and gained from introspection. The patient suffers from visual apraxia, he is shown a bell and he tells us that he does not know what it is, but he does recognize the bell when it is rung or put in his hand; the neurologist concludes that the visual memory-images are lost. How does the neurologist arrive at this conclusion if not by the method of introspection? The patient gives us to the best of his abilities what the sensations of certain forms, size, and color indicate to him, and the neurologist further interprets this introspective experience as to what the psychic material and factors are for the complete perception of the external object. The patient suffers from auditory aphasia, he can hear sounds but can not understand the meaning of words. The patient experiences the components, the sounds, and syllables, but does not realize their combinations and associations. The neurologist concludes that the patient's memory for auditory word-images is lost; although in the present hypothetical case it is not the auditory-



word-images that are gone, it is more probable that the manifestations are due to dissociation from the memories relating to the other senses. Whatever the real psychological interpretation be, one thing stands out clear and distinct, and that is the necessity of falling back on the patient's introspective account of his experiences. The neurologist further interprets the psychic deficiency by his own introspective analysis as to what sort of psychic content may be absent to account for the mental symptoms, and puts them down to the failure or loss of auditory memory-images. An autopsy may reveal the fact of degeneration in the convolutions of the temporal lobes, and the neurologist comes to regard these convolutions as the area for auditory memory-images found and analyzed introspectively. Whether the neurologist is right or wrong in his generalization, the method of procedure and the conclusion arrived at are essentially of an introspective character.

Similarly in visual aphasia, such as alexia, the patient sees words but does not know how to read them ; the patient may even be able to describe the color, size, and form of the letters ; he may be able to copy and even write spontaneously, to recall how to read written or printed characters. The neurologist may point out the missing psychic elements necessary to the formation of the comprehension of written or printed words, and refer the " symptoms " to the loss of visual memory-word-images ; although



here again it may be more correct in this case to refer it to a lesion, or dissociation, organic or functional, between certain groups of visual memories and those derived from other sources. An autopsy may reveal a lesion or degeneration in certain portions of the convolutions of the occipital lobes, and the neurologist arrives at the generalization that the convolutions of the occipital areas contain "visual centres." By what other method is the neurologist guided here if not by that of introspection? Introspection is the main method of all branches of psychological sciences for the simple reason that there is no other way of gaining access to psychic phenomena. Introspection alone can give direct cognizance of mental facts.

Psychological introspection, however, must by no means be confused with the introspection of the metaphysician. The introspective method of psychology is of a purely scientific character; it simply deals with facts of consciousness, such as sensations, percepts, images, ideas, sentiments, affections, emotions, decisions of will; it investigates their conditions, constitution, and laws. Psychology, in short, deals with the psychic facts and their relations. Psychology uses the methods of observation and experiment; it starts with psychic phenomena and does not leave the ground of mental life; it remains entirely subjective throughout; psychological findings, laws, and theories are concerning mental manifestations, concerning facts, *facts of consciousness*.

## CHAPTER IV

### THE SUBJECTIVE METHOD AND ITS DIFFICULTIES

IN the investigation of mental life-processes, the subject's or patient's co-operation is of the utmost importance; without it our steps are uncertain and the conclusions are dubious; in fact, nothing whatever can possibly be accomplished, since the very subject matter of investigation is lacking. It is clear then that under such conditions the only cases truly valuable for psychological and psychopathological research are those which have not travelled far on the road of mental dissolution, because they alone are in that stage where a subjective account is still possible. Those cases of mental dissolution that have advanced far on the way of disintegration can not be utilized, because they are unable to give directly an account of their experiences, and all we can know of them must simply be a matter of guess and inference. The cases presenting advanced stages of mental dissolution can only be understood in the light of the initiatory stages; advancing step by step through the transitional and intermediary stages of dissociation and disintegration. Functional psychosis alone complies with all such conditions and supplies ample material for scientific experimental research.



The subjective method of investigation, required by the very nature of psychic phenomena, makes it extremely uncongenial for those who are used to work objectively with the rule, the scale, the microtome, and the microscope, and who trust to their senses alone, relying only on what is visible and tangible, taking as the measure of reality the extensive and the ponderous, all else being in their opinion so much "stuff and rubbish." The impartial scientist, however, will without hesitation agree that sensations, perceptions, images, ideas, thoughts, decisions of will, judgments, beliefs, sentiments, and emotions of normal and abnormal character are facts as real as are physical objects, and as such they fall into the domain of scientific research. If then we want to approach these facts from a strictly scientific standpoint, it would be high folly to study them by methods inappropriate to their nature. We may as well ask the geometrician to treat lines with staining fluids, look at arcs and secants through the microscope, cut sines and cosines with the microtome, measure conic sections with pints and gallons, weigh parabolas on the balance with ounces and grammes. Each subject matter must be treated in its own way and by methods specially appropriate to it. Psychological and psychopathological material being essentially of a subjective nature must be studied by subjective methods; subjective accounts, introspective analysis and interpretation are of the highest moment in the study of the relations and laws



of psychological and psychopathological phenomena. Not even the highest and strictest chemical analysis can reveal as much as the least insignificant constituent of a fixed idea, nor can the best of microscopes reveal the meanest factor of an illusion or hallucination. Introspection and introspective interpretation alone can lay hold of a psychic fact.

Because of this subjective side, essential in psychosis along with the introspective aspect requisite in all investigations of psychic phenomena, one has to be very careful and cautious in the acceptance of his facts. Only a close critical inspection from all sides possible can justify one in acceptance of the full truth of what has been given to him as introspective statements of a subjective experience. The primary requirement is to convince oneself of the intelligence of the subject or of the patient so as to be sure that they are able to give a correct introspective account of their experiences. One should not relinquish continuous questioning and should always be on his guard. For the investigator must never forget that the psychic facts occurring in others, in subjects or patients, can not be gotten at in a *direct* way, but only in an *indirect* way. The nature of evidence in psychological research is essentially of a *circumstantial* character. And still the facts obtained are as much, if possibly not more, of a reality as any physical facts; for he who denies reality to psychic fact denies not only the possibility of all sciences, but of all thought, and not only



contradicts himself in the very act of his denial, but puts himself in the condition of the insane suffering from the delusion of the unreality of his inner life-activity. The second requirement is to be well acquainted with the subject or patient and to be sure of the moral trustworthiness of his statements and description of his subjective experiences. The statements of the subject or patient should be carefully sifted and ceaselessly tested.

Psychic processes should be studied as organic functions are by the physiologist and biologist. Psychic functions should be regarded as having at least equal rank with other functions and processes of the organism, such for instance as digestion, respiration, assimilation, blood circulation, and other innumerable physiological functions.

From a biological and physiological standpoint a psychic process should be regarded as a function of the organism, and possibly as one of its most important functions, since it is this function that brings about the adjustment and adaptation of the organism to its environment. The all-importance of this physiological function in man's life-history can hardly be too highly overrated, because it is on account of the high development of the psychic function that he has become the "lord of creation," the victor in the struggle for existence against other animals, even the creator of new organs in the shape of machinery, mechanical, chemical, and electrical, of ever greater

complexity,—new organs which give him ever greater control over his environment. It is this psychic function that enables man to penetrate into the far past of bygone ages, into the history and development of this world—nay, of the whole universe beyond, into the chasms of eons to come. By the help of the psychic function, man measures the velocity of light, he weighs the distant stars in the balance, and analyzes their composition in a ray of light; he chains the titanic spirit of fire and works him as his drudge; he employs light as his engraver, orders the lightning as his messenger, and makes the very lips of dumb matter resound and re-echo with human speech and emotions; it is by means of this function that man overcomes matter and force and breaks down the barriers of time and space. A function of such paramount importance in the biological history of man's existence should certainly not be neglected, and the utmost efforts should be put forth towards the gaining of a more or less precise understanding of the *modus operandi* of its constituent processes.

It is true that in order to approach psychic life we must go about it in an indirect way; we can aim at it, so to say, round the corner. We can not possibly directly examine the phenomena of psychosis, insofar as they occur externally to us, in others, in subjects, or in patients, but this is always the course of nature. The inner spring of natural manifestations



is hidden, and especially is this the case in such complexities as are presented by organic life phenomena in general and by psychic processes in particular. The inner mechanism of natural events rarely lies on the surface, so that he who runs may read; it is always enshrouded in darkness and mystery. The human mind, however, in its ever-restless activity, has overcome many a difficulty, and by the powerful instruments of its scientific methods has penetrated into the most inaccessible regions of the world of phenomena, and by the intense light of its searching thought has dispelled the darkness surrounding many a deep recess in the infinite domain of nature. Science has wrenched many a mystery from nature and shall wrench many more. Psychosis is one of the many great mysteries of nature, but this stronghold too, inaccessible as it now seems, is bound to be taken by the patient siege of scientific research and bold assault of the daring investigator.

## CHAPTER V

### THE ARTEFACTS OF PSYCHOPATHOLOGY

THE investigator becomes specially puzzled when he comes in contact with the initial stages of what we may call functional psychosis, what may be more correctly termed as psychic dissociation, and what is commonly known under the name of "hysteria." In functional psychosis, one finds himself on shifting sands, so to say. The nature of those psychophysiological phenomena presents such an extreme instability, — the symptoms or manifestations are so unstable, so ephemeral, so ill defined in character and form, — coming, vanishing, ceaselessly playing like combinations of color in a kaleidoscope, ever changing and shifting their position like the ever-restless waves on the ocean, no wonder that many an investigator feels at sea, turns dizzy, and finally becomes nauseated at the whole affair and gives it up in disgust. This disheartening state of things becomes to many minds all the more intolerable, because a good many of the phenomena, being of a psychic character, necessarily depend on the patient's introspective account, and one has to take such accounts not only *cum grano salis*, but often almost the whole of them have to be entirely



distrusted. Shamming, simulation, gross lying, and courses of deliberate deception frustrate all attempts of the earnest scientist, who finally gives up the whole matter, not being able to find his way in this tangle of deceit and conceit, and is glad to leave this labyrinth of lies, sham, and fraud for something more real and truthful to spend his time upon. The story is told of a physician who had devoted a good deal of his time to an interesting case of a young lady suffering from "hysteria" and had scrupulously taken detailed notes on the subject. One day the young lady, in a confidential mood before she left the physician's office, told him she had one thing more to add, and that was that the whole thing was not true. One can imagine the physician's just indignation. He never after took an interest in any sort of that "sham and fraud."

It is no wonder that some go to the extreme and declare that all phenomena of psychic character are nothing but fraud, or as some have termed them "innate cussedness." Granted that there is a good deal of "innate cussedness" in some cases of functional psychosis, still one can not make this sweeping statement in all cases. In throwing away the husks one should be careful not to throw away the kernel; gold comes with a good deal of sand, and diamonds are rarely found without a quantity of gravel. To abandon metaphors, in all sciences the initial stages of natural processes are uncertain and ill defined. This uncertainty increases with the complexity of the phenomena,



and in organic life where the complexity reaches a very high degree the uncertainty is proportionately greater. They who work in minute microscopic anatomy know how disheartening and disappointing are artefacts, and artefacts in microscopical anatomy correspond closely to the illusory "facts" of the "shams and frauds" of functional psychosis. In fact, we may regard *the fraud phenomena of psychosis as the artefacts of psychopathology*. In cytology, we know how uncertain, almost deceitful, the microscopic presentations are, as, for instance, in the neurofibrils coursing through the neuron, or the intraconnections of the terminal arborizations, or the varicosities found under certain conditions in the dendrons and neuraxons with their collaterals. Similarly uncertain is the whole extent of biological discussions and works clustering round the function and *rôle* of the centrosome and microsomes, and so on. One could multiply, *ad infinitum*, instances of this kind taken from various branches of science. No one, however, will claim that it is nothing but a waste of energy to spend time and labor on such investigations and that the whole domain of cytology and biology is nothing but a snare and a delusion.

In the early stages of science, the uncertainty of the phenomena is extreme,—myth and fraud form a good portion of the web and woof of early science, which even at its best is inevitably saturated with metaphysics. Physics has its magic, chemistry is



bound up in alchemy, astronomy is mingled with astrology, biology and medicine are organically interwoven with spiritualism and incantations, and even mathematics has its early stages of magic symbolism, as one can witness it yet in the magic squares now forming amusement and play in leisure hours. Even in Greek civilization, in which philosophy and science have made considerable progress, the greatest thinker of the age, Socrates, was so disappointed with the state of uncertainty of physics and astronomy that he turned away in disgust to the more practical and more certain knowledge, that of man, and so was Hobbes in modern times in his relations to the scientific investigations of the English Royal Society.

Patience and perseverance are the great virtues of the scientist. In spite of all disappointments and failures, physicists and astronomers went on working on their material and now they fall but short of the exact mathematical sciences. We must not, therefore, be disheartened at the obstacles in psychopathology, but take courage and work at them with all the more patience and ardor in proportion as the difficulties are greater.

We can not possibly close our eyes to the reality of the phenomena of psychic nature in general and those of psychopathic character in particular, lest we be like the baby who hides himself by shutting his eyes, or like the bird that puts its head under its wing to escape from imminent danger. One can not



shut out the world by ignoring it. The wisdom of science is to look with eyes wide open. Because a number of cases are snares and artefacts, we are not in the least justified in ignoring the whole subject. We do not throw away pearls and diamonds because of imitations.

What is requisite is the sharpening and training of that power of discernment which discriminates between the false and the genuine. We may claim that this power of discernment in regard to psychic facts is not yet fully developed or is possibly lacking altogether, although this is not strictly true, but it will not do to brush the whole subject aside by a vague objection of "innate cussedness." *First of all, "innate cussedness" in itself may make a psychic trouble worth while studying;* and secondly, all types and forms of psychic troubles are subject to the same taunting criticism.

The multiform types of aphasias and apraxias are liable to similar doubts and criticisms. How do we know that all those different aphasias and apraxias are not sham and simulation? What assures us of the fact that the aphasiac is not an impostor and fraud? The patient suffers from auditory aphasia; we speak to him and he seemingly does not understand us; he can not write from dictation, but he can write spontaneously; may it not be all mere fraud and deception? The patient suffers from visual apraxia; we show him a shoe and he tells us it is a cat or a



horse ; what if the patient simply lies systematically and persistently ? The patient suffers from alexia ; he is shown words which he claims he can not read, but he can write from dictation as well as spontaneously ; what if it is only so much simulation, "innate cussedness" ? Are not all the forms of aphasias and apraxias subject to similar criticisms ?

Delusions, illusions, hallucinations, in the different forms of mental alienation, can not be directly known, and the investigator depends for a knowledge of them on the patient's introspection. One can not directly perceive fallacious perceptions and false systems of ideas occurring in other people's minds. We can not see other people's visions, nor can we feel their joys and pains, nor can we directly know and think other people's ideas and thoughts. Not even the mystical agency of telepathy can accomplish such a miracle. The phenomena of mental diseases are essentially subjective, and can be communicated only by the individual's own introspective account, and as such they are uncertain, dubious, and for all we know may be only sham and deception. The systematized delusion of paranoia may be only deceit and fraud ; the actions, hallucinations, illusions, and delusions of the maniac, melancholiac, general parietic, paranoiac, may be nothing but tissues of falsehood and perverse "innate cussedness." In fact, all types and forms of insanity may be so many variations of the one fundamental trait of perverse "innate



cussedness." What we have to do is to open wide the gates of the asylums and hospitals and turn loose the insane.

It is clear that no one will for a moment entertain such an extreme and untenable position. If, then, such a position can not possibly be maintained, where shall we draw the line. Where do the real forms of mental aberration begin, and where lies the province of the unreal, of sham, simulation, and "innate cussedness"? What we must agree to is the indisputable fact that all mental ailments, that all psychic processes, whether they be normal or abnormal, are all essentially "*innate*" in their nature, and to discard them by terming them "*cussed*" will neither explain nor help matters. The phenomena, whether they be "innate cussedness" or not, *are there* and can not be ignored theoretically or practically. The only way out of the difficulties, and they are most certainly great and grave, is to accept them with scientific impartiality of judgment and study them with great caution and circumspection in such order as the processes appear, in a series from the early to the later stages, the early stages requiring our special attention, since they are the most valuable for scientific research, though the pitfalls are more numerous and more dangerous.

The practical aspect of the study of the early stages of abnormal mental life must not be overlooked, for it is in the early stages that the physician is enabled to arrest the disease process which, when permitted to



reach the advanced stages, may often be of a grave or fatal character. In this respect the study of functional psychosis is invaluable. The scientific men of the medical profession should be specially interested in the investigation of the problems presented by functional psychosis, because the manifestations of functional psychosis lend themselves to so much abuse by all kinds and forms of "fakes," "miracle cures," abject superstitions and prejudices which mar and disgrace civilized humanity.

# Mental Dissociation in Functional Psychosis

*By*

BORIS SIDIS *and* WILLIAM A. WHITE

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## CHAPTER I

### HISTORY AND EXAMINATION

D. F., the patient, age thirteen, was admitted to the Binghamton State Hospital, April 8, 1897. According to the medical certificate, the patient "previous to the attack was quiet and modest; is now boisterous and profane; will throw anything she gets in her hands at any one she sees; has said if she could get a knife she would kill some one; breaks windows. She will fight, strike, pull hair, try to pull boards from side of the house; throws pillows and bedclothes, screams, uses vile and profane language; has to be watched to keep her from climbing out of windows, etc. Struck at mother; tried to break window; laughs violently; sings and screams, such as: 'I want a pint of whiskey; ha, ha, ha, God damn you! Sonny, are you tired?'"



Patient is of a neurotic family on paternal side ; paternal grandmother was insane ; father committed suicide. On maternal side family history is negative.

Up to her thirteenth year nothing abnormal had been noticed in the patient : she was well and attended school regularly. About the 16th of March, 1897, she became suddenly disturbed mentally ; she was violent and excitable, destructive, using profane and obscene language, threatening those about her with personal injury ; would do rash acts, thus requiring the constant care and watchfulness of her people.

When admitted, she would not talk to the examining physician, and is described in the case-book as having a stupid, somewhat dazed, look. The night of her admission, and the following morning, she had two convulsive seizures, accompanied by abdominal pain and crying. On examination in the morning, she presented marked tremor of the right hand, was reticent, and had no recollection of the facts which led to her commitment as insane. It was noted that she could not see well. She complained that after a short application to reading the words on the page became blurred and indistinct. An examination of her field of vision showed a marked contraction, the maximum range being only  $25^{\circ}$  (see Figure 1). Vision was, however : OS 20/15, .50 astigmatism ; OD 20/15, .50 astigmatism ; the right disc was hyperæmic.

A physical examination revealed the fact that the patient possessed a moderately sized goitre and that

she had not yet menstruated. No other physical abnormalities were found and the rest of her bodily functions were normal.

An examination of the patient's general sensibility in the waking state gave the following results :

Localization of touch. Eyes closed.

Hand : Pointed out precise place immediately after touch. A few seconds later (about 5 sec.) pointed out about 2 mm. farther.

Tip of nose : Pointed out correct right after, and 1 mm. farther, from memory. Cheek and chin : Correct right after, and 2 mm. removed 5 sec. later.

Legs : Immediately after touch stimulation, correct ; from memory (5 sec. later), 1 mm. removed.

Localization of sound. Eyes closed.

Five out of eight cases correct ; direction of sound correct.

Watch ticking heard 56 cm. from left ear.

“ “ “ 48 cm. from right ear.

When watch was moved toward ear from a region in which it could not be heard, the distance was diminished ; when moved in opposite direction, distance increased.

Differentiation between dull and sharp points :

Pressure 20 on forehead, one trial, correct.

“ 30 on back of hand, one trial, correct.

“ 20 “ “ “ “ “

“ 10 on palm, two trials, correct.

“ 10 “ “ “ “



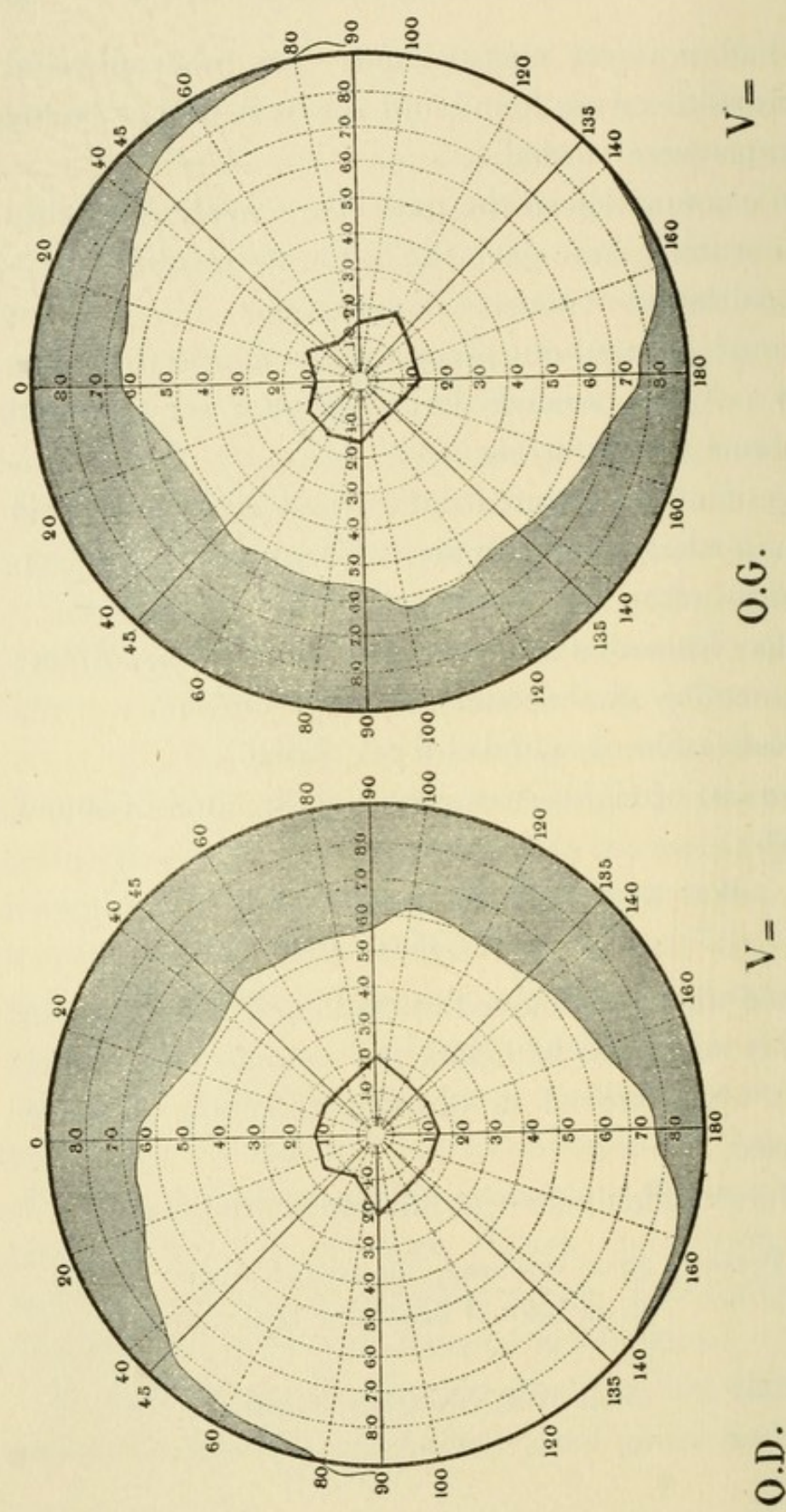


FIGURE 1.

Patient was blindfolded,—letters, figures, etc., drawn on left forearm, patient given pencil and paper and asked to reproduce immediately the outlines of figures or letters. Results negative. There was a tendency to reverse figures drawn.

When blindfolded movements communicated to fingers and arm were correctly reproduced with other hand and arm.

The field of vision for *white, red, blue, and green* were taken. The field of color vision showed reversal. (See Figure 2.)

Objects were introduced into anæsthetic portion of field and she was asked to guess what they were: first, the particular character of objects, and, when this could not be guessed, their general character. The general character, such as piece of paper, could be guessed in a wider field than the particular character, *i. e.*, the letter or figure on the paper.<sup>1</sup> (See Figure 3.)

Very sensitive to different colors; picks them out at once, matches them perfectly. Picks out of a basket of woollen yarns light colors by preference.

The sense of smell was highly discriminative.

The dynamograph gave the following results :

WAKING STATE.			HYPNOSIS.		
1st trial :	R. H.	75		R. H.	70
	L. H.	75		L. H.	56
2d trial :	R. H.	65	Suggestion of lack of strength.		
	L. H.	54		R. H.	28
				L. H.	25
			Suggestion of strength.		
				R. H.	80
				L. H.	60

<sup>1</sup> For a full discussion of the method of guessing in relation to the general and particular character of subconsciously perceived impressions, see *Psychology of Suggestion*, pp. 165-176.

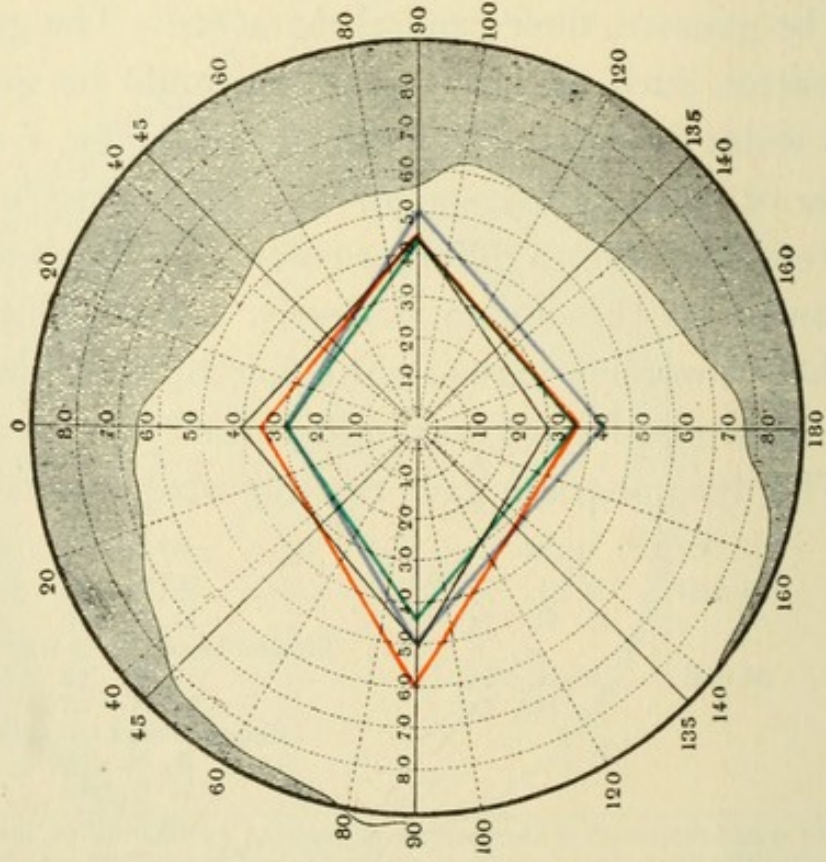


White.

Red

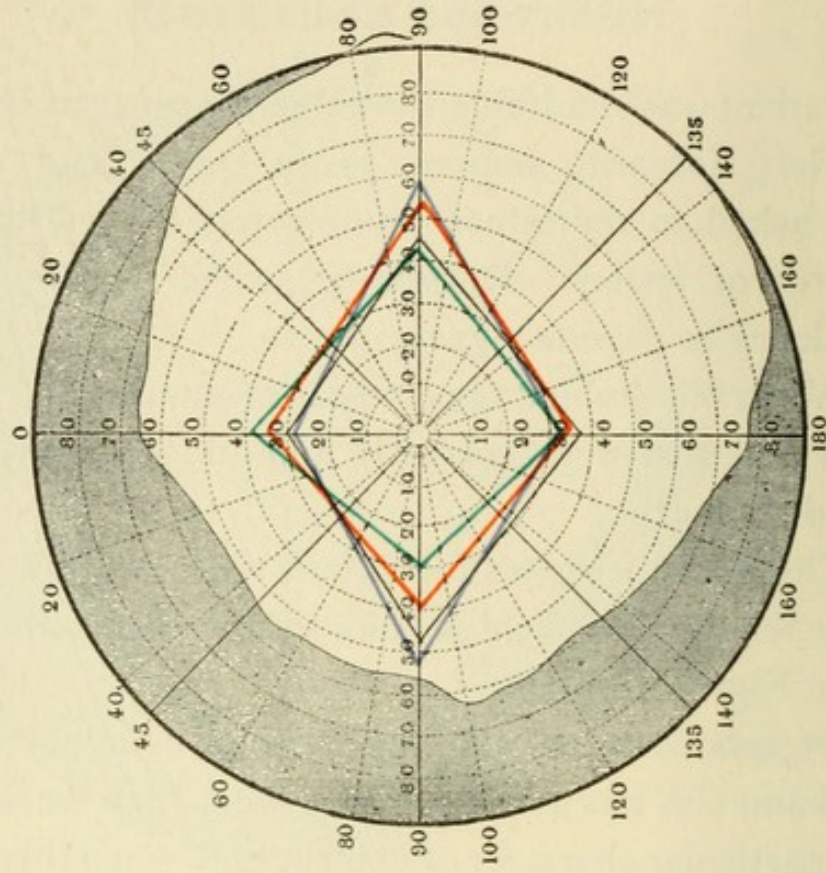
Blue

Green



O.D.

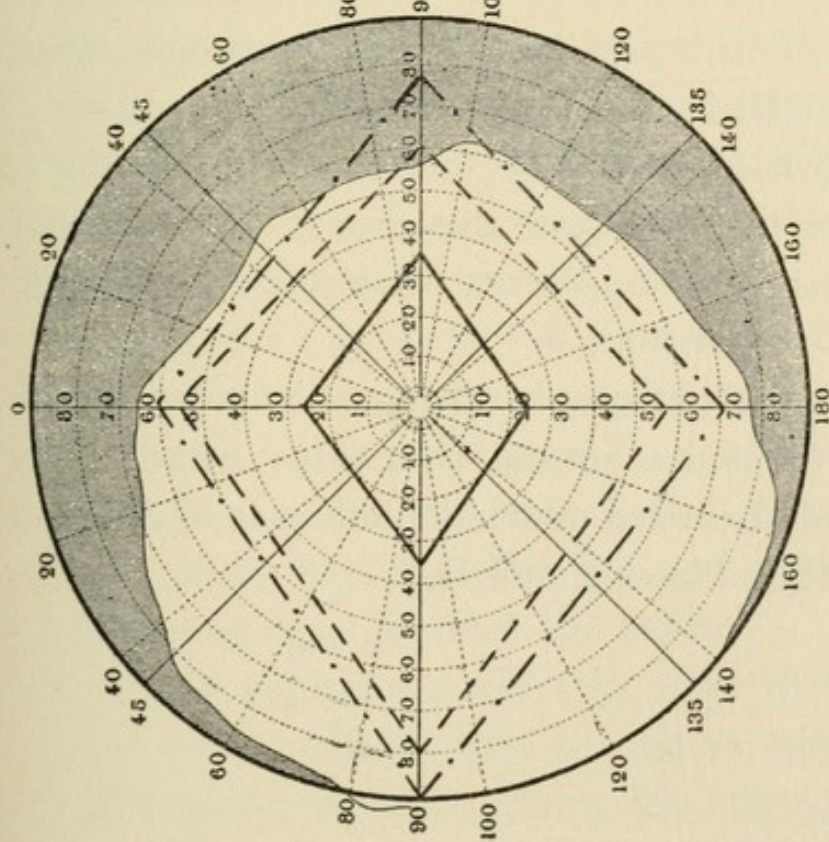
V =



O.G.

V =

FIGURE 2.

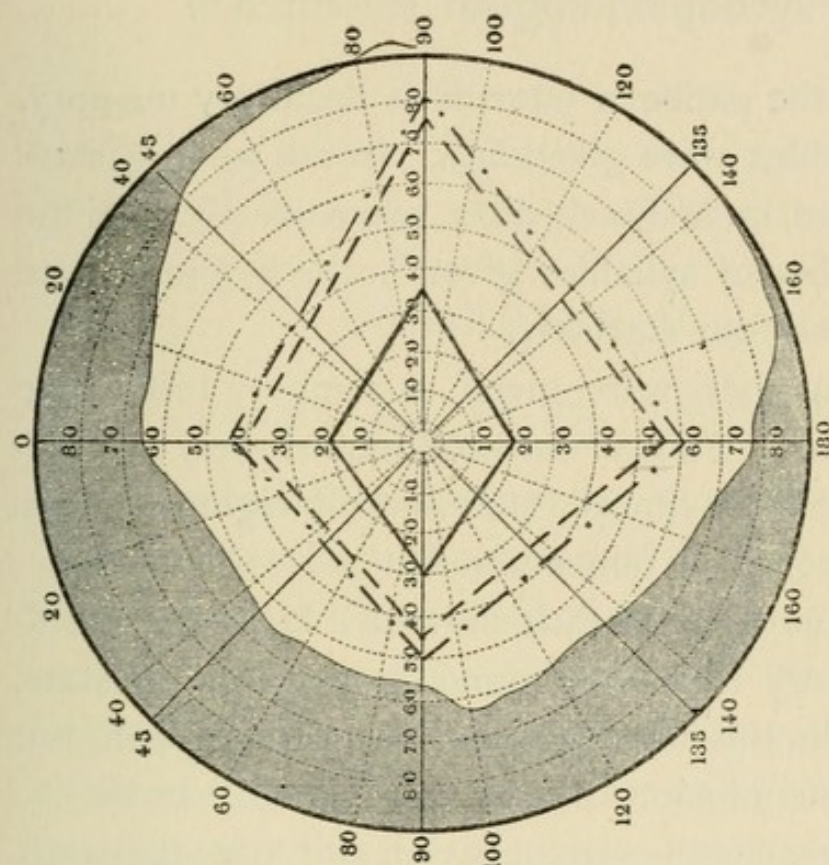


O.D.

39

- Normal field.
- - - Particular character of objects guessed correctly.
- . - . General character of objects guessed correctly.

V =



O.G.

V =

FIGURE 3.



To test the patient's immediate desultory memory, eight syllables were given her. In the waking state she repeated, immediately after, two correctly. Of the same number of syllables given in the hypnotic state she repeated four correctly.

Eight numbers were given as memory test in the waking state. Patient repeated immediately two correctly. In the hypnotic state, out of eight numbers, five were correctly remembered.

The hypnotic state thus showed a far better desultory memory than was found in the waking state. Memory in the waking state was rather poor, but subconscious memory proved to be good.

Motor reactions were delayed, and tests by autograph in the waking state clearly revealed the presence of subconscious motor reactions. (See Plates IX. and X.)

On the whole, it may be said that with the abatement of the maniacal state the sense of sight and that of kinæsthesia alone showed disturbances; all the other senses were normal.

With the pneumograph, tracings were taken of the patient, first under normal conditions without any stimuli, and afterward under the influence of different stimuli. (See Plates I. and II.)

## CHAPTER II

### EXAMINATION OF THE SUBCONSCIOUS

To test whether the case was of an organic, neuropathic, or psychopathic character, the method of guessing was used. The method of guessing consists in the making of impressions on the anæsthetic organ, and the subject, not perceiving any of the applied stimuli, is asked to guess as to the nature and number of them by telling anything that happens immediately to enter the mind. The patient was placed before the perimeter and objects were introduced midway between her field and the normal field. These objects were outside the patient's field of vision, but if asked to guess what they were, stopping a few moments to think and naming the first object which came to her mind, her answers were correct. Letters were introduced into the perimeter, of the same size as the disc used for determining the field ; she could often guess the correct letter, although she could not see it, but when it was near the limits of her field she often had a perception of white without being able to see the letter.

Under hypnosis it was suggested to her that her field would enlarge, that her vision would improve, and that she would be able to use her eyes better for



reading and sewing. On awaking from the hypnotic state, tests with the perimeter showed a markedly increased visual field, and there was some improvement in her ability to use her eyes, but not as much as would have been expected from the increased size of the field of vision. The fields of vision taken immediately after this hypnotic state showed a marked tendency to change continually—dilating and contracting along certain angles from  $5^{\circ}$  to  $15^{\circ}$ , and finally lapsing into the original state. We may add here that the contracted field of vision which constitutes the central symptom of this case could only be transiently affected by hypnotic suggestion. In spite of the fact that suggestions given during the hypnotic state were most emphatic, the field of vision could not be permanently enlarged.

The subject manifested a tendency to fall into deep somnambulism with complete amnesia in the waking state. She was unable to open her eyes when told that she could not, and equally unable to prevent the arm from rising to a level with the shoulder when told it would. If she was told that she could not lower the arm when in this position, it remained there indefinitely, and all her efforts to lower it were futile. Rotation of the hands about one another, if started, was continued, and if they were held a moment, they immediately flew apart when released and continued the motion. Complete anæsthesia could be produced by suggestion, and the patient was completely unconscious



of any movements communicated to the anæsthetic limb, and could not tell where it was without the aid of vision. If now one arm only was made anæsthetic and both arms were raised to a level with the shoulder, the patient meanwhile having her eyes closed, the anæsthetic arm trembled less, sank more slowly to the side, and when it finally dropped, after having remained up longer than the other, it did so in a heavier, more lifeless manner. If all the limbs were made anæsthetic and the subject with her eyes closed was directed to rise and take two steps forward, she did so, but in answer to inquiries said that she was not aware of having moved.

Both positive and negative visual hallucinations of persons and things could be given by suggestion. If a person rendered invisible to her was placed in her path while walking, she ran directly into him and tried to walk on, pushing by him, and appearing entirely unconscious of his presence. She could not explain when questioned what had interfered with her progress. This negative hallucination did not extend to objects handled by the invisible person. They seemed to her as if suspended in mid-air, and she could give no explanation of this incongruous appearance. On one occasion she was told that an empty chair opposite contained Dr. E., that he was speaking to her, and she was expected to answer him. She said that she saw Dr. E., but did not converse with him as she did not hear him address her. She would



see imaginary columns of figures on blank paper, read them, and add them all, or any combination of them; but the number of figures in each instance which she saw never exceeded four. In the same way she saw photographs on blank paper, and when asked whose pictures she saw she usually gave the names of the nurses. If a letter of the alphabet was eliminated from her mind by telling her she could neither see, pronounce, nor write it, she repeated the alphabet promptly, omitting the letter, and copied passages from books leaving the letter out wherever it occurred.

While in a hypnotic state, a nurse was introduced to her, whom she had never seen and whose name she did not know, and after telling her the name she was told that when she awoke she would ask me for pencil and paper and write the name. On awaking, she had no knowledge of ever having seen the nurse, who still was in the room, and made no spontaneous effort to carry out the suggestion. When asked if she did not feel as though there was something which she should do, she tried to think, but failed to recall anything. Finally she had to be assisted by telling her that she was to ask for something, whereupon, after a few moments' thought, she asked for pencil and paper and promptly wrote the name.

In every instance where she was given a suggestion to be carried out in the waking state, it was found necessary to assist to this extent, but when once the act was initiated it was completed accurately. After-



wards, however, this assistance became no longer necessary. The many experimentations seemed to have cultivated in her the spirit of obedience to suggestions.

On another occasion she was given, during hypnosis, a blank piece of paper upon which she was told there was a column of figures. When asked to read the figures, she read four numbers, giving a different order on a second interrogation, but maintaining this second order throughout the experiment. She was told that on awaking she would see these numbers and add them. With similar assistance to that described in the foregoing experiment, she took a pencil, drew a line as if under a column of figures, and wrote down the correct sum—21. When questioned, she said she had seen no figures, but had drawn the line to add and written 21 simply because that was the first number that came to her mind. Finally, when asked what she had added, she repeated the figures seen during hypnosis, and gave them as a reason for the sum 21, but she could not account for the particular numbers. They appeared to her as if they had accidentally occurred to her mind.

Anæsthesia of the right arm was produced during hypnosis, and it was suggested that this condition would continue in the waking state, which it did. The anæsthetic arm was insensible to pin-pricks, and with the eyes closed she could not locate it. The arm was carried in a limp, helpless way, but she was



able to use it in grasping objects, playing cards, etc., and in holding a heavy book between thumb and fingers even with closed eyes.

On one or two occasions, however, while she was playing cards and holding the cards in the anæsthetic hand, on looking away from the hand the cards dropped to the floor.

With her eyes tightly closed, the fingers and arm were moved several times in the same direction. When left alone, these movements were continued automatically and without her knowledge. In the same way, if a pencil was placed in the fingers and the hand started writing a figure, letter, or simple word, it completed the movement, although she did not even know that she held a pencil.

If, with eyes closed, she was asked to think of a number, and the hand was pricked several times, although no sensation resulted she invariably thought of a number corresponding to the number of pricks made.

All these experiments were conducted with the same results during hypnosis. This anæsthesia was allowed to remain about three hours, and, as it seemed to worry her somewhat, was removed by hypnotic suggestion.

The subject in her normal state was given a book ; she was directed to read aloud to some one in the room, in a slow, clear tone, taking pains meanwhile to understand clearly what she was reading. While she



was reading, Dr. W. approached her from behind and spoke to her in a low tone of voice, directing her to raise her right hand to the table ; the hand obeyed ; Dr. W. placed a pencil in the hand, and the hand grasped it. Now any question that was propounded to her was answered in writing while she continued to read aloud. If a suggestion of a visual hallucination was given to her, the hand wrote, in reply to a question, that she saw the thing suggested. It was noticeable, however, that the two processes interfered with one another, and that while one was carried on at its best the other was interrupted and hesitating. When she stopped reading, she had no recollection of anything said or suggested, and her remembrance of what she had read was rather indistinct. If, however, she was hypnotized after one of these experiments, she remembered everything said and what her written replies had been. When questioned once during this period of distraction about a hallucination of a rose which had been given her in a former hypnotic state, and asked if she remembered it, the hand wrote "Yes" ; asked what she did with it, the hand wrote "I gave it to Mrs. S.," which was a correct answer and showed complete recollection of the hallucination. Questioned after she finished reading, she had no recollection either of the hypnotic state or of the answers her hand had written.

If in her normal state she was placed at a table with pencil and paper in the attitude of writing and with



closed eyes asked to think intently of a name, the hand soon began automatically and without her knowledge to write this name. This experiment has been duplicated with the hand made anæsthetic by suggestion both during hypnosis and post-hypnotically.

All these experiments were made without in any way suggesting to the patient, or indicating in her presence, what were the expected results, and a careful observation of her since admission has failed to detect any evidence of simulation.

Since her admission, she had no further nervous crises, except those described above, until the afternoon and night of June 12th and 13th. This attack was convulsive in nature and accompanied by marked spasms and dyspnœa.

## CHAPTER III

### EXPERIMENTS ON THE INTELLIGENCE OF DISSOCIATED SUBCONSCIOUS SYSTEMS

WE have found that under certain conditions phenomena are induced of which the patient herself is not conscious. The patient carries out certain acts, does certain things, and is unable to know anything about them. Changes in sensibility are also induced—such, for instance, as anæsthesia, analgesia, etc. The question, therefore, before us is this: Are the acts of the patient of an automatic character,—a sort of reflex activity of the organism without any accompanying consciousness,—or have they a psychic concomitant? In other words, are the acts carried out by an unconscious, wound-up, physiological mechanism, or is there an accompanying intelligence, limited though in range, but rational enough to carry out the acts? In the cases of changes of sensibility,—such, for instance, as anæsthesia and analgesia,—the problem is of the same nature: Are the stimuli really not perceived by the patient,—such, for instance, as we find in the anæsthesia and analgesia of an organic character,—or are they only absent from the patient's limited personal consciousness, but



perceived by dissociated subconscious systems? With this problem in mind the following experiments were performed :

During the hypnotic state Dr. W., to whom the patient was accustomed, remained alone *en rapport* with her. She remained insensible to the touches and also the pricks and other pain stimuli given her by outsiders. She did not react to any stimuli coming from outsiders and in reply to an interrogation by Dr. W. said that she perceived nothing at all. The most painful stimuli seemed to have left her unaffected, showing that for all practical clinical purposes she had not felt them. To prove, however, that she did feel all these stimuli ; that she really did hear what was said to her ; that she really did perceive everything that was going on about her, being only seemingly unconscious of it, while the experiences were really present in and perceived by the subconsciousness dissociated from the upper consciousness, experiments were made by the methods of associative suggestion.

The method of associative suggestion consists in the formation of a subconscious association between a subconsciously felt stimulus and a consciously experienced percept or concept. The subconsciously perceived stimulus is projected into the upper consciousness in the form of an idea, and the intermediate link is lost.

Associative suggestion may be divided into mediate

and immediate. The method of mediate associative suggestion consists not in the realization of the suggestion itself, but of something associated with it. The subject does not perceive certain stimuli directly, but reacts always in a definite form when these stimuli are impressed so that this reaction becomes associated with the stimuli.

Immediate associative suggestion consists in the formation of associations between impressions of stimuli subconsciously felt and ideas corresponding to those subconscious perceptions in the patient's personal consciousness. The patient does not feel the stimuli, but when asked to tell the first idea that comes to her mind the ideas are found to correspond exactly with the stimuli.

By these methods the following experiments were carried out :

Dr. W. to D. F. : As soon as Dr. S. speaks to you, if you do not hear him, say, "No."

Dr. S. spoke to her and asked her if she heard him and she immediately answered, "No."

Dr. W. to D. F. : Dr. S. is in the room; you cannot hear anything he says, but when he counts up to five you say, "No"; and when he counts to ten, say, "Yes."

Dr. S. talked to her, but no response. When he counted five, she said, "No"; and when he counted ten, she said, "Yes." Dr. S. presented acetic acid to nose; it produced a very slight reaction.



Dr. W. told D. F. she could not feel pricks, but that every time Dr. S. pricked her she would count the numbers. This she did, but said she could feel nothing.

Dr. W. to D. F.: You can hear nothing Dr. S. says, but he will ask questions, and you will give me the answers.

Dr. S. asks, "How much is 4 times 4?" D. F. says, "16." Dr. S. asks, "How much is 5 times 5?" D. F. says, "25," etc., to many questions.

Dr. S. : Do you hear me?

D. F. : No.

Dr. W. to D. F. : You feel nothing Dr. S. does.

Dr. S. gives her electric current of great intensity. She does not react, as she would in the normal waking state, and says she feels nothing.

Dr. W. says to D. F. : You cannot feel anything nor hear Dr. S. speak, but he will count and as he counts you will tell whether you feel pain, or want the electricity stopped.

Dr. S. then used the electricity without counting and she said she felt nothing, and when he counted she said, "Electricity."

Dr. W. told D. F. : When Dr. S. touches your hand you will feel nothing, but you will point out the place he touches.

This she does, but says in answer to questions of Dr. W. that she feels nothing.

Dr. W. told D. F. she could not hear Dr. S., but

would tell Dr. W. everything that came in her mind. When Dr. S. told her she would like to take a walk, or read a book, she told Dr. W. that she would like to go for a walk, or read a book.

These experiments indicate more or less clearly that experiences are actually present to the patient's consciousness, although the patient herself seems to be unconscious of them. The stimuli impressed on the patient's sense-organs are perceived, co-ordinated, recognized by systems dissociated from the principal functioning constellations constituting for the time present the patient's personal consciousness. That these dissociated systems are of a conscious nature is clearly seen from the fact that they are able to perceive different stimuli, such, for instance, as touch, pricking, electricity, etc., and furthermore are able to count and give answers to questions.

The character of the methods employed in these experiments indicates at the same time that if there be a dissociation by habitual tracts there must be an indirect association by unhabitual tracts; for the answers and the fact that these stimuli were actually perceived could be brought out in an indirect way; the patient giving replies of such a nature as to clearly indicate the presence of these experiences in a subconscious form within her mind. The patient, for instance, is not able to feel touch or pain stimuli, but is still able to tell their number.

The experiments carried on by the methods of



associative suggestion show that the same holds true of more complex stimuli, such, for instance, as speech. The subconscious dissociated systems were able to comprehend speech and could give answers, although the patient herself was seemingly not directly conscious of them. Thus, for instance, when a question was propounded to her she apparently did not hear the words, did not hear even the sounds, and still she gave replies perfectly in accord with the questions, not being at the same time conscious of the meaning of the words which she uttered. The phrases in which she couched her answers were meaningless to her and when asked what she meant by the words and phrases said she did not know. When further asked why she made the remarks she answered that something unaccountable urged her to make them.

## CHAPTER IV

### SUBCONSCIOUS REACTIONS

PSYCHOMOTOR reactions of subconscious systems to external stimulations may have their parallel in cases of insistent ideas or phrases which come up unaccountably to consciousness and have to be pronounced whether the patient will or no. The subconscious dissociated systems seem to have taken possession of the patient's organs of speech and have given the answers to questions without her knowledge. It may be that the dissociated systems simply send up their reply in an insistent form and the patient has to pronounce the answer. In this case it is the personal consciousness that is indirectly made to answer and the patient is first conscious of the words or phrases before they are pronounced. It may, however, be as we have just suggested,—that the subconscious dissociated systems possess themselves of the patient's organs of speech and make the reply directly. In this case the answer does not come up in the form of an insistent idea and the patient becomes conscious of the answer only after it has been given.

In some of the experiments, however, it is clear that the first case holds true, because the patient



when questioned replied that she had said the first thing that came into her mind. Furthermore, in those experiments which were carried on by the method of guessing, or by the method of immediate associative suggestion, where the patient had to tell anything that came into her mind, and she was thus giving correct answers, it was evident that the first case held true.

As an example of the second case, we give the following experiments :

Dr. S. gets D. F. up out of one chair and puts her in another. When questioned she said she was in the same chair in which she had first sat down and gone to sleep.

Dr. W. to D. F.: You will open your eyes but you will be unable to see Dr. S.

Dr. S. talks to her continually, but she avoids looking at him. When asked to look about for him, looks everywhere, but not in the direction where he is. When he holds up his hand she says she sees nothing. If Dr. W. holds up an object back of Dr. S's hand (which object she has not seen) and asks her what it is, she says it is Dr. W's hand.

Dr. W. takes a hat. She sees it. Dr. W. gives it to Dr. S. and he puts it on, and the hat appears to her as if suspended in air. She was told she could not see Dr. S's glasses, but when they moved she would say "Yes"; she does this, following the glasses with her eyes. Why she does this and why she says

"Yes" she does not know, but says she could not help it.

When Dr. S. puts a lighted match to her eyes, the pupils react. Sclerotic sensitive to touch, but reaction very slight.

She was told to walk to another chair. Dr. S. held her hand and prevented her going. She resisted for some time, but afterwards remained passive and made no further attempts to go. When asked why she did not go, she answered she could not, something in the air prevented her. She does not look at Dr. S., but continually smiles. Dr. S. holds up a finger, which she is told she cannot see, but will follow it with her eyes. She does not see it, but pupils react to accommodation.

Dr. S. holds up newspaper, and tells her she cannot see it or his hand, but when finger points to word she will pronounce it. This she does, but immediately after cannot recall the words. If asked to recall them and the finger points to the words, she repeats them. When the paper is removed she does not know what she has said. Suggestions were given by Dr. W. that she could not remember the words, but could write them. She takes pen, and writes them. Asked if they are the words, says she "don't know"; says she wrote them because she could not help it.

An attempt was also made to experiment in personality metamorphosis. A suggestion was made that she was a child two years old. She claimed in



answer to questions that she was two years old, and it took a special suggestion to remove this idea from her mind, but there was really no organization of a child personality; she did not behave as one would expect of a child, and she was able to write without the least change. This may be explained by the fact that the patient was extremely young, and her store of experiences was rather meagre. She had not sufficient mental material to personate the individuality suggested to her.

On awaking at the end of this long series of experiments, the patient had no recollection of what had passed.

She was asked then to shut her eyes, and a pen was given to her. She was told to try to recollect what occurred when asleep, but she could not remember anything. The pen meanwhile wrote without the patient's knowledge an account of what had occurred. (See Figure 4.)

Told me to H. two  
up years old when I was

FIGURE 4.

took my father to the garden

again to sleep

Try to make me hear & see him  
Lunacy

I picked me with a pen

FIGURES 5, 6, AND 7.



## CHAPTER V

### SUBCONSCIOUS EXPERIENCES

A SERIES of experiments was then carried on in the same line demonstrating the same truth, namely, the presence of experiences of which the patient was not directly cognizant, but which were nevertheless present to the patient's subconsciousness. In other words, the experiences existed in a state more or less dissociated from the stream of mental life that for the time being constituted the patient's personal consciousness.

She was hypnotized by Dr. W. and it was suggested to her that she could not see Dr. S. or Dr. G. When Dr. G. pricked the sole of her foot she said she did not feel it, but occasionally there was slight transient dilatation of the pupil. She was then told that when Dr. S. touched her and knocked she would count, but that she could not hear the knock or feel the touch. She counted when Dr. S. touched her and knocked, but not unless these two signals went together. When Dr. G. touched her and Dr. S. knocked, she said nothing.

Dr. S. and Dr. G., neither of whom she could see

or hear, talked to her and said funny things; she laughed, but said she heard nothing.

Hyperæsthesia of smell, which is sometimes characteristic of the hypnotic state in the deepest stages, was tested. Drs. W., S., and G. each took a sheet of paper and held it in their hands until it was well warmed, then the subject was asked to smell of each of their hands and try and pick out the piece of paper belonging to each; several tests were made; with the exception of two cases the patient uniformly failed.

An experiment was then made in which it was attempted to bring together the experiences dissociated from the patient's consciousness and those that constituted the normal stream of her personal life. The patient did not see any one in the room with the exception of Dr. W. The experiment consisted in putting the patient into a strange, unusual emotional state, and observing whether she would then see the other persons in the room. This was done in the following way:

Dr. G. went out, and in a few moments came back hurriedly, saying Dr. W. had just been telephoned for to come at once to Fiftieth Street. Dr. W. put on his hat and coat and started off, and Drs. S. and G. commenced making preparations to go also. The subject at first did nothing, but as the doctors began to leave she got progressively more and more disturbed, and finally put on her things, took umbrella and nurse's coat, and went with Dr. G. and Dr. S. When



asked at this time if she saw Dr. S., she said "Yes" in a faint, hesitating voice. Drs. S. and G. met Dr. W. in the hall and all came back to the laboratory. The subject was then asked if she could see Dr. S.; she answered "No." Asked why she had her hat and coat on, she could give no explanation. She was awakened after the suggestion that she would feel well and sleep well at night. She had no memory of what had transpired.

From this experiment we may infer that the patient could by a strong emotion be brought out, temporarily at least, from her hypnotic state and a synthesis of the dissociated subconscious systems could take place. It is highly improbable that she was during this time in her full waking state. This could be more or less seen from the way in which she acted, and also from the expression of her face. She was in a dazed condition, looking as if stupefied and stunned by the unexpected experiences. Furthermore, all memory was gone after she was awakened. This seems to indicate that the patient was really not in her normal waking state, although she seemed to have emerged from her habitual hypnotic condition. It is more probable that a new state was formed, different both from her waking and her habitual hypnotic state.

What this experiment really does show clearly is the fact that the patient does perceive subconsciously stimuli which apparently do not reach her narrowed

labeled the "Gollum  
Diner" on the hall  
and found I a White Goat,  
if the chair goes into another.  
and dressed myself  
now see of  
the paper



field of consciousness. These stimuli, under special conditions, such, for instance, as a strong emotion, may bring about a total change in the relations of the different systems of the patient's consciousness and result in a different mental state. Experiences dissociated and apparently unperceived will now become associated and synthetized in the newly formed mental state. The induced emotional state did not bring the patient to the original normal waking state.

On awaking it was found, as pointed out, that the patient had lost all memory as to what had happened. To show, however, that the memories were really present and not utterly lost, and under certain conditions could be brought to light, the following experiments were made :

The patient was now set down to a table with a pen in her hand and with her eyes closed ; she was asked to try and recall what had happened while asleep, but told to keep her hands quiet. She protested that she could think of nothing, but the hand wrote an account of the experiences she had just passed through. (See Figures 5, 6, 7, and 8.)

## CHAPTER VI

### SUBCONSCIOUS MOTOR MANIFESTATIONS

PNEUMOGRAPHIC tracings were taken of the patient, first in the waking state without any stimulation, then she was hypnotized and the pneumographic tracings were continued during hypnotization and the deep hypnosis into which she passed. The patient was as usual *en rapport* only with Dr. W., to whom she was used and who had habitually hypnotized her. All other persons in the room were simply so many negative quantities to her, she apparently did not perceive anything which came from them, and as usual appeared to be unconscious to pain, touch, and other stimuli coming from them. The pneumographic tracings, however, clearly indicate that, although she was seemingly unconscious of different stimuli coming from other persons, her respiration responded to them. Thus, for instance, in tracing 4, Plate III., a person who was negative to the patient was tickling the sole of her foot. The patient was not conscious of the tickling and still the pneumograph clearly showed a great modification in the respiration, the waves becoming more rapid and the apices more acute, showing a rapid



alternation of inspiration and expiration. Although she apparently did not hear Dr. G., still when he was telling stories to her there was a great modification in her respiration.

Experiments were then carried on by the method of distraction. These experiments point in the same direction, viz., the subconscious presence of experiences of which the patient was directly unconscious. The method of distraction consists in the following: The patient's mind is occupied with some stimuli that fully engross the mind and meanwhile some slight stimulus, faintly perceptible, is given, a stimulus of which the patient is unconscious, and it is found out whether the patient perceives it in a subconscious form. In other words, arrangements are made to the effect of discovering whether the subconscious systems, dissociated from the general stream of the patient's personal consciousness, have perceived the stimulus and reacted to it in response. During the experiments conducted by this method of distraction, this patient was not hypnotized.

The pneumograph was attached and the following series of experiments were made:

During hypnosis, suggestion was made that when awake, when she heard Dr. W. knock, she would go to sleep. She was awakened and placed in distraction by reading. When Dr. S. knocked, no result; when Dr. W. knocked, she immediately went into hypnosis.

She was hypnotized and a post-hypnotic sugges-

tion given to her that she should go to sleep when Dr. W. whistled. Awakened by Dr. W. counting, and told that she would awake at a certain number. Then distracted by reading. Dr. W. went to farther end of the room and whistled. She immediately went to sleep.

During these experiments taken with sound stimuli, pneumographic tracings were taken, as shown in Plate IV.



## CHAPTER VII

### THE PSYCHOPATHIC PARADOX

EXPERIMENTS were then carried out in which the æsthesiometer was used. At first the sensibility of different parts of the body was determined in the normal state. Afterwards the same was tried under distraction, the patient writing down by means of automatic handwriting whether she felt one or two points. Now it is interesting to find that although the patient

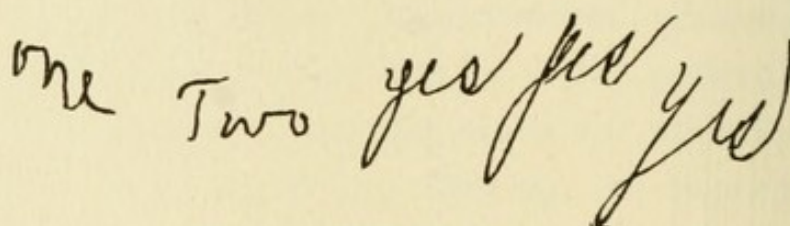
The image shows a sample of automatic handwriting. It begins with the word 'one' in a cursive script, followed by 'Two' in a similar but slightly more upright script. This is followed by a series of 'yes' and 'no' responses, also in cursive, which appear to be written without conscious control, illustrating the 'psychopathic paradox' mentioned in the text.

FIGURE 9.

under distraction did not seem to feel the touch stimuli, she still gave correct answers and her sensibility was much enhanced. (Figure 9.) Thus, for instance, on the back of the left hand in the normal state her sensibility was 30 mm., while under distraction the threshold of sensibility fell to 19 mm. With the general fatigue of the patient, the threshold became higher for both the normal state and the state of distraction. From our standpoint these experi-

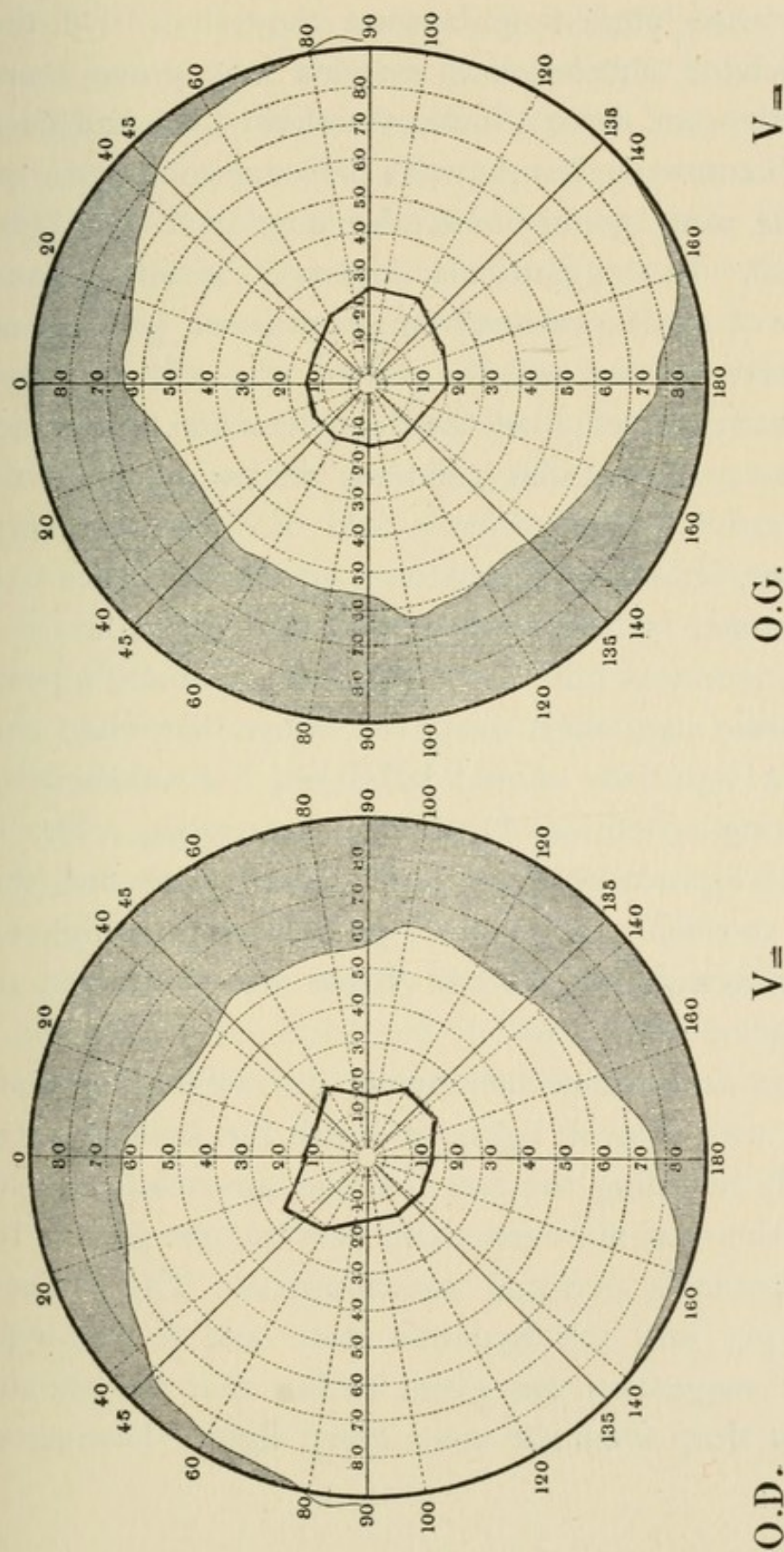


FIGURE 10



ments are interesting, because they show that the dissociated subconscious systems may prove more sensitive and have a lower threshold than the ones which constitute the patient's personal consciousness.

The same method was also employed with light stimuli. In this particular instance, the interest and value of the experiments are very great, because, as we have pointed out, the patient was suffering from a great contraction of the field of vision, a contraction so persistent that it did not yield to any hypnotic suggestion. The patient's field of vision was very narrow, as shown in cut on page 69. (Figure 10.) Minimum,  $15^{\circ}$ ; maximum,  $25^{\circ}$ .

Patient was put in the hypnotic state and a post-hypnotic suggestion was given to her that when she saw a light she should fall asleep. Awakened by counting as before. Distraction by reading. Dr. S. places light at  $90^{\circ}$  from direction of vision and she goes to sleep. The patient evidently saw the light at  $90^{\circ}$ , although her field of vision was contracted to maximum  $25^{\circ}$ .

The same experiment under distraction was then tried with colored lights, and with the same results, clearly revealing the fact that the subconscious field of vision was more extensive than the one present to the patient's personal consciousness. The patient was put into the hypnotic state and a post-hypnotic suggestion was given to her that she should go to sleep when she saw a green light. Distracted

by Dr. S. talking to her ; a yellow light placed at her side—no result ; a green globe was put over it, and when she turned her head so that it came into the average normal field of vision she went to sleep. During these experiments, pneumographic tracings were taken, and as soon as the light, colored or not, according to the suggestion, was thrown on the periphery of the retina, which was anæsthetic to light, she showed at once reaction in respiration as manifested in the pneumographic curve, tracings 4 and 5, Plate IV.

The interest here lies in the fact that the patient, in spite of the contraction of the field of vision, really manifested a very *extensive* field of vision present to the subconscious. Thus, while her retina was *anæsthetic* and the field of vision contracted for the patient's personal consciousness, there was really *hyperæsthesia* and great sensitiveness of the subconscious both for light and color. These experiments bring out clearly the nature of psychopathic anæsthesia, as expressed in the so-called "psychopathic paradox" : *Psychopathic anæsthesia is also hyperæsthesia.*



## CHAPTER VIII

### MEMORY AND INTELLIGENCE OF THE SUBCONSCIOUS

THE memory and intelligence of the dissociated subconscious systems are fairly well illustrated in the following experiments:

Patient was put in the hypnotic state and a post-hypnotic suggestion given to her to fall into hypnosis when Dr. W. counted to a certain number. Awakened by counting. Distraction by reading. Dr. W. stood back of her and counted; when he got to the right number she immediately fell into hypnosis. She was again hypnotized and a post-hypnotic suggestion given to her that Dr. W. will repeat a number of names to her, and when he says the same name twice she will at once fall into hypnosis. Awakened by counting. Distraction by reading. Dr. W. talks to her and tells her to raise her hand and arm in the air, and adjust the book in her hand, Dr. W. standing behind her and speaking in a low tone. When the reading stopped she did not know that any one had spoken to her or why her hand was in the air. Distraction again by reading. Dr. W. calls out names, repeats one without effect—then repeats first name called and she falls into hypnosis. In hypnosis she could

tell several of the names and the one which produced hypnosis. Says she fell into hypnosis because she could not help it.

Again hypnotized. A post-hypnotic suggestion was given that Dr. W. would call out names and when he pronounced the name of a girl, she would fall into hypnosis. Awakened by counting. Distraction by reading. Dr. W. calls names behind her in low tone and when he pronounces a girl's name she immediately falls into hypnosis.

The intelligence of the dissociated subconscious systems can be clearly seen from the fact that they were able to identify names, to recognize the name when repeated, and to discriminate between the name of male and female. All this is done by the subconscious while the patient's principal personal consciousness is ignorant of what is going on. The patient was unable to tell during the post-hypnotic waking state what had been whispered to her while in the condition of distraction. By no means was she able to bring to memory the faintest trace left by the external stimulus. To all intents and purposes it seemed as if she did not hear and could not therefore recollect. She really did not perceive the external stimulus, but the subconscious systems did. The external impression did not reach the patient's contracted personal consciousness, but did reach and remain within the subconscious regions of her mental life. It was due to the perception by the



subconscious systems that a discrimination of the stimuli was performed and a corresponding reaction was brought about in response.

The intelligence of the subconscious was still further shown by the fact that a suggestion was made in the hypnotic state that when she awoke and Dr. W. made a number of calculations, she should go to sleep at a correct one, but no matter how many wrong ones were made, she should pay no attention to them. She was awakened and as usual was completely amnesic to what had occurred in the hypnotic state. We used as before the method of distraction. As long as Dr. W. was whispering wrong calculations, there was no reaction, but as soon as a correct one was given, she immediately fell into the hypnotic state.

Here the patient did not perceive directly the scarcely audible acoustic stimuli, but the subconscious did, and not only did perceive the acoustic stimuli, but also knew their meaning, recognized them, and was so highly intelligent as to discriminate between the wrong and right results, showing memory by reacting in the prearranged form to the right calculation.

During the time we carried on these experiments testing the memory, recognition, and discrimination of the dissociated subconscious, tracings were taken with the pneumograph and each time she was awakened by counting. The pneumographic tracings revealed disturbances to stimuli of which the patient

was not conscious, but which, nevertheless, effected and called out psychomotor disturbances of the dissociated subconscious regions. (Tracings 1 and 2, Plate V.)



## CHAPTER IX

### SUBCONSCIOUS HABIT FORMATION

To test further the intelligence of the subconscious and also the formation of new habits, the patient was put into the hypnotic state, and it was suggested that she would awaken when ten was reached by counting. When Dr. W. began to count, the pneumograph showed a marked disturbance at five. The patient had formed a habit, from previous suggestions, to awake when five was counted. Calculations were carried on during the same time to test the patient's subconscious discrimination. During the time of the waking state as usual she reacted only to the right answer, and fell into the hypnotic state at once as soon as the correct result was given.

To show how quickly the subconscious forms habits, in the next experiment the suggestion was given her that she wake up when fifteen was reached. The pneumograph showed disturbances at the regular intervals of five and ten — the numbers at which she had been previously awakened. Experiments were then continued in the same line by the method of distraction, and the appreciation of the beautiful by the subconscious was tested. Along with these experi-

ments were also given suggestions while in the hypnotic state to wake up at various numbers, all of which were multiples of five. It was interesting to observe that while there were disturbances when a picture was shown, and also when the patient passed into the hypnotic state, there were marked disturbances in the respirations shown by the pneumographic tracings when the patient was in the process of being awakened on hearing counting. The patient's respiration was in accord with each number pronounced, so that there were as many respiratory acts as there were counts, and when the counting reached five, ten, fifteen, multiples of five, there was a marked disturbance. Thus, for instance, when it was suggested to the patient that she wake up when thirty was reached, by counting, there were thirty respiratory acts and disturbances at five, ten, fifteen, twenty, twenty-five, and thirty respectively. (Plate V.)

The patient's subconsciousness formed a habit to react when the number was reached at which she was previously awakened.

The following are the specific experiments which showed the conditions referred to above:

In the earlier experiments she had been awakened by Dr. W. counting five or ten. Now he counted to fifteen to awaken her. There was a marked respiratory disturbance at ten. A post-hypnotic suggestion was given her to fall into hypnosis when she should



hear a correct calculation. Distraction by reading. Dr. W. makes calculations aloud, and at the first correct one she falls into hypnosis.

She was again hypnotized, and a post-hypnotic suggestion given to her that she would be shown different pictures, and would fall asleep when she saw a beautiful one. Awakened by counting. Counted to twenty to awake. Pneumograph showed respiratory disturbances at five, ten, fifteen, twenty. (Tracings 4 and 5, Plate V.) Distraction by reading. Pictures shown, and she fell into hypnosis when one was placed at her side. It was not pretty. She was asked to look at it and see if it was pretty, but said it was not. She said, however, that she fell into hypnosis when she saw a bright picture (the former ones were all black tracings; this was a series of photographs on one page).

She was again hypnotized, and a post-hypnotic suggestion again given to her that she fall into hypnosis when she saw a beautiful picture. Awakened by counting to twenty-five. The pneumograph showed marked respiratory disturbances at five, ten, fifteen, twenty, and twenty-five. Distraction by reading. She was shown pictures, and immediately fell into hypnosis when a beautiful colored plate was produced. (Tracing 5, Plate V.)

She was again hypnotized and a post-hypnotic suggestion given her to fall into hypnosis when she saw a certain letter that Dr. W. would show her. Dr. W. then counted thirty to awaken her. There were respi-



ratory disturbances at ten, twenty, twenty-five, and thirty. (Tracing 5, Plate V.)

A tracing was now taken while only counting from one to thirty. Awakened, distraction by reading. Letters were shown her. She fell at once into hypnosis when the right one had been shown twice. In hypnosis could repeat some of letters shown, but while they were being shown she glanced at them.

Again hypnotized, and a post-hypnotic suggestion given her to fall into hypnosis when Dr. W. would show her the name of a man, and she was told not to glance toward the names. Awakened by counting rapidly from one to fifty ; distraction by reading. The names were shown, and she fell into hypnosis at the name of a man, but persisted in glancing towards the names, which were purposely held much to one side. (Tracings 6 and 7, Plate V.)

It was now desirable to see what was the influence of mere counting in both waking and hypnotic states.

While the patient was awake, Dr. W. counted up to ten ; then up to fifteen, and it was found that the patient's respiration was but little affected, keeping pace in a very irregular way with the counting. It showed slight disturbances at five and ten.

The patient was then put in the hypnotic state, and the same experiments were repeated. The respiration kept more accurately in pace with the counting, and disturbance was distinctly marked at multiples of five.



For these experiments see tracings 1, 2, and 3, Plate VI.

Experiments were again made by counting to awaken her, and the disturbances at multiples of five were marked. (Tracing 2, Plate VI.)

Experiments were further made by counting to produce hypnosis, tracings being taken during the process of hypnotization. There were no disturbances at the multiples of five. (Tracing 3, Plate VI.)

Experiments were then made during hypnosis to show the influence of counting by a person with whom she was not *en rapport*. The tracings showed that there were regular intervals of respiration in accord with the counting, and the patient manifested the same tendency to respiratory disturbances at five, ten, etc. This counting was slow. Rapid counting was then tried from one to fifty; the respiration was very rapid, keeping pace with the counts. Further experiments were varied, counting slow and fast from one to ten and from one to fifty, and in all of them the patient clearly manifested a tendency to keep pace in her respiration with the counts of Dr. S., with whom she was not *en rapport* and whom apparently she did not hear. When the counting was very fast there was no marked disturbance at multiples of five; it became manifest, however, as soon as the rate of counting became slower. (Tracings 3 and 4, Plate VI.)

When the fast counting was stopped suddenly, there was also a sudden marked stop of the respira-



tion. These last disturbances can be clearly seen in tracings 5, 6, and 7, Plate VI. The regularity of keeping pace with rhythmical sounds was especially well manifested when the metronome was used, the respirations keeping pace with the beats of the metronome. (Tracing 7, Plate VI.)

The subconscious forms habits easily which are as easily broken. In fact, in the remarkable plasticity of the subconscious, in the great ease of subconscious habit formation, lies the secret of hypnotic suggestion. Once a habit has been subconsciously formed and permitted to persist and develop, it is very difficult to eradicate it. It is, however, nigh impossible to eradicate the habit of personality suggestion or so-called "rapport," if it is permitted to be formed, and herein lies the danger of suggestion, whether in the waking or hypnotic state. Thus it was impossible to change the subconscious habits formed by the patient in their relation to Dr. W., who had been experimenting with her since her entrance into the hospital, and with whom she had formed the habit of standing *en rapport* during hypnosis. It was attempted to have her awakened from the hypnotic sleep by a person other than Dr. W., and by one with whom she was not *en rapport*, but to whom she was nevertheless habituated by a long series of experiments, viz., Dr. S. The results showed that the hypnotic memory was so persistent that it was impossible to overcome it by the ordinary suggestions coming from a source

6



with which she had not formed the habit of being *en rapport*. Thus, in one of her hypnotic states, Dr. S. made an attempt to have her count to ten and awaken. She positively refused to wake up, saying that she could not wake up because he had not hypnotized her.

Dr. W. suggested to her that on awaking she should allow Dr. S. to hypnotize her. Dr. W. awoke her and Dr. S. hypnotized her. Dr. S. made a suggestion to her that she could not hear Dr. W., but she did not take the suggestion; she answered Dr. W. each time he spoke to her. Dr. S. made a post-hypnotic suggestion that on awaking she could not

A handwritten note in cursive script. The first line reads "I will do any thing Dr. White tells me to (do)," and the second line reads "yes." The handwriting is fluid and somewhat slanted to the right.

FIGURE 11.

see nor hear Dr. W. He awoke her, but the suggestion was not acted upon.

So strong was this personality suggestion, that in one of her automatic writings under distraction, she wrote spontaneously the following: "I will do any thing Dr. White (tells) me to (do)," emphasizing it with an affirmative "yes"; and at another time she wrote, "and no one else will be able to hypnotize me only Dr. White." These writings are reproduced above, Figure 11, and on page 97, Figure 14.

## CHAPTER X

### SUBCONSCIOUS RETENTION—AUTOMATIC WRITING AND ANÆSTHESIA

THE patient was awakened, and by the method of automatic handwriting it was endeavored to discover whether all the experiences which the patient did not remember were really retained in the memory of the subconscious self.

Experiments were then made on the patient by means of automatic writing. The hand in its automatic writing revealed experiences which were not known to the patient herself. During the automatic writing, the sensibility of the writing hand and arm was greatly lessened, merging into anæsthesia. This probably depends on the fact that during the writing the consciousness of the sensory-motor systems related to the activity of the hand is dissociated from the principal consciousness and associated with the active subconscious systems lying outside the range of the patient's personal life.

Some examples of the patient's automatic handwritings, with eyes shut trying to recall what happened during hypnosis, are reproduced in Figures 4, 5, 6, 7, and 8.



During the writing, the hand was being pricked by Dr. S., but when the patient was questioned she claimed she had not felt it.

Automatic handwriting at dictation from Dr. W., while being distracted by Dr. G. talking to her. The writing hand was being pricked by Dr. S. At one time, entire writing arm was anæsthetic to the shoulder, so that she had no knowledge of the pricking. At another time the pricking of either arm or hand disturbed her, and she recollected it on being questioned about it later. Pricking the writing arm was recollected when the pricking was in the intervals of the writing. The disturbance of arm and hand by pricking was much more noticeable when the writing was not continuous, when there were many intervals.

Experiments in automatic handwriting and distraction were continued and the sensibility of the writing hand and arm tested with the following results :

Under distraction ; right hand. At beginning the sensibility to electricity during writing was dulled, especially in the hand, but later the hand became very sensitive, and reacted at once, feeling the stimulus every time she was touched by the electrodes during the writing. The same results occurred in the left hand.

Instead of electricity, a pin-point was then used, and she mistook the prick for electricity. When the prick was repeated and she was asked if that was what she had felt, she said : " No, it was electricity."



Dr. S. then gave suggestions during distraction, but later she stopped taking his suggestions ; at first when her eyes were closed and later when they were open.

The patient afterwards continued to react to pricking, although she said she did not feel it. When pricked, she often said she did not feel it, but wrote in answer to questions by Dr. W. the number of times pricked. The written answer of one of these tests is reproduced on page 59, Figure 7.

The experiments carried on by automatic handwriting, and the anæsthesia manifested, seem to indicate that although the dissociation was more or less profound, it was rather of a transitory character, and under the influence of a strong stimulus — such, for instance, as electricity, when reaching a high intensity — the anæsthesia disappeared not only during the intervals when the patient did not write, but also during the process of writing itself. In short, we may say that functional anæsthesia, when slight and transitory, as is usually the case in automatic handwriting, can be made to disappear under the influence of strong painful or disagreeable stimuli. The anæsthesia recurs, however, more markedly than before with the cessation of the stimuli, and with the re-establishment of conditions favorable to it. This is probably analogous to the condition of negative hallucination, or systematic anæsthesia, in which the patient is insensible to stimuli proceeding from a certain source. In this



latter condition, we have pointed out before by experiment, that the negative hallucination, or anæsthesia, may disappear under the influence of a strong emotion. An intense or a strong emotion may call forth in the patient static energy,<sup>1</sup> and thus enable her to carry on the particular functions lost, and with the removal of the stimuli and the drawing off of the static energy manifested, the patient may fall into a deeper psychopathic state.

<sup>1</sup> See "Neuron Energy," *Archives of Neurology and Psychopathology*, vol. i., No. 1.

## CHAPTER XI

### SUGGESTIBILITY IN THE WAKING STATE

EXPERIMENTS were then made on the patient to test her suggestibility in the waking state.

For the purposes of these experiments a pack of ordinary playing cards was used, and it was endeavored to discover whether, when the patient was requested to make a voluntary choice of one of them, she could be so influenced by indirect suggestion as to choose a card previously determined on by the experimenter.

The artifices used for making the suggestion were numerous; for instance, the cards were partially separated and held face up, some one of them, however, being so placed that it could be more readily seen, then the entire pack was passed rapidly before the patient's eyes, and she was asked to make a choice. She invariably chose this most prominent card. If, again, the card to be chosen was placed so as to be surrounded by others of a different color—for instance, a red card with two black ones on either side,—and she was again asked to choose, the red card would be chosen. Again, if the experimenter took a few cards, face up, in his left hand, and then with the right hand picked them up separately and dropped



them on the table, the patient meanwhile being asked to watch the cards closely and choose one of them, it was found that if in this process the rhythm of the motions used was disturbed at any particular card, or one of the cards was thrown beyond the others, or rotated in being dropped to the table, or, again, if a card was both preceded and followed by cards of a different color, the card so peculiarly dealt with or located was the one chosen. Again, several cards were placed upon the table, one at a time, by the experimenter, and the patient asked to choose one of them after they were all deposited; if, now, the experimenter moved his hand over the cards to straighten or rearrange them, any lingering over any particular card, or any motion imparted to one card different from that given the others, resulted in the choice of that card. In short, any method employed by which one card was rendered more or less different from the others, either by virtue of its relative location, or by virtue of motions imparted to it, or by virtue of its peculiar position relative to other cards of other colors, always resulted in the choice of that card. It was noted, however, that where the distinction was very slight, or the whole process exceedingly complicated and prolonged, the suggestion frequently failed. It seemed as if the subconscious had to understand clearly and distinctly what was required of it, so that when the conditions were such as not to bring out clearly the intentions of the experi-

menter, or when they became very complicated so as to give different interpretations to the experimenter's suggestions, the suggestion did not succeed.

A pair of shears was laid on the floor. D. F. was standing on one side of them, and facing Dr. W., who stood on the opposite side. Dr. W. held up his hand and told her that she could not step over the shears, and told her to advance. She walked as far as the shears, but was unable to go farther.

Dr. S. told her she could not pronounce her own name ; at first she did, but on repeated suggestion she failed to do it. When told she would stammer, she did so.

Dr. S. suggested to her that she could not write her name, and when challenged to do so, she failed.



## CHAPTER XII

### SYNTHESIS OF DISSOCIATED SUBCONSCIOUS SYSTEMS

AN attempt was now made to run together the patient's dissociated mental systems. As it was pointed out before, suggestions given to the patient during hypnosis could not bring about a permanent effect of synthesis. The patient could not be suggested in the waking state, nor was it possible to give her any permanent suggestion by the method of distraction, nor by the method of automatic writing in a manner that could bring about a satisfactory result. One can easily see the reason why it is impossible to effect by means of suggestion an association of a disaggregated consciousness, when the patient is in the state of distraction, or when the patient is carrying on automatic writing, or when in a state of hypnosis, because any of these conditions are themselves states of dissociation that have not the power, or rather the possibility, of effecting a synthesis with states from which they are dissociated. It would not do to address oneself to a dissociated state to effect a synthesis. In the case of the hypnotic condition, it is true, all the states are more or less present, and a suggestion, if it be emphatic enough, might effect some

result. If, however, we consider the fact that hypnosis itself presents a state of high psychophysiological plasticity, that in this state systems are not very stably organized, are continually shifting in their associations and dissociations, we can see the reason why suggestion in hypnosis can not possibly give permanent results. What then shall be our course? How can we bring about an association of disaggregated systems so that the synthesis shall be of a lasting character? Evidently, the synthesis must take place in a state in which the dissociated systems are all present, and which is not of the plastic hypnotic character. In other words, we must put the patient in a state in which she herself shall have control of her experiences. In short, the patient must be put in a more or less normal condition. But this condition must be of such a character as to make possible an access to the patient's consciousness. This intermediary state must therefore be a sort of mental ground on which the dissociated systems may meet, be balanced, controlled by the patient's own activity. The nearest approach to it can be found in normal sleep. Not exactly in the deep normal sleep where functional activity altogether ceases, but in those sleeping dream states, when one begins to emerge from the deep levels of sleep, and is on the way to pass into the waking state. It is the borderland between the sleeping and waking condition. Our course was in accordance with this



general plan. We attempted to put the patient into a *normal sleeping state*, and in order to be in touch with the patient during this condition, this sleeping state was approached through the induction of hypnosis. The patient was hypnotized, and it was suggested to her that when the pneumograph was attached to her and ready for use she would fall into a natural sleep. This she did. When spoken to by Dr. S. or Dr. W., she did not answer.

Pneumographic tracings were taken during sleep. (Plates VII. and VIII.)

Pencil and paper were given her and she spontaneously wrote her experiences.

During this writing the pneumograph showed great disturbances. Counting in her presence produced respiratory disturbances in rhythm with the sounds.

While the patient was in this state of sleep, conversations were carried on with her and she was able to hear and feel all the stimuli given her. There were no systematized anæsthesias to objects or persons. The writing was carried out by her voluntarily and spontaneously and she was fully conscious of what she was doing.

Opportunity was taken now to bring together in a synthesis the dissociated states of consciousness, and two letters addressed to her mother were dictated to her, one by Dr. W. and the other by Dr. S. The letter of Dr. W. was to the effect that when any one whispered to her she would be fully aware of



what was said, and that she would no longer write unless she knew perfectly what she was writing. (Figure 12.) The letter of Dr. S. was for the purpose of arousing the energy and will of the patient and insisting on the fact that she would try and not be sick any more; in short, that she should make the attempt to bring into association the dissociated systems. (Figure 13.) It was the awakening of the patient's spontaneous energy coming from the depths of her own being. That this energy was really awakened and the synthesis voluntarily formed by the spontaneous activity of the patient herself are well shown in the interesting and highly suggestive lines which she herself volunteered after the letter was finished, as if to emphasize distinctly that what she had just written by dictation was not a matter of a passively accepted suggestion, but of a spontaneous, voluntary, active, energetic resolution. The resolution was especially well seen in the way she wrote it. The pencil was firmly grasped in the hand, and she wrote quickly and with determination the following sentence: "*I mean what I have just written,*" and signed her name. (Figure 14.)

After she wrote this, she was allowed to sleep for some time and finally was awakened by a noise accidentally made by one of us in dropping an object. In addition to the pneumographic tracings 1 and 2, Plate VII, which show well the tracings of normal sleep in contrast to those taken in hypnosis,



New York City

Sept 8 1897

Dear mother

here to fore Dr White would come up & whisper  
to me & would not fear himself ~~very~~ <sup>very</sup> much &  
not know that I was writing  
but hereafter there will be no one that can whisper  
to me unless I hear him fully & comfortably  
they say & I will not be able to write any  
longer unless I know just what I am  
writing & I remember I saw F



there is here also another proof of the patient being in a state of non-hypnotic normal sleep in the way in which she awoke spontaneously by an accidental noise, which would not have wakened her in her hypnotic state.

On awakening, all attempts at distraction by getting her to read, and whispering behind her to write something, failed. (Plate VIII.) She did not know what she had read, but heard everything said to her. She was then hypnotized by Dr. W., and an attempt at distraction and automatic handwriting again failed.

During hypnosis, to reinforce the patient's resolution and formed synthesis of the dissociated states, she was told that if any one whispered to her from behind, even Dr. W., she would hear perfectly what he said, also that she would no longer write unless she knew what she was writing, also that her eyesight would be as good as any one's, and that she would feel perfectly well. She was also told that she would remember everything hereafter that happened during hypnosis. She was told she could hear Dr. S., and when he spoke to her she heard him. She was told she could remember what occurred in the natural sleep just recorded, and she recollected everything.

Dr. W. then told her he would awake her by counting slowly from 1 to 75, and that she would get more and more awake as he approached 75, and wake at 75. Dr. W. counted from 1 to 25 and repeated the suggestion as above, then from 26 to 50 and



New York City  
Sept 8 1897

My dear father

Dear Mother I will now write you a great deal  
I am feeling a great deal better  
to tell you that I am feeling a great deal better  
& can see to read & write good & can see  
& can see healthy & hope I shall be  
as any good healthy & be sick again

I don't want to be sick again  
From your Daughter  
Dora

I mean what's here just written  
Dora Fuller  
and now she will be able to purchase  
only Dr White's ova yes

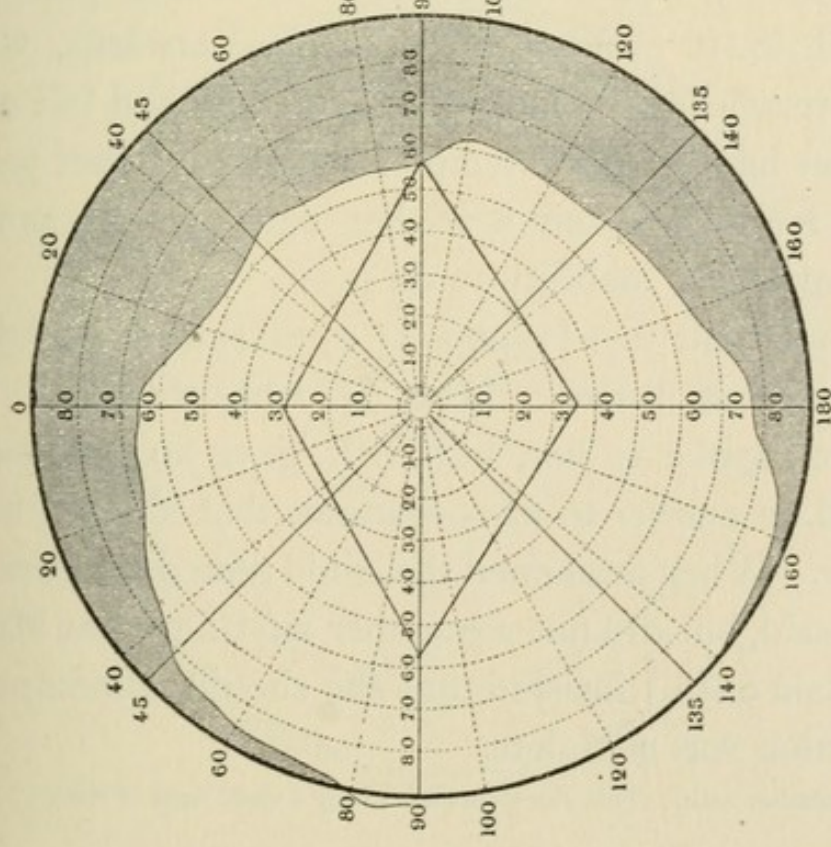
FIGURE 14.



repeated the suggestion again, then from 51 to 70 and repeated it again, and then from 71 to 75 and she awoke. On awakening, she remembered all that had happened in hypnosis, but could not recollect what had happened while in normal sleep. Dr. W. hypnotized her again and told her that on awaking she must remember all that had occurred in the normal sleep. Dr. W. then awoke her slowly, counting from 1 to 30, and pausing to repeat suggestions about distraction, automatic writing, eyesight and health, etc., and also about remembering what happened while in normal sleep. Pauses to repeat these suggestions were made at 10, 20, 27, 28, and 29, and she awoke at 30 with complete recollection of all that had happened during hypnosis and natural sleep.

Tracings were taken during the first, but not the last hypnosis.

The field of vision, taken immediately after attempts to run together the dissociated systems into one, was markedly enlarged (see Chart, Figure 15). The field of vision kept on expanding. A comparison, with a field of vision taken eight days afterwards, showed that it was still slightly contracted. This latter field reached the limits of the normal standard (see Chart, Figure 16). The patient evidently was recuperating her energy slowly. The synthetic process was going on continually, resulting in a more stable, more permanent synthesis of the disaggregated systems, causing a loss of the phenomena of automatic



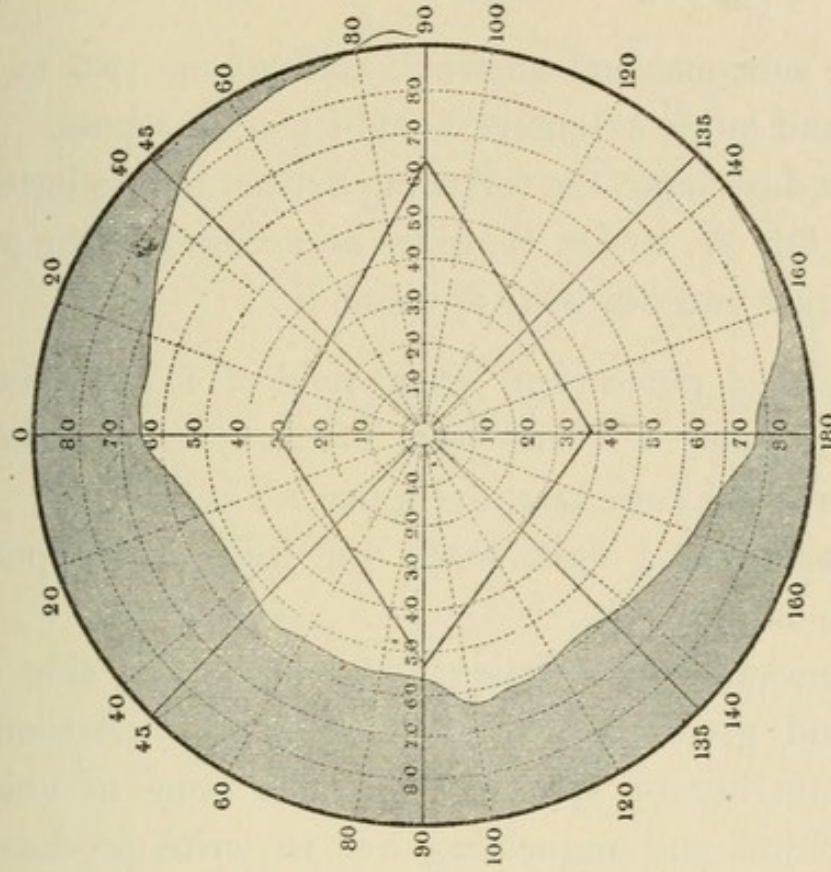
O.D.

V =

TEXT FIG. 15.

O.G.

V =





writing, subconscious answers, and giving rise to a larger and more extensive field of consciousness.

Eight days later, the following extract from a letter, sent by Dr. W. to Dr. S., gives an account of the patient's state and her field of vision :

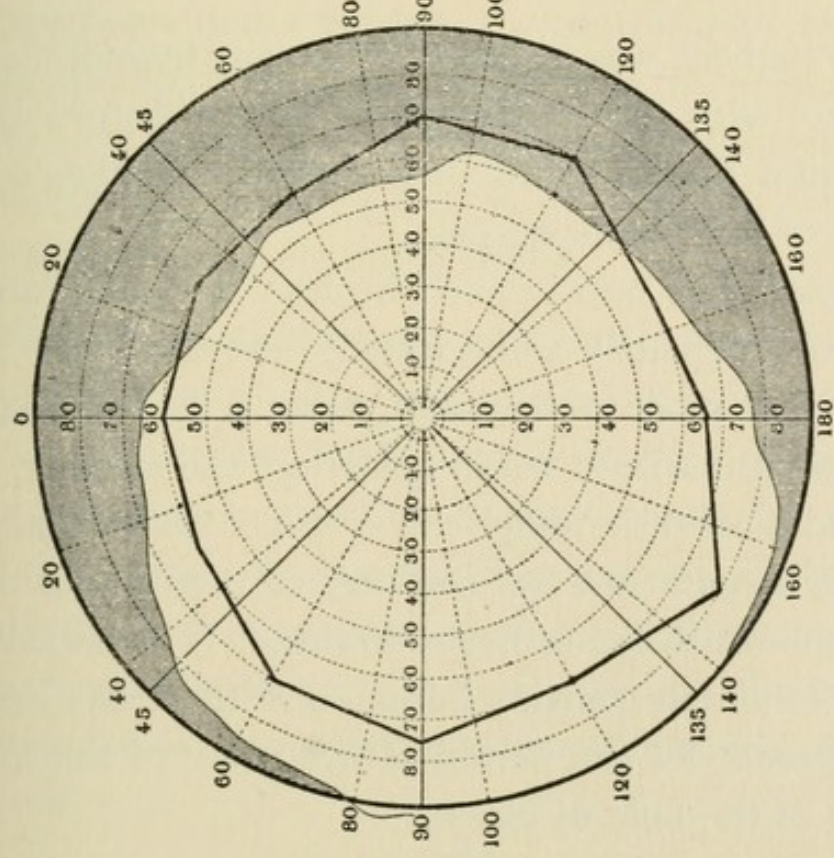
" Enclosed please find visual field of D. F., taken this day<sup>1</sup>; also a visual field for comparison, taken on the 26th of June last. (Figure 1.)

" In addition, I have made the following experiment to-day :

" Experiment 1.—Patient was placed at side of table and given paper to read aloud. Attempt to distract her by speaking in a low tone of voice from behind and requesting her to write produced no result. I also took hold of her hand, placing a pencil in it. When questioned afterwards, was able to recollect all I had said to her and had felt me touch her hand. An attempt afterwards on her part to both read aloud and write her name at the same time proved her inability to do it.

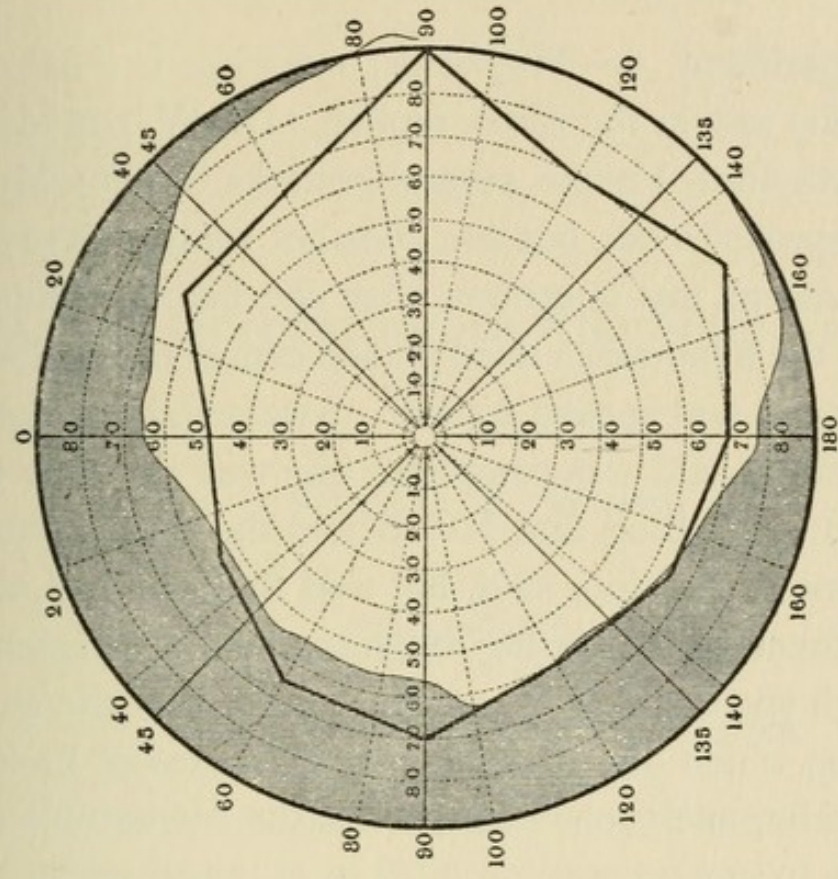
" Experiment 2.—Hypnosis; eyes shut. I spoke to her several times; Mrs. S., who was also in the room, spoke to her, but D. F. gave no response, and said, in answer to my questions, that she did not hear her. When awakened she could remember everything I said, but did not remember anything that Mrs. S. had said until I insisted that she should, whereupon recollection was complete.

<sup>1</sup> September 24th. This chart showed a fully normal field of vision.



O.D.

101



O.G.

TEXT FIG. 16.

V =



“Experiment 3.—Hypnosis; eyes open. Asked whom she saw in the room, replied, ‘Dr. W. and Mrs. S.’ Eyes shut, I make several remarks to her; Mrs. S. also speaks to her, but she does not reply, and says, in answer to my questions, that she heard nothing. During the hypnosis, a third person comes to the door of the room and speaks to me. Awakened, memory of all that I said was complete; she was also able to recollect everything that Mrs. S. and the third person who came to the door said, but said that she had not heard them speak during hypnosis, and at present, although she detailed to me every portion of the conversation which occurred, she had no means of knowing whether such conversation was the correct one or not.”

Dr. S’s advice was not to continue any hypnotic experiments with the patient, so as not to disturb the equilibrium of the synthetized systems and thus run the risk of new dissociations.

The patient is now in good health. Organic functions work regularly and normally, and there are no disturbances either in the waking state or during sleep. The patient has been working during the summer of 1898 and is now attending school. Since her discharge from the hospital she has had no return of any of the symptoms which led to her committal. The patient’s mental condition remains normal and there has been no recurrence for the period of five years of the contraction of the field of vision.

# Mental Dissociation in Alcoholic Amnesia

*By*

WILLIAM A. WHITE

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## CHAPTER I

### AMNESIA AND HYPNOIDAL STATES

THE whole subject of amnesia, whether of alcoholic or other origin, is so little understood and of so much importance that I believe any contribution to its psychopathology, however slight, will be welcomed. I have, therefore, decided to present the following case, though fully realizing that it can only be considered as suggestive in its implications.

Mr. X., a middle-aged gentleman, not addicted to the use of alcoholics, but only occasionally indulging in a social glass, inadvertently drank too much, and as a consequence suffered from amnesia for a period of three hours, during which he was intoxicated. The following is his account of all he could remember of the events leading up to and including the period of intoxication, upon the occasion of his relating them to me.



In September, 1898, at about 11 A.M., he met a gentleman in the City ; he was introduced, talked, and began drinking Manhattan cocktails. About noon he suggested having lunch and they went together to a dining-room, but before eating drank another cocktail. Mr. X. by this time was feeling rather "shaky." After lunch, which consisted of corned beef, cabbage, and apple-pie, they had cigars, and the gentleman proposed they go to his office, where they had more cigars, and then started for a drive. Mr. X. telephoned for a team to meet them at the Hotel B. They went there and found the team, got in, returned to the restaurant, and had another cocktail. From there they drove over a bridge—not sure of the name of the street they drove on, it was the other side of the railroad tracks,—made two or three stops for drinks and came to a place where there were a number of cars—he thinks it must have been the town of U. As it was getting late by this time they turned about and drove back towards home on R. street very fast, and reached F. street about 6.30 P.M. Here Mr. X's friend got out and Mr. X. drove down F. street to C. street, and turned in the direction of the bridge, after which he recalls no more until he heard a pounding like some one pounding on a door and some one said : "Are you sick? It is time to close up." He awoke in one of the closets of the A. hotel. He adjusted his clothing and got out. He thought it must be about closing time, viz., midnight ; but



when he reached the street it was only 9.30 P.M. He hurriedly went home, took a dose of compound licorice powder, and went to bed. When he awoke, his first thought was: "Where are the horses?" He could recall nothing about them and was apprehensive that an accident had occurred, although he felt all right. He examined his clothing and found no evidences of an accident in their appearance. He went to S's livery-stable and asked how the team got home, and they told him that he (Mr. X.) drove it home. The man smiled and said he seemed to be asleep when he returned; that he jumped from the box when he arrived, said nothing to any one, and walked off. His idea is that when he got off the box at the stable he must have gone to the hotel to the closet, but the A. hotel was not on his way home from the stable, and the C. hotel was right next to the stable.

The entire period from 6.30 P.M. to about 9.30 P.M., or the time he was awakened in the hotel, about three hours, is effaced from his memory. I felt convinced, however, that it would be possible to obtain a complete recollection for this period, as it was quite impossible for him to have been unconscious during it. The various things which he must have done—walking about the streets, going to the hotel—must have been intelligent acts, or otherwise they would have attracted attention and excited comment. The acts must also have been of a too complicated nature to



be designated as automatic. In other words, instead of being in a condition of *unconsciousness* he must have been in a condition of *other* consciousness for which in his ordinary waking state he was amnesic.

With reference to this matter of confusing amnesia with unconsciousness, let me quote from Van Gieson and Sidis, who say very justly :

“From the fact of amnesia, unconsciousness is inferred, because the two are thought to be identical.

“Now we must strongly emphasize the fact, however elementary and trite it may appear to the scientist, that amnesia in no wise implies unconsciousness. The two are not the same. While unconsciousness, being a cessation of all psychic activity, includes *ipso facto* a lack of memory, or amnesia,—for there can be no recollection of what did not exist as a psychic state,—amnesia, on the other hand (even if it be real), does not necessarily include unconsciousness. The fact that one can not remember what has happened to him does not in the least imply that the past state was an unconscious one. A fall, a blow on the head, may obliterate from memory whole periods of high intellectual activity, but it would certainly be wrong to conclude from the state of amnesia now present that the patient for all that period that had lapsed from his memory was an unconscious automaton.

“From the mere fact of amnesia or of total ‘oblivion,’ we have no right to infer even a diminished or semi-conscious state. A very high and in-

tense state of consciousness may become dissociated from the rest of conscious life, and be incapable of reproduction in the synthesis of memory. The phenomena of double or multiple personality and of post-hypnotic states may serve as good examples. From a psychological standpoint, memory, objectively considered, is a present mental reproduction and recognition of one's past conscious experience, and the loss of the first two conditions, of reproduction and recognition, does not in the least imply the non-existence of that conscious experience. *In short, amnesia is not identical with unconsciousness.*"<sup>1</sup>

If Mr. X. was not unconscious during this period of three hours, he must then retain the memories of what he did in his subconsciousness, and I decided to employ a modification of the method of hypnoidization for determining this.

This method, as described by Dr. Sidis,<sup>2</sup> to whom we are indebted for it, is as follows :

"The patient is asked to close his eyes and keep as quiet as possible, without, however, making any special effort to put himself in such a state. He is then asked to attend to some stimulus, such as reading or singing. When the reading is over, the patient, with his eyes still shut, is asked to repeat it, and tell what came into his mind during the reading, during the repetition, or after it. Sometimes, as when the song

<sup>1</sup> "Epilepsy and Expert Testimony," *State Hospital Bulletin*, April, 1897.

<sup>2</sup> *The Psychology of Suggestion*, p. 224.



stimulus is used, the patient is simply asked to tell the nature of ideas and images that entered into his mind at that time or soon after." By this method we are enabled to distract, draw off, completely occupy, in fact remove, as it were, the personal consciousness of the patient, and thus allow the subconsciousness to act unhampered by the inhibitions of the upper self. The personal or upper consciousness of the patient being fully occupied, by close attention to the stimuli used, fails for the nonce to exercise its inhibitory control over the subconsciousness, which in its turn, finding itself thus relieved from censorship, acts spontaneously.<sup>1</sup>

I had Mr. X. sit in a room only dimly lighted and very quiet, in a semi-reclining position, and then, assuring him that the memories would return (influence of suggestion), asked him to fix his attention on the events just related, more particularly at that point where memory ceased, and see if he could not recall additional facts. This modification of the method of hypnoidization was first used by Dr. Sidis and myself in the M. case. I asked him to think of the events related, so as to exclude extraneous thoughts as far as possible and to assist any latent tendency that might be present to recall events associated with the forgotten occurrences. I obtained the following results :

<sup>1</sup> Wm. A. White, M.D., "Preliminary Experimental Studies in a Case of Amnesia with a Discussion of their Psychopathological Significance," *Archives of Neurology and Psychopathology*, vol. i., No. 4, 1898.



He sees the stable more plainly than before and imagines going in and throwing the lines aside and jumping off the box ; he then comes out and walks along to C. street, and then to the A. hotel and goes to the closet.

Effort continued : Laughs because he sees himself catch a tree for support ; runs for the tree, for he felt as if he was going to fall ; the tree was in front of Mr. M's ; from the tree he ran to the hotel.

Effort continued : Smiling ; does not recall going from the hotel to the closet, but recalls being very anxious to go there ; after there, he was very sick and vomited, and went to sleep sitting there and did not awake until some one knocked on the partition between the closets, because he had locked the door to the closet and it could not be opened.

At this point he told me what he had previously forgotten, viz., that S. (the liveryman) told him that some one telephoned him that the man who had his cobs out was driving down C. street asleep on the box.

Effort continued and directed by me : I tried to get him to recall the events immediately after his friend got out of the carriage and he turned down C. street, but he failed. I now tried to get him to recall the events when he arrived at the stable. He seems to be asleep on the box ; while going along he pulls the horses up suddenly to let a wagon from a side street go by, and then goes on along a street that is all torn up and goes to the stable and jumps off the box.



This experience was not as well recognized as the former ones recalled, but when questioned about the recognition element felt sure that it was himself, but his answers evidenced some hesitancy. However, as we conversed about it he said it was all plain to him now as he could see himself in blue clothes, with his hat pulled over his eyes, driving along holding the reins carelessly.

Effort continued : Does not recall any of the persons or faces he came in contact with during this period ; he now tries to.

Some one was in the stable when he arrived, but he did not notice who it was. He knows that when he left the stable he felt glad that it was dusk ; the lights were being lit and the streets were pretty well deserted — probably between 6:30 and 7 P.M. He says he went right along without looking to the right or left, and therefore can recall no faces, as he was in a hurry to get to the hotel.

Sees stable of S. lighted up ; never in there before when it was illuminated ; some one came to take his horses, but he does not know who ; no one spoke to him.

I asked him to try and recall why, when he left S's, he went to the A. hotel rather than the C. hotel which was much nearer. He says because when he left the stable he wanted to defecate, and chose the A. hotel because he was more familiar with the toilet there than at the C. house.

When he staggered about the tree, he was seized with the first inclination to vomit, and then was anxious to get to the hotel for a double reason. He vomited in the cuspidor while sitting in the toilet.

My associate, Dr. Gillespie, who was present during my examination, says that he told him about having vomited before when relating the circumstances connected with his intoxication to him.

Says as he sat in the toilet he moaned constantly, and that is probably what led the man to knock on the partition.

He remembers distinctly that he was much chagrined, and wished he had eaten more, and wondered why he had ever gotten into such shape.

Told me he stopped at F's café after he got in the carriage, but Dr. Gillespie said Mr. X. told him once before he had F. bring out two cocktails. This he now recalls, but did not when he first recounted it to me.

Again very undecided whether his recollection of driving through C. street asleep on the box is a true memory of what he himself passed through or not. Recognition element somewhat in abeyance—much confused. After his friend left the carriage he turned into C. street, and then a blank (asleep?); when the team interrupted him he awoke, then a blank (asleep?) until he entered the stable.

I told him that if he had been asleep on these two



occasions he would recall the sensation of being awakened ; this he did for the first blank. The team that drove in front of him caused his horses to stop ; he did not stop them, but opened his eyes and looked around. He cannot, however, recall the sensation of awakening from the second blank.

## CHAPTER II

### THE LAPSED PERIODS

HERE, then, we have a case of amnesia for a period of three hours, due to alcohol. The great importance of a careful experimental study of such a state is evident, especially if we take into consideration the large number of crimes committed for which amnesia is subsequently claimed by the criminal.

It is noteworthy in reviewing this case that Mr. X. told me about having vomited as an entirely new recollection, whereas he had told Dr. Gillespie this before. This tendency of subconscious memories to crop out in the upper consciousness momentarily and then to sink back again into oblivion is quite characteristic of functional amnesias. I have often observed it. It is important, too, because in the absence of a knowledge of this fact such a phenomenon might lead to a suspicion of malingering.

Especially hard is it to get at the truth in cases where a crime has been committed, as often there is little else than the subjective statement of the criminal to the effect that he has no recollection of what occurred.

In this case there were unfortunately, or fortunately,



as the case may be, no unusual occurrences by which the mental condition of Mr. X. during the period for which he was afterwards amnesic could be gauged. I think, however, that we may posit what that condition was in other cases where we have a complete record of what occurred, when we take into consideration that the patients must have been conscious of what they were doing, provided their acts were at all complicated, a thesis I think we are fully justified in adopting, especially after having been able to prove that consciousness actually did exist in a single case—that of Mr. X.

The following case, for example, is given by Sullivan,<sup>1</sup> and cited as a good example of the automatic type of alcoholic homicide :

“K——, æt. 28, a sailor. Father mentally unstable, suffered from fits (of uncertain nature); paternal uncle died insane. Patient himself said to have had sunstroke. When sober appeared of normal feeling and intelligence; when intoxicated was violent. Drinking for about ten years at intervals determined by his occupation; convicted three times as drunk and disorderly, the first occasion six years before his crime.

“On the evening of the eleventh day of a severe drinking bout [was seen to go home with his wife, being apparently on boisterously affectionate terms

<sup>1</sup> W. C. Sullivan, “Alcoholic Homicide,” *Journal of Mental Science*, October, 1900.



with her. During the night he killed her by cutting her throat with a razor as she lay in bed, and made an almost successful attempt to commit suicide with the same weapon. Professed to have no memory of the act, and could not at any subsequent time suggest a motive for it. While under treatment for his self-inflicted wound suffered from severe alcoholic symptoms, nervous and digestive."

Foster's<sup>1</sup> definition of automatic, which seems to me to be quite in accord with the facts, is as follows: "Self-acting, *i. e.*, without the intervention of the will (said of physiological acts and of the mechanisms by which they are performed). The term is applied to acts which, although voluntary at first, become habitual and continue to be performed without any further attention being bestowed on them." A classical example is that of the pianist, who, having learned a piece, continues to play it while holding an animated conversation with a bystander. Surely there is nothing in this case described by Sullivan that would bring it within this conception of automatic. K—— could hardly be accused of having performed such an act as cutting his wife's throat with such frequency that it had become habitual, self-acting, automatic.

A state of mind which can conceive of two separate crimes, seek out the appropriate instrument for their execution, succeed in consummating one and in nearly completing the second, is certainly of a sufficiently

<sup>1</sup> Foster's *Encyclopædic Medical Dictionary*.



complex nature to warrant the assumption that consciousness was present and directed the several acts. The amnesia which followed may have been functional or organic; experimental research alone could determine this. It is quite conceivable, however, that the violence of the process which brought about the acts may have been sufficient to destroy the physical substratum of the consciousness which accompanied them, a state of affairs possibly present at times in epilepsy.

Such a case as the following, however, is quite possibly altogether automatic in character<sup>1</sup>:

"Take the case of the woman E. C——, first quoted by Dr. Orange.

"One day, whilst dressing her infant, she rose with the view of procuring some bread and butter for another child. She had a slight seizure, and instead of cutting the bread, severed her infant's arm at the wrist. When she recovered consciousness she found several neighbors and a policeman in the room, the latter taking from her the severed hand, which she was fondling. Once before, in cutting bread, she unconsciously injured her thumb. She had no recollection of either act. During her asylum life she suffered from both *grand mal* and *petit mal*. The attacks usually came on about the third day after the catamenial period. She was occasionally maniacal, gradually

<sup>1</sup> John Baker, "Epilepsy and Crime," *Journal of Mental Science*, April, 1901.



drifted towards dementia, and finally died of cancer of the vagina."

In this case the woman started to do an act to which she was fully accustomed, viz., cut some bread. On starting to cut the bread she had an attack, and the act begun in the waking state was continued automatically in the epileptic state, the baby's hand being cut off because of its unfortunate proximity, being seized instead of the bread and the difference not appreciated.

It is probable that acts committed in a condition for which there is subsequent amnesia are the results of various causes. The acts of blind fury during which everything within reach is destroyed, and murderous assaults made upon those about, are probably as nearly automatic as any, although I think that these states are often accompanied by a low degree of consciousness, and in a case that came directly under my observation,<sup>1</sup> in which the condition was aggravated, though not caused by alcohol, there was perfectly clear consciousness on the part of the patient of what he was doing, as was proved by subsequent complete recollection. These conditions are probably often, as in the case referred to, the result of angry states waxed into violence by the removal of the ordinary controls of conduct and frequently aggravated by hallucinations, delusions, and obsessions.

<sup>1</sup> Dr. Wm. A. White, "The Retraction Theory from a Psychical Standpoint," *Proceedings American Medico-Psychological Association*, 1899.



This condition is well illustrated in the case quoted by Sullivan,<sup>1</sup> although in this case amnesia for the acts committed did not occur.

“David Baines, æt. 41, fish-dealer. No definite evidence of hereditary taint; his long resistance to alcohol suggests a normally stable brain. His drinking habits dated back some twenty or twenty-five years, and within two or three years of his crime he had several attacks of delirium tremens; also, without actual delirium, he often suffered from hallucinations, tremors, and insomnia. Under the influence of drink he was wont of late to become extremely violent, and would manifest suspicions of his wife's fidelity; he would then accuse her, watch her movements, threaten, or even assault her; on two occasions when in this state he attempted to commit suicide. When sober he did not entertain, or at least did not express, these ideas.

“From June to Christmas day, the date of the murder, Baines drank very heavily. On Christmas eve he had a violent quarrel with his wife; the wrangling lasted late into the night; Baines stayed up, walking about the house, talking to himself, and occasionally beating his head against the wall. Early on Christmas morning the woman went to a neighbor's house to ask the time. Baines, who had got possession of a knife and had sharpened it, followed her there and stabbed her fatally. Arrested immediately after, he

<sup>1</sup> *Loc. cit.*



said : 'It is all over last night's affair ; I saw it with my own eyes ; I did it deliberately over that.' Thirty hours later he was hallucinated and delirious, his ideas referring to the murder of his wife and to his own bodily condition, 'his inside was taken out, half of his penis was cut off.'

"Questioned subsequently regarding his crime, he stated that his wife, who constantly deceived him, brought a man to the house on Christmas eve ; he went to bed, leaving them together, and soon after, the door being partly open, he heard filthy conversation between them, and on looking out saw them having connection in the presence of the children. After this the woman and her paramour left the house separately. Baines slept for the rest of the night. Next morning, armed with a knife, he followed the woman to the neighbor's house ; his intention was merely to frighten her, but at the last moment 'something came over me, and I could not help doing it — I don't rightly know how it happened — I was not master of myself.'"

In other cases there appears strong evidence that the mental condition under alcohol is one which lends itself easily to suggestion, reminding one strongly of the hypnotic state. "The following observation<sup>1</sup> may perhaps be regarded as an instance of this influence (external suggestion), though the absence of corroborative evidence, and, assuming his veracity, the blurred

<sup>1</sup> Sullivan, *loc. cit.*



condition of the culprit's memory, leave the point in doubt."

"P——, æt. 31. No fixed occupation. Mother died of a 'fit'; said to have been demented for some time before her death. A cousin on the maternal side idiotic; another committed suicide. A brother suffered from convulsions in childhood.

"Prisoner was always idle and unstable; lost several engagements through drunkenness; drinking for over ten years before crime; was once convicted summarily for drunkenness. Had had rheumatic fever and syphilis, and suffered from mitral disease.

"Three days before the crime, prisoner took a room in a brothel, and went on a steady drinking bout with one of the girls of the house. On the day of the crime, in the afternoon, he went out with this girl; having had some drink in a tavern they entered a cab, directing the driver to take them back to the brothel. On arriving there, P—— got out of the cab, and told the driver that he had killed the girl, that she had asked him to do so. She was stabbed to the heart with a penknife. P—— could give no further account of the affair: the woman told him to stab her, and he obeyed, as one might in a dream."

"A clearer instance of the same agency is given in a case recorded by Prosper Despine, where one of four drunkards, who were carousing together, suggested the hanging of the most intoxicated of the party—a suggestion promptly carried out, with results



which only failed of being fatal through the accident of outside intervention."

Thus we see that the mental state during the alcoholic condition may be variously dominated. The presence or absence of amnesia appears to follow no rule, and when present it is probable that the mental condition for the forgotten period was dominated in much the same way as it would have been if amnesia had not followed. Sullivan<sup>1</sup> records two instances of alcoholics who committed crimes in a "state of obscured consciousness" and subsequently developed delusions which, if held at the time, would have been ample to have constituted a motive. It appears highly probable to me that such a crime was the result of delusions which in the following period of amnesia were forgotten, only, however, to crop up from the regions of the subconscious at a subsequent time to dominate the upper consciousness as delusions. Experimental research alone can determine whether this is so or not.

I have cited these cases only for the purpose of indicating in a general way the many different states of mind that may prevail during alcoholic intoxication, and to show further, that it is not sufficient to dispose of a case by simply designating it as amnesic. The confounding of amnesia with unconsciousness has been largely responsible for this, but now that we appreciate the distinction an effort should be made to

<sup>1</sup> *Loc. cit.*



study fully the forgotten period, with a view to determining the character of the dissociated and lapsed mental states.

This plea needs no justification from a psychopathological standpoint. From a medico-legal standpoint, however, while such methods may be of no value in dealing with the criminal whose principal safety from the consequences of his acts lies in the acceptance of his plea of forgetfulness, still there are many cases of "psychical automatism," so-called, during which important business transactions are entered into or consummated, long journeys taken, or various other acts done, for which there is subsequently no memory, where it might be a matter of great importance to recall what has been forgotten.

# Mental Dissociation in Psychic Epilepsy

*By*

WILLIAM A. WHITE

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## INTRODUCTION

It occasionally happens in the course of an active medical practice that the physician meets with a case of great interest. When this occurs it becomes his duty to study such a case so far as his abilities enable him to, and present the results thus attained to the scientific world in the hope that he may have added some few facts to the mass of knowledge, or that his studies may result in the better understanding of the class of cases to which his case belongs.

When, however, such a case belongs to a type little studied, about which hardly anything definite is known, and when, further, it presents a wealth of symptoms which in their *ensemble* are closely allied to that most unfortunate of human afflictions—insanity,—it becomes doubly the duty of the man under whose observation such a case falls to publish it in all its details.

The case which follows is such an one. No apology



is required for offering it in this form. It presents a wealth of manifestations which entitle it to a place in the annals of psychopathology.

The amount of experimental work done was so great that it will necessitate months of patient labor to formulate it all into a coherent and connected whole. I have, therefore, decided to present a review of the case embodying its main features, trusting that I will be able to offer the details at no very distant future.

## CHAPTER I

### ANAMNESIS AND PSYCHOPHYSICAL EXAMINATION

*Anamnesis*:—J. A. C., female, æt. fourteen, nativity United States, was admitted to the Binghamton State Hospital at Binghamton, N. Y., March 9, 1901. The commitment was made by a judge on the facts contained in a certificate of lunacy made by two duly qualified examiners in lunacy who, after having examined the patient, gave it as their opinion that she was insane.

The petitioner gives as his reasons for desiring his niece committed as insane that she "does not recognize members of her own family, refuses to take medicine, has purchased poison, and attempts to commit suicide. Has to be watched constantly." The physicians who examined her made the following statements on which their diagnosis of insanity was based: "Said did not care where she was, that she would sometime kill herself and had things to do it with. Had something on her mind that worried her all the time. Found fault with family for keeping her locked up so she could not get out. Friends all against her, trying to get her away from her home. Crying, violent movements and acts; at times



appearing quite rational, then suddenly becoming wild so that she has to be held. Refuses to take medicine; during attacks urinates in bed or upon floor; also bowels move in same manner. Tries to elude family in every way with suicidal intentions. Did succeed in taking something she supposed to be poison."

At the time of her admission to the hospital the physician who was in the office made the following note in her case: "Patient arrived at hospital accompanied by attendant and Mrs. W. Petition states that patient at times does not recognize members of her family, refuses to take medicine, has purchased poison, and has attempted to commit suicide. Medical certificate states that patient has been insane since February 12, 1901, that at times patient is uncleanly, that she has suicidal tendencies, and that this attack of mania seems to have been caused by *la grippe*, love affair, and hereditary tendency. Her mother died in an asylum. Patient said she did not care where she was, that she would at some time kill herself, that she had things to do it with, etc. In the medical office patient explained to the examining physician that at times she went into a condition where she would lose all control of herself and act and talk in a most irrational manner. During these periods she would both wet and soil her bed, and afterward would remember little or nothing of what had happened. She seemed pleased to think that she was about to receive



medical treatment for her alienation and talked most intelligently about herself and her sickness."

The next morning I visited the patient and obtained from her the following history :

She says that for the past year and a half to two years her relatives have commented on the fact that she has not acted right, but no active symptoms appeared until from four to six weeks ago. Some months ago she spent some time with a relative at G. While there suffered from intense headaches and consulted a physician who told her, as near as she can recollect, that she had astigmatism, and inflammation of the eye muscles, but that back of it all there was some brain trouble. After this visit she spent some time with an aunt at N. This aunt told her, what she had never known before, viz., that her mother died in an insane asylum. After her father's death her mother worried a great deal, and finally became insane, dying only about two weeks after being taken to the asylum. While at N. she had alternate attacks of depression and exaltation. During the stage of depression, she was gloomy and refused to talk; during the stage of exaltation, she talked constantly to every one's great annoyance. It was here, at N., that the first active symptoms developed. This first attack came on suddenly and she has no recollection of anything that occurred during it; the first thing she recalled was awakening at her home at R. and being surprised that she was there, not understanding



how she had come from N. Since this attack she has had numerous others. The first was the longest, lasting about three days, the others were never over a few hours in duration. On one occasion during an attack she bought some things in a grocery, and came to only to wonder where they came from and what she had done with her money. She is acquainted with many of the details of these attacks from having been told them by her relatives. The most constant feature seems to be the mistaking of persons; especially is she prone to mistake those about her for her brother, even though they be women. During the attacks she often soils herself.

This constitutes the entire history of the case so far as I was able to obtain it from all sources at my command.

*Psychophysical examination:*—A psychophysical examination conducted during the first few days of her residence in the hospital gave the following results:

The cutaneous surface was anæsthetic in areas distributed over both sides of the body and involving the trunk and limbs. These areas were characterized by their greater size the farther they were located from the nerve centres (neuron energy),<sup>1</sup> and by their rapid variation in size and outline. Their increase and decrease in area was so rapid that I have called them "pulsating areas of anæsthesia." Extensive

<sup>1</sup> "Neuron Energy," by Van Gieson and Sidis, *Archives of Neurology and Psychopathology*, vol. i., No. 1, 1898.



changes would take place in a few moments, so that a particular spot that was anæsthetic at the time tested might not be so a few moments later, or *vice versa*.

A greatly contracted field of vision extending in the four principal meridians (see Figure 17).

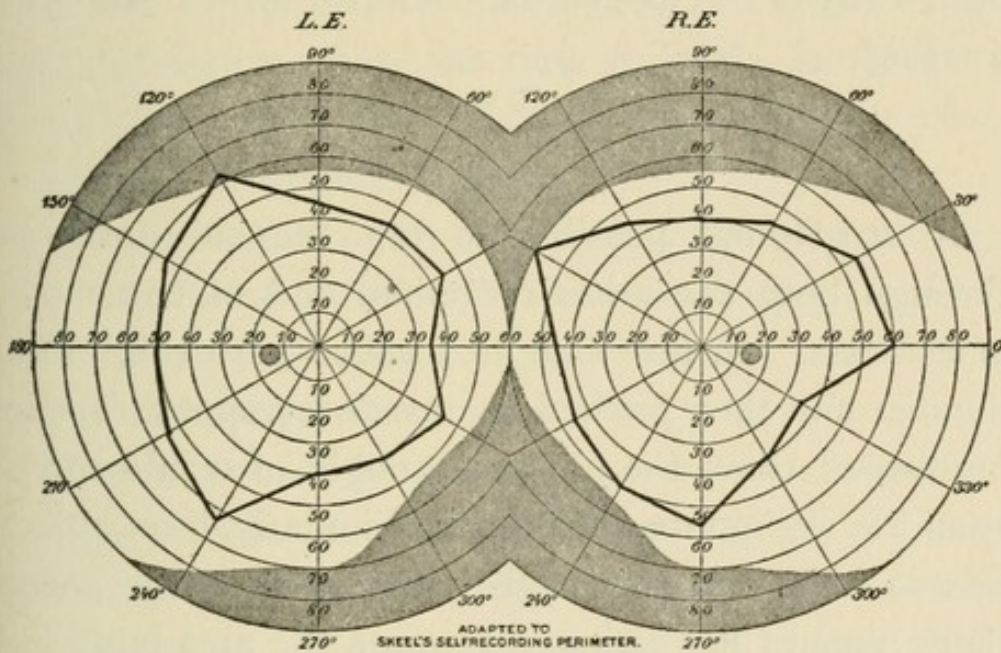


FIGURE 17.

Visual fields taken March 25, 1901.

Visual fields were not taken before this date because of the high degree of asthenopia present.

In taking fields, it is my habit to make a pencil mark on each meridian as the limit of vision on that meridian is determined, and then outline the whole field when I have finished. In this instance I discovered, when I came to outline the fields, that at O. S. 90° I had two pencil marks—one at 45° and one at 55°. This field had evidently been taken



twice in this direction and varied  $10^{\circ}$  between the first and second determination, illustrating well that the retinal anæsthesia closely resembled the cutaneous in its property of extreme and rapid variability and instability.

The skiometer showed an error of refraction for both eyes of  $-.50$  cyl. ax.  $180^{\circ}$  for which she was wearing

O. D.  $+.125$  sph.  $\ominus -.25$  cyl. ax.  $135^{\circ}$ .

O. S.  $+.125$  sph.  $\ominus -.25$  cyl. ax.  $45^{\circ}$ .

It was found possible to tap the subconscious through both the areas of retinal and of cutaneous anæsthesia. If, for example, I asked J. to think of a number and then pricked an anæsthetic spot a certain number of times the number thought of would correspond to the number of pricks. Similarly, if an object was so held that its image was cast upon the anæsthetic area of her retina, *i. e.*, upon the area lying between the limits of her field of vision and the field which is normally visually active, and she was asked to name the first object that came to her mind, she would name the object held before her, although throughout the experiment she had been unable to see it.

During the first two days of J's residence in the hospital she had two attacks followed by complete amnesia. During the greater portion of the first of these attacks I was with her and so enabled to make a number of important and interesting observations.

In both her normal condition and during her attacks she suffered from a well-developed suicidal obsession, and from erythrophobia (*ερυθρός*, red, *φόβος*, fear). Her attacks are ushered in by a distinct sensory aura : pain in the occiput. During the attack in which I saw her she did not recognize those about her but mistook them for friends and relatives and did not realize where she was, evidently thinking she was home. She also said and did things for which there was no apparent reason.

J. is hypnotizable, sinking readily into deep somnambulism, during which state she accepts suggested hallucinations both positive and negative. She also accepts post-hypnotic suggestions.

She is very bright and was a good student at school, and is very much alive to all that is going on about her. She is, however, self-centred, given to morbid introspection, and not interested in things which ordinarily interest girls of her age.

Emotionally she is very mercurial, easily pleased and as easily hurt. She has a tendency to alternate between conditions of comparative exaltation and of comparative depression. During the former she is happy, smiling, and very active, and apt to overdo and become greatly fatigued. This fatigue assists in producing the depressed state, during which she is overwhelmed by depressing thoughts, quiet and inactive, her mind constantly occupied by the idea of self-destruction.



## CHAPTER II

### ORIGIN AND GROWTH OF DISSOCIATION .

I PROPOSE to present in this chapter, arranged chronologically, a connected story of the origin and development of the many phenomena which the patient presented ; in other words the story of her case without reference to experimentation and with only a sufficient amount of comment to make it a clear connected whole and to show the relations and dependencies between its different parts.

At the tender age of one and one half years J. lost her father. He had been ailing for some little time and died finally from a complication of diseases in which the heart and kidneys figured prominently. Her mother, who was very much devoted to her husband, never fully recovered from the shock of his death, and one year afterward, as a result of continual grieving and the increased work made necessary by added responsibilities, she became insane. She was taken to a State Hospital but only survived for two weeks.

J. has two sisters, J-n-y and M., and one brother, H., who are respectively eleven, sixteen, and nineteen years older than she.

At a very early age then we see that J. was de-

prived of that most important of elements in the proper development of the child mind: the solicitous care and love of parents. Her sisters and brother were too old to sympathize with her in her childish ideas and so to be her companions, and not old enough to take the place of parents, so that of necessity there was much lack of sympathy between her and them.

Starting in life with a probable hereditary taint, cared for by a brother and sisters suffering in all probability from the same taint and with whom she had little in common, she was certainly seriously handicapped in the race of life. Notwithstanding all this, however, for the first few years of her life she was apparently a normal girl, going daily to school, playing with the other children, interested in what they were interested in, happy, jovial, light-hearted, and withal much like other children of her age.

At the age of ten years the first important event of her life occurred. She menstruated. From now on her character underwent a radical change. From being an active, happy-go-lucky child she became quiet and sedate. She was no longer interested in the play of other children, but preferred to remain at home and sew or read. Her manner became so much changed in this respect that it was a matter of comment among her associates and they often remarked on it. Unfortunately, too, at this period of her life phenomena developed which tended still further to give a morbid character to her acts and thoughts,



namely, auto-erotism.<sup>1</sup> During this period, however, she continued in school, was bright and got on well with her studies and was comparatively happy. When she was eleven and one half years old, the first event occurred to which definitely can be traced the origin of symptoms which ultimately led to her commitment as insane. It was three and a half years ago, on New Year's eve. After she had finished her evening meal she went, as often she had done before, to call upon her next-door neighbor, a woman with whom she was quite intimate. While sitting chatting in the darkness—the lamps had not yet been lighted—this woman told her a story: it was a story of blood and death. She told her of a young man who became discouraged with life and resolved to commit suicide; of how he went to his room one evening, and, after writing a note telling of his discouragement, had cut his throat. Death not coming as fast as he had wished, he jumped from his window and ran toward the river, into which he plunged and was drowned. She told her all this and how on the following morning he was traced by the splashes of blood which he left behind in his path as the vital fluid trickled from the wound in his throat.

Imagine for a moment the effect of such a story upon a morbid, emotional, and highly sensitive girl of eleven years of age, told in the darkness of the night

<sup>1</sup> "By 'auto-erotism' I mean the phenomena of spontaneous sexual emotion generated in the absence of an external stimulus proceeding, directly or indirectly, from another person."—Havelock Ellis, "Auto-Erotism," *The Psychology of Sex*, vol. II., 1900.



in all its horrible details. Is it strange that such a gruesome yarn left its impression so deeply seared into her brain that years failed to eradicate it? Yet nature is so careful of her own that it is doubtful if this would have had any effect whatever, if it had not been for the events which immediately followed. That the story made a deep and morbid impression on her is shown, however, by the fact that during its relating she thought of the possible effects of such an action on her part.

After finishing her visit with the neighbor she went home. It was now about nine o'clock. She went to the sitting-room and began playing on the piano, a favorite pastime of hers. While she was playing, however, the same idea recurred,—what would her folk think if she killed herself? Would her brother care if she did? While sitting here playing she noticed that the train returned to the station after leaving it and the bell kept ringing. (The railroad station was only a short distance from her home and the sound of the train was readily discernible.) She asked her brother H., who was sitting in the room reading, the reason for this. He was deeply engrossed in his book and at first did not answer her, but to her repeated questions finally answered crossly and told her to stop playing the piano. He had never done this before and it made J. feel very badly and shortly after when she started for bed neither he nor she said good-night.



After getting into bed she cried about her brother's crossness to her and thought still of what effect her suicide would have on her folk. She finally fell asleep and dreamt of the suicide and also that if she should kill herself her brother would not care. This made her feel very badly.

She was dreaming thus when she was suddenly awakened by the front door slamming and the sound of her brother's footsteps. The first idea that flashed to her mind was that her brother did not like her. She then heard her brother say to a man who kept his horse in their barn, "Is she dead?" and then, "Which way did Uncle H's folk go?" The first question immediately brought back the recollection of the suicide and the second the thought of going to the river. Then her brother locked the door and went off leaving J. in the house alone. She was much frightened, and in her agitation, not knowing what had happened, she walked the floor crying. She feared that her sister J. had been killed. In this state of fear and apprehension she wished she was dead.

It was in this state of mind, while walking the floor crying, fearful that her sister had been killed and with the remembrance of her brother's harshness still fresh in her mind, that the desire to kill herself suggested by the story of the boy's suicide came first to her mind. She had previously only thought of suicide in a general way and of the effect her death



would have on her folk: she now for the first time felt an actual desire to end her life. Feeling, in her childlike way, that her brother's actions could only have been prompted by hate, and convinced that her sister was dead, she saw nothing to look forward to in life, nothing to live for.

In about a half-hour her brother returned, but he did not as yet know anything definite about the accident and went out, leaving J. alone again a prey to the tyranny of her own thoughts.

When he returned the second time he had learned that while J's cousin L. had been out driving she had been struck by the train and run over. He made fun of J. for "taking on" so and told her that her sister J-n-y was at Uncle H's. Her sister returned at 2.30 o'clock. J. was much worried, however, until she returned, despite her brother's assurances.

These are the events which served to make permanent the damage done by the old woman's story and the effects of which I propose to trace through the following three and one half years of J's life.

During the next fourteen months nothing of consequence occurred. The events just recorded, however, had done their work well. The idea of suicide had been grafted into J's mind, there to grow, to elaborate itself, and to wax strong, its origin lost in the depths of the subconscious, for J. no longer thought of the story of the old woman. That had long since passed from her mind.



Here is the first definite symptom of mental dissociation in the case. The story of the suicide and the events that followed had been sufficient to produce the idea of suicide in J's mind, and then sinking from view into the depths of the subconscious they became lost as dissociated states. Separated from the stream of the upper consciousness they are lost to view by the patient, and their causal connection with her disturbed mental state is not in the least suspected.

Lost to view, apparently forever, we still find ample evidence of their existence in their effects on J's everyday life. The slightest difficulty that arose was sufficient to bring the thought of suicide to her mind, and if her sister J-n-y opposed her in anything we often hear her replying in some such way as this: "Well, maybe you 'll be sorry. I shall kill myself. Which would you rather do, have me kill myself or let me do that?"

That the suicide idea was still comparatively weak, however, had not as yet gathered unto itself sufficient strength to make its demands imperative, as subsequently happened, is shown by the fact that throughout this period of fourteen months J. never once attempted to kill herself, although she often thought of how she would do it, and when would be the best time.

At the end of this period, in the month of March, J. had a difficulty with her brother H. She up-

braided him for the way in which he managed her parents' estate, in which she had an interest as heir, under the law. He told her that if she did not like his way of doing she could get out. This made her very angry, and she went to her grandmother's and stayed for several days.

One night while at her grandmother's, and after she had gone to bed, she kept thinking about the trouble she had had with her brother, and about what as she supposed was his mismanagement of the estate. Then the events of the railroad accident came to her mind and with them the reasons she had at that time for thinking that her brother hated her. With these recollections was associated the old idea of suicide. While she was turning all these things over in her mind the idea suddenly flashed upon her that she would kill her brother. She thought of how she would do this, and concluded that she would use his revolver, as she knew where it was kept, and that it was loaded. She felt confident that she could accomplish her purpose by going to his room at night, as he was a very sound sleeper.

This is the first occasion on which the idea of homicide ever occurred to her; an idea, the origin of which, like that of the suicide idea, became immediately dissociated, passing into the depths of the subconscious.

Although the events surrounding the origin of this idea were not nearly so startling as those surrounding



the origin of the suicide idea, yet it must be remembered that the habit of dissociation had already been formed. The soil was in a favorable condition for the growth of additional dissociated ideas.

Further than this we see that a somewhat different principle is involved in the origin of the homicide idea from that which governed the origin of the suicide idea. The latter was directly suggested by the old woman's story and the events which followed, while the former came about rather as a contrast idea. The genesis of the homicide idea was purely subjective, and not, as in the case of the suicide idea, due to objective agencies in the patient's environment. The homicide idea followed the suicide idea on the well known principle of association of ideas by contrast.

During the following year no particular event of importance occurred. The suicide and homicide ideas held the field and gained considerably in strength. In fact, they forced themselves on her attention at all times and in all places, and finally came to occupy her mind almost continuously.

The suicide idea frequently gave origin to such expressions as it had formerly, but the homicide idea she kept carefully to herself.

That the suicide idea in particular gained in strength and became more imperative to its demands for recognition is evidenced by the fact that once during this period she made an abortive attempt at self-destruction.



She started for the river fully intending to jump in and drown herself, but changed her mind, however, only after she reached the river's bank.

During this period certain other symptoms developed which are of great significance. She became very forgetful; so much so in fact that the commonest acts of her life were much interfered with. If her sister J-n-y would send her for something in an adjoining room she would often forget while on her way what it was, or even go to the wrong room, so quickly would her sister's instructions slip from her. This was such a constant feature of her condition that her sister used often to say, "Well! you'd forget your head if it was n't tied on," and "Why J., you act as if you did n't know what you were about half the time."

The tendency to dissociation was becoming more and more marked. Dissociation was actually taking place. The soil was being prepared for the growth of dissociated systems conditioned by the events which followed.

Just one year after J's trouble with her brother she met and became attached to G., a young man who had just been employed at her uncle's mills. This was an event of some importance, largely, as we shall see later, because her attachment was bitterly opposed by the members of her family.

About this time she began to have considerable trouble with her eyes. She suffered from severe



headaches almost every evening, largely as a consequence of having to use them so much at school. She was accordingly sent to N. to consult an ophthalmologist, who prescribed a pair of glasses for her which helped her for a time.

The next July she was sent by her folk to visit her Aunt B., who lived in the pleasant little village of G. on Long Island Sound. She was sent here ostensibly because of the condition of her health, in reality, however, to break off her relations with G.

While here she suffered a great deal from headaches and consulted a physician who told her, as near as she can recollect, that she had astigmatism and inflammation of the eye muscles, but that back of it all there was some brain trouble.

She stayed in G. until the holidays, at which time she returned to her home for a period of six weeks. During these six weeks we see the strongest evidence of the strength to which the suicidal idea had attained in four distinct attempts at self-destruction, each of which was much more desperate in character than the one already described.

Once she took about a half-ounce from a bottle labelled "poison" and which afterwards proved to be laudanum. This made her very sick and she vomited. Again she drank from a bottle taken from the medicine closet but no effect seems to have been produced. Twice she started to take chloroform but on both



occasions was interrupted and her attempt thereby frustrated.

During all this time, however, her mind was almost constantly occupied by the idea of suicide, especially when she was left alone in the house, as frequently happened.

During this period of six weeks the third important event in the history of J's case occurred. One evening unknown to her folk she attended a party with G. While there a young man, jealous of his intended, who persisted in dancing with some one else, shot himself in the head and fell dead. Although J. did not see the tragedy she heard the shot fired and was much shocked by it and afterward by seeing the dead man's body, bathed in its own blood, lying on the floor in the room where she had left her wraps.

J. was greatly shocked (psychical traumatism) by the occurrence. On that particular evening she was so nervous that G. remarked the fact on his way home with her, and we shall have occasion from now on to note the serious effects which this unfortunate affair had upon her. It is certainly not to be wondered at that the effects were serious. It would be strange, indeed, if such a shock could be experienced by one in her condition without a deep impression being left.

A few days afterward J. wandered into the barn of one of the neighbors, and unexpectedly came upon a farm hand in the act of killing a calf. She had often seen such sights before, and had never experienced



any particular emotion at them, but on this occasion she was much disturbed. The sight of the blood frightened her and made her feel uncomfortable and strange. In fact she experienced much the same feelings as upon the occasion of the suicide. This experience was repeated shortly after on the occasion of her cleaning and dressing a couple of chickens.

In these experiences we see the beginning effects of the shock she had received in the fear which it had engendered at the sight of blood. We shall shortly see, however, that these effects are to be more far-reaching and serious in character.

About this time J's aunt B., with whom she had stopped at G., moved to N. and J. went with her. While there her aunt had the poor taste to tell her of the circumstances surrounding the death of her mother in an asylum.

Shortly after her arrival at N., during the latter part of January, she suffered from a severe attack of nose-bleed. During this attack everything appeared red to her. She expresses it by saying that it appeared to her just as if she were looking through a red glass. This symptom disappeared when the nosebleed stopped, only to reappear with a subsequent attack. This sensation of red was disagreeable and accompanied more or less by a feeling of fear — erythrophobia. From this time on this sensation (as though she were looking through a red glass) appeared, especially when her head ached, and as she suffered



from this source a great deal the sensation was naturally present a considerable portion of the time.

In February following she was quite ill with a severe attack of *la grippe* which kept her confined to her bed for two weeks. During this period also the red sensation recurred from time to time.

The first day out of bed after her illness, she was quite weak, and went and lay down on a sofa in an upstairs room. While lying there her mind reverted to the occasion of the suicide, and again the red sensation made its appearance. In connection with the events of the party, she also thought of how her folk had scolded her for attending it, and of her uncle's threat to place her in a convent if she did not behave better. These thoughts worried her greatly. She arose from the sofa, but immediately felt faint and dizzy and fell to the floor, striking her head on the occipital region (physical traumatism). Her fainting was probably caused, in part at least, by the pain of menstruating. (She not infrequently used to faint away during her menstrual period.)

The fall was so severe as to render her unconscious and she lay on the floor until her aunt came upstairs and found her and put her to bed. When she came to she immediately began fighting her aunt and was apparently quite out of her head. During that afternoon she came to herself for two or three hours only, lapsing again into her previous condition and continuing thus for the following three and one half days.



During all this time she acted strangely, often did not know where she was or recognize those about her. On the third day of the attack she was taken home, and on the afternoon of the fifth day suddenly came to herself, with absolutely no recollection of what had occurred. The last thing she remembered was lying on the sofa in her aunt's house at N. From then on everything was a complete blank, even her journey home having left no trace in her memory.

This was the first attack of what we shall hereafter call her secondary state, a condition from which she rallies with absolutely no recollection of the events that occurred during its ascendancy.

That the blow which produced this state of affairs was a severe one is shown by the fact that she was rendered unconscious by it, and further that when she came to her head was paining severely in the occipital region and the point where she struck was sore and tender to the touch for some time afterwards. The fall also caused an epistaxis which continued intermittently for four days—the most severe nose-bleed she had ever had.

### CHAPTER III

## THE DEVELOPMENT OF THE SECONDARY STATE

FROM this first attack the development of a secondary state was assured and it accordingly began to manifest itself with ever-increasing frequency. It will be instructive if we pause and study the origin of a few separate attacks and learn how this condition was brought about and what symptoms accompanied its

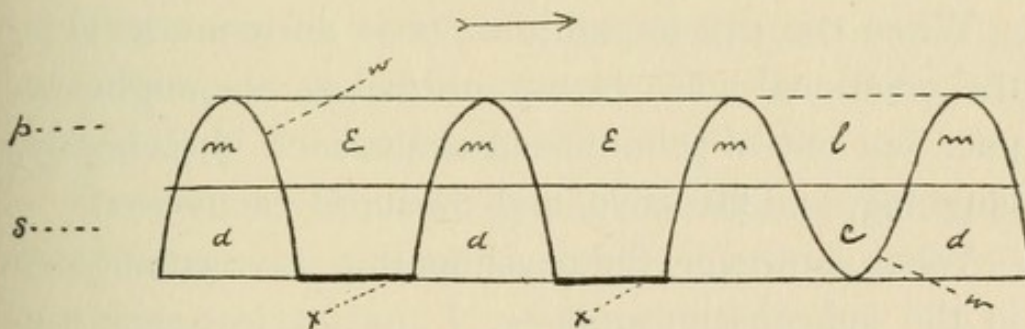


FIGURE 18.

Graphic representation of J's abnormal mental states.

incidence. We can do this to better advantage if we will first pause and examine the accompanying diagram (Figure 18), which is an attempt at the graphic representation of J's abnormal mental states.

If by this diagram we represent J's stream of consciousness, then  $p$ —that portion between the middle and upper line—will represent her upper



or personal consciousness, and *s*—that portion between the middle and lower line—will represent her subconsciousness. By *w* is intended to indicate that abnormal element in patient's consciousness which is alternately active—*m*, *c*; or dormant—*x*. This is termed "the psychopathic wave."

When the psychopathic wave is active and it culminates in the upper consciousness as at *m*, J. is profoundly depressed, inactive, and melancholy, and possessed by the idea of suicide. The origin of this emotional condition is, however, in the subconscious dissociated mental states which lie at the base of the wave at *d*—*i.e.*, the story of the suicide told her by the old woman, and which she has long since forgotten.

When the psychopathic wave is dormant, as at *x*, the emotional state is, not normal as we might expect, but one of pronounced exaltation. J. is happy, laughing, and talkative, and constantly active—*e*.

When, however, the psychopathic wave culminates in the subconsciousness—*c*, J. passes into her secondary state, and her upper consciousness, as indicated by the broken line at *l*, is, in large part at least, inactive.

Thus we see that J. has three distinct abnormal mental states, viz.: depressed—*m*, exalted—*e*, and secondary—*c*. The two former have to do with her upper or personal consciousness, although the first has its origin in the subconscious; the third has to do almost wholly with the subconscious.



On one occasion she felt tired and lay down to take a nap. She was suffering from pain in her head at the time—the same sort of pain that resulted from her fall. J. has two varieties of headaches; one is frontal and due to eye strain, the other is occipital and the result of her fall. The former she speaks of as “headache,” the latter as “pain in the head.” It was this latter variety from which she suffered on this occasion. While sleeping she dreamt that she visited her uncle’s mills (woollen mills), and that there they were at work dyeing an unusual amount of red cloth, so that there were large quantities of this red cloth all about her. She awoke, but in her secondary state.

Other attacks were preceded in the same way by occipital pain and this sensation of red without the incidence of the sleep state.

Here we see the development of what appear to be two distinct auras, both sensory, which usher in the secondary state.

If we analyze these attacks carefully, however, especially with reference to her condition before the head injury, we will, I think, have the conclusion forced upon us that the occipital pain sensation is the only true aura of the secondary state. This pain has a constant relation to the secondary state, whereas the red sensation not only often occurs without the pain, but was frequently in evidence before the head injury, and therefore before she ever had any secondary



states. The red sensation is rather an indication of the activity of the dissociated subconscious systems occurring typically in connection with the mental state—*m* (see Figure 18), and quite consistently appearing on the scene preceding the secondary state, when these systems are about to usurp the field of consciousness.

Let us study still further how these attacks manifested themselves under other conditions.

One day while at her uncle's house, her cousin L. played on the piano to her while they sat together in the parlor downstairs. During the playing she was thinking of what she had been told she did in her secondary state and worrying about her uncle's threat to send her to a convent. After her cousin had played for a while they went upstairs to her room. As they passed through the upper hall J. noticed that the carpet was red. This immediately brought back to her mind the recollection of the suicide and produced a peculiar feeling of fear,—erythrophobia,—which was immediately followed by pain in the back of her head. They went together into L's room and L. read to her. J., meanwhile, was lying down, her eyes shut (condition favorable for the outcropping of subconscious states), and thinking of the party and the subsequent scolding her brother and sister gave her. It was during the reading that the secondary state asserted itself. She was thinking of her brother's anger, and opening her eyes she mistook L.



for her brother and said, "Why H., what are you mad at me for?" Her uncle took her home and when she came to herself her brother was untying her necktie preparatory to putting her to bed.

Another attack was preceded by a dream of the suicide, during which dream she had both the red and pain sensations. She awoke in her secondary state.

During all this time she suffered a great deal from headache. She would often lie down complaining bitterly of her head, saying, "Oh, how my head hurts!" Then as the secondary state would assert itself she would keep right on making this remark.

From now on attacks were much more frequent. They came almost every day, and sometimes more than one a day. Their resemblance to "epilepsy of the psychic type" became even more marked. Often she would seat herself to play on the piano, would begin all right, when a secondary state would assert itself and she would commence to play one thing after another in a confused jumble. On one occasion she started to set the table for dinner, an attack came on, and she went on with the work but mixed up everything hopelessly. She then went into the sitting-room and sat down for a few moments, then returned to the dining-room and finished setting the table, but was greatly surprised to see how everything was strewn over it, and wondered how such a condition had come about.



More interesting yet are the attacks during which she held conversations with her brother. They came on often when she was seated, sometimes alone, sometimes with people about her with whom she was conversing. If she had been conversing she would suddenly become quiet for a few moments, then looking up would mistake some one in the room for her brother, and enter into conversation with them. This would last a few moments, when she would suddenly come to herself and resume her former conversation.

Even when no one was in the room with her these attacks assumed the same characteristics. She would then imagine that she saw her brother before her, address remarks to him, and hear him answer her. She would usually talk to him of suicide, and his replies to her were of a nature to dissuade her from such an act.

Here we have a condition closely bordering on that of "double consciousness"; its relation to so-called "psychic" epilepsy is shown by being in each instance preceded by the aura previously described; its real character, however, is that of *mental dissociation, the presence of dissociated systems in the depths of the subconscious.*

It was at this time when her attacks were recurring with such frequency—during which she was often violent, having to be held, on one occasion breaking out the window panes (subconscious angry state), threatening and attempting suicide—that she was examined and committed as insane.

## CHAPTER IV

### THE SYNTHESIS OF THE DISSOCIATED STATES

THE principle followed in this case was that of bringing together,—re-associating—what had become dissociated : synthesis of the dissociated subconscious states. All the details of the events for which the patient was amnesic were thoroughly traced by use of hypnosis and hypnoidization, and were then united to her upper, personal consciousness, so that she is now in full possession of all of the facts. These facts, obtained from her in this way, were subsequently verified by numerous conversations with different members of her family.

It is noteworthy in this connection, that all of her acts and sayings which had previously seemed to have no foundation in reason, but on the contrary had every appearance of being quite incoherent, could be traced in each instance to an adequate cause, and thus what appeared as chaos on the surface was reduced to order.

The hypnotic state itself is an abnormal state, a state of dissociation, and so long as amnesia for this state was permitted to exist the patient could not be said to be well, as the very conditions were present



which would favor further tendencies to dissociation, and although the individual symptoms for which she came under treatment had disappeared it was highly probable that they would reappear or that others would take their place. When dissociation has once begun, the dissociated state tends ever to gather unto itself new material and in growing to bring all its elements into systematic and ever more fixed relations with one another. This process, while enriching the subconsciousness, does so by robbing the upper consciousness, thus bringing the patient more and more fully under the control of the dissociated systems.

In order to prevent the possibility of these untoward results the hypnotic states were dealt with in precisely the same manner as her secondary states and brought into relation with the upper consciousness.

The results of this method were most gratifying. An immediate and marked improvement took place. The erythrophobia and the suicidal obsession, which did not yield to the influence of hypnotic suggestion, entirely disappeared and sank at once into the background. It is noteworthy also that the occipital pain, a pain of apparently purely psychic origin, also disappeared.

It was hardly to be expected, however, that habits of thought which were of three and one half years' growth could be dissolved and made to disappear in an instant as if by magic, and as a matter of fact this did not take place, but from the time when the first re-



association of subconscious states was effected to the present J. has been gradually though surely gravitating back to normal.

The suicidal idea being the most firmly fixed and highly organized was correspondingly the most refractory and a slight tendency to its recurrence continued for some time, indicating that J. was not entirely well. It no longer occurred spontaneously

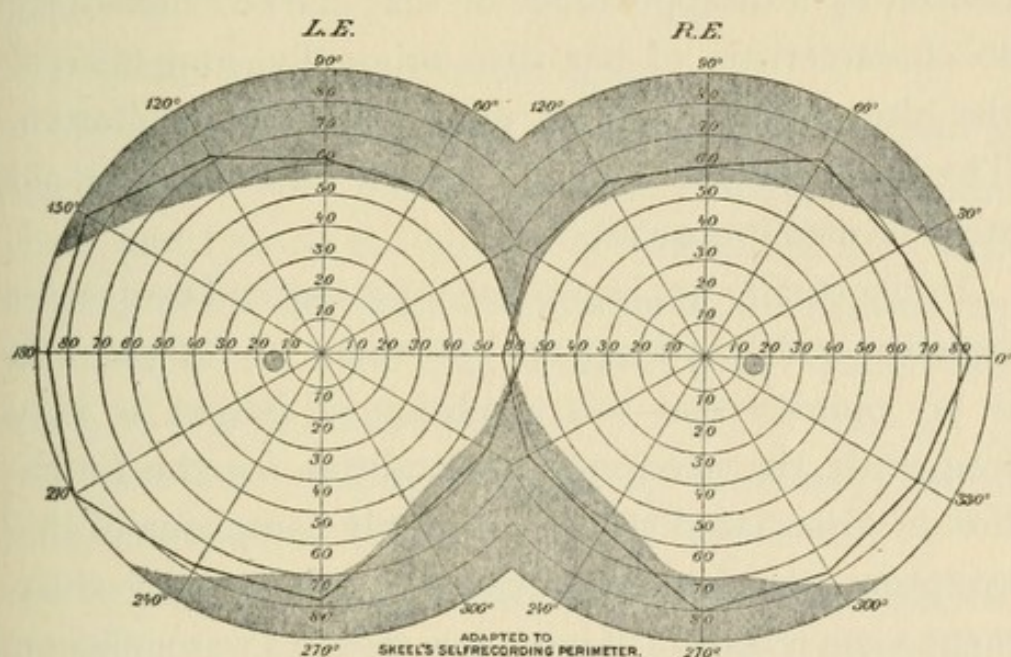


FIGURE 19.

as formerly, but only as the result of a definite cause: either some depressing event in her environment or as the result of fatigue. When it did recur, however, it was relatively less intense or if intense was of relatively short duration.

At this point it will be interesting if we compare J's field of vision taken at this time (see Figure 19) with her field as it was when she came under observa-



tion (see Figure 17). The very great increase that has taken place is at once apparent. At the time this field was taken, all symptoms of cutaneous anæsthesia had also disappeared. This indicates a condition which I have found to be true in other cases, viz., that the extent of anæsthesia is often an index of the extent of mental dissociation.

The improvement in J's emotional sphere is evidenced by a disappearance of that marked instability so characteristic of her case originally, and also of the alternating states of depression and exaltation. The latter have merged, as it were, into an emotional state of medium quality.

Intellectually her improvement is marked by greater stability and less frequent symptoms of fatigue. It is my opinion that this condition of fatigue is very frequently the necessary precondition for the formation of dissociated states. J. rarely complains of this symptom now, but when she first came under treatment a conversation of but a few minutes was sufficient to produce it. The improvement in this particular is partly due to increased general health, but chiefly, I think, to an equalization, by re-association, of the energy of the systems of psychic neurons.

On August 29, 1901, J. left the hospital for her home on thirty days' parole. At the expiration of this time, viz., on September 28, 1901, she was discharged. Since that time I have been in constant correspondence with her, and have every reason for

believing that she is perfectly well in every way. I can do no better in closing this review of her case than to quote from a letter received from her and dated October 3, 1901. She says, in part :

"R—— M——, N. Y.

October 3, 1901.

"DEAR DR. WHITE :

Your letter received, and was glad to hear from you.

It seems good to be home again.

My memory is real good now, and is better than it has been in some time. We had examinations last week, and I stood the highest of any one in my grade in geography, drawing, and grammar ; so I guess my memory is not very bad. There is no school this week, as it is Institute week.

I have been selling the *Life of McKinley*, and I sold twenty-seven books.

I went chestnutting to-day and rode four miles on my wheel, and did all the housework, so J-n-y could sew.

I am thinking some of going over to see J. B. this week.

I had a nice letter from Miss I. the other night, telling me all about her trip to the Pan-American.

One of the girls took her father's horse and took me to G——e to canvas for *Life of McKinley*, but there had been an agent all around up there ; but as it was I sold three."



I have never seen that picture of you that you said I might have. I would be much pleased to receive it.

I have just been up to the factory, and I weigh 127½ lb.

Remember me to all.

Your friend,  
J."

# Mental Dissociation in Depressive Delusional States

*By*

BORIS SIDIS

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## CHAPTER I

### THE HISTORY AND THE FORMED DELUSION

FROM the standpoint of abnormal as well as normal psychology the following observations and experiments on what may be regarded as a typical case of melancholia present many points of interest to the student of psychology and psychopathology.

The patient is a Russian Jew; he is twenty-six years of age, and by occupation a clerk. He is quite intelligent and is temperate in his habits. His physical constitution up to the time of his illness was strong and healthy, except that he seemed to have had a severe attack of malaria. He had no mental anxiety, suffered from no worry; and from his temperament and race one could be tolerably sure that he never indulged in any excesses.

The family history could not be well ascertained, but from the patient's account it appeared that he was



of good stock, his parents as well as his nearest relatives being all of a good healthy constitution.

About February, 1900, the patient began to suffer from headaches, insomnia, and loss of appetite. The patient found he could not fix attention on anything, his mind wandering aimlessly; he could not retain anything in his memory. He began to feel gloomy, depressed, and dejected in spirits; he avoided company, having a desire to be left alone; his physical health became greatly deteriorated; his appetite was getting poorer; his bowels were costive, and he suffered from great pain in the abdomen.

The patient called on one of the local physicians, who, on examination, referred the whole trouble to the stomach and to the intestinal tract and indigestion. To bring the matter home to the patient the physician told him he had "lumps." From this time dates the definite manifestation of the disorder. The incautious statement was, so to say, the last straw that broke the camel's back. These "lumps" proved the nucleus of a complicated, highly organized systematized delusion. The patient formed the fixed delusion that a vast amount of waste materials in the form of lumps had become accumulated in his intestines. This delusion developed further and became minutely worked out. The mass of lumps was regarded by the patient not as being stationary, but as spreading to other organs of the body, continually shifting position and taking many courses in different directions. These



courses were minutely described and localized by the patient. The lumps seemed to have kept a course of their own; in the form of minute spots, they streamed to the head and came out in a definite hole in the thigh. These were the main streams; minor currents circulated through various other organs, finally coming to the same holes. This formed the basis of the delusion.

On this delusional basis was superimposed a highly complicated delusional superstructure. The patient believed he had worms in the intestines; it was these worms working on the great amount of lumps that broke the big hard lumps and ate them; at the same time being stupid and careless, they sprinkled tiny lumps all about them. It was this sprinkling that gave rise to the different currents in various directions. The worms were regarded by the patient as not unfriendly agents; in fact, they were useful in breaking up the stuff of the lumps and eating away his waste materials as much as they could. The only objection to the worms was the process of sprinkling which sent tiny lumps circulating through the body. In this process of sprinkling, due to the careless mode of "feasting," the worms themselves became besprinkled with tiny lumps and were very uncomfortable, but they could not free themselves from the lumps which stuck fast to their slimy, sticky bodies. The more the greedy worms ate, the more did they become besprinkled with tiny lumps in a most



disgusting fashion, and the more uncomfortable they felt. Were he dependent on the agency of these stupid worms alone the patient believed he would have been in a very bad fix indeed; he would have simply become chock-full of these tiny lumps, and there would have been an end of him. Fortunately for himself as well as for the worms, three agencies came to the rescue of this intolerable state of affairs, — the spleen, the soul, and the veins. The veins took a passive part, but the soul was specially active in removing the lumps as fast as possible as well as taking directions from its more intelligent companion, the spleen. The worms were now taken in hand by the soul and cleansed of their fast accumulating lumps, which were taken up by the veins and driven in definite currents to the two main holes of the body. The spleen and the soul were the two active agents in this purifying process. The soul was the scavenger and the spleen the director. This was rather an unusual function for the soul, but the patient did not find it degrading, and was rather glad that the soul had undertaken this highly useful function. Although the situation was sad and deplorable, still, under the circumstances, the patient considered that nothing better could have happened.

With the soul as scavenger-in-chief and the spleen as superintendent the state of things was by no means cheerful. Things dragged on; the worms at first were very angry at being handled, but then they felt com-



fortable as they were cleaned quite carefully by the soul under the constant watchful direction of the spleen; the patient, however, felt as uncomfortable as ever. A whole system of signs was established between the two scavengers, the soul and the spleen, signs which the patient could hear distinctly. He could hear the spleen grunt in reply to the signals given to it in a sort of deaf and mute fashion by the ever-waking, never-tiring soul. The spleen would grunt when the soul worked well, but its grunt did not resemble that of "man."

The worms in their stupid way were piling up work for the poor soul. The patient believed that he could distinctly feel the soul come and go and open the mucous membrane and clean up the worms, which at first quite resented such an operation, appreciating it, however, in the end and acquiescing in the process of this unceremonious handling.

The good, efficient work of the soul depended a great deal on the intensity of the attention. When there was nothing to distract the attention, the patient believed that he could feel the soul going round in its silent way and cleaning away all his lumps from the head into the veins and then to the stomach. When, however, his attention became distracted, the soul did not work well; the spleen then by signs commanded the soul to stop; the soul did not and could not answer, but it understood and ceased its activity. When the patient was asleep the cleaning activity of the soul came to a complete standstill.



## CHAPTER II

### A REVIEW OF THE GENERAL PSYCHOMOTOR STATES

THE emotional state of the patient was one of great depression and even of anxiety ; the face looked extremely sad, anxious and distorted with the mental pain caused by the lumps and the three working agencies,—the worms, the spleen, and the soul. The eyes were lustreless, apathetic ; the skin was pale ; the whole body was badly nourished and partly bent, as if by the weight of great suffering.

The feelings of the patient were greatly affected ; he lost all interest in everything and in everybody. His whole mental and emotional horizon became narrowed down to the one painful state, to his highly systematized delusion. He became unfit to do his work and he had to give it up altogether. The parasitic delusional system became the predominating one and sapped all the vigor of his affective emotional life.

His mind seemed to have become a blank to everything else, or as he put it : "I looked and could not see." Like a mental cancer the delusional system grew and developed at the expense of the life of other normal mental systems. Whatever was possible to

connect with this central delusion was greedily seized and organized into its tissue ; what could not lend itself to such a purpose was rejected, ignored, in some way or other transformed into an illusion so as to fit the system and then absorbed and organized. The delusion formed the focus, the very heart of the patient's life.

The flow of association of ideas became greatly retarded and even seemingly arrested ; only what related to the principal delusional system and what therefore met with no obstruction, only that alone flowed with great ease and facility. The patient could hardly be induced to talk of anything else but his woe ; when he was induced to enter into conversation his speech was slow and in monosyllables ; the thoughts formed slowly, with great difficulty, and tended to revert to the principal delusional system. Only when the conversation directly concerned the dominating delusion, only then did the current of speech and the stream of association of ideas flow with ease and without disturbance.

While the patient's memory was otherwise bad and unreliable the memories for his delusion were excellent and exact to the last trifling details. Outside his main delusional system the reasoning process was sound and but little disturbed. The trouble was that but little mental material remained outside this delusion ; most of it having been drawn into the whirlpool of the general delusional state.



The attention was impaired in relation to all interests and also to stimuli not connected with the one all-absorbing delusional system, but it was quite strong and distinct to whatever directly or indirectly concerned the focal functioning system constituting the delusion. The loss of attention in regard to things not connected with the systematized delusion, no doubt, explains the fact of the relative loss of memory.

The patient could not fix his attention on anything. When tested with reading, he could not follow the type, — he became mixed up and understood nothing of what he had been reading. Occasionally the depression became so intense that he was absolutely incapable of appreciating external impressions, or as the patient characteristically put it: "I looked out of my eyes and I could not see."

The patient was also predisposed to become possessed or obsessed by insistent ideas from which he could not free himself. Thus, one of his friends suggested to him that he seek advice of Dr. N. This suggestion became a fixed idea with him,—he must see Dr. N. come what may. He had no rest and gave others no rest; he implored over and over again: "Will Dr. P. go to see Dr. N.; it is in my head and I must see him; it is always in my mind and it bothers me." It was only by means of hypnotic suggestion that we could rid the patient of this insistent and troublesome idea.

In regard to the general motor reactions, no gross

motor disturbances were present; the reflexes remained normal, but the voluntary motor reactions were rather retarded; the patient reacted slowly to external stimulations, walked at a slow pace, as if absorbed in one intense, painful grief. The whole motor attitude was decidedly one of dejection. As in the case of memory and attention the motor reaction became quickened with regard to impressions relating to the delusion.

No sensory disturbances were present. Sensory stimulations were correctly perceived and estimated; no anæsthesia, no paræsthesia, no hyperæsthesia could anywhere be detected. Vision remained unaffected; there was no limitation of the field of vision; and there was no reversion in the series of perceived colors. Taste, smell, touch, pressure, the thermic sense, and kinæsthetic sensibility were all in good condition and showed not even transient anomalies.

The patient suffered from bad dreams, which also left him in a state of great depression after awaking. The dreams usually referred to the delusion and seemed to have intensified it. Thus, during the early part of his illness he used often to dream of his spleen, and has seen it in his sleep jumping around and removing lumps. One night he became so terrified that he screamed in his sleep, from which he awoke in great terror; he was afraid that his spleen would jump out through his chest. Sometimes his dreams were determined not by the definite delusion, but by



the general indefinite melancholic tone. Once he dreamt, for instance, of two men attempting to murder him and that he called firemen to his aid.

No hallucinations were present, and the illusions observed were those pertaining to the dominating delusion, which was of a purely central character; no peripheral pathological disturbances could in any way justify it, except possibly the condition of costiveness, which was, no doubt, of a secondary character in the formation of the delusional system.

Although the affective states were of intense depression, still there was no tendency to self-destruction. The whole attitude was one of quiet, passive dejection, without any violent outbursts, without any uncontrollable impulses.

It goes, of course, without saying that orientation in space, time, and in regard to social relations was fully and clearly present and as far as it could be ascertained was never gone. The patient could fully realize his environment, he could come to definite places at the appointed time, and could take good care of himself. The central delusion was entirely limited to his inner life, and seemed not to have affected his relation to the external world; it left intact his sense of appreciation of his environment. As far as examination could disclose neither unconsciousness nor subconscious states have occurred in his former normal healthy condition or in the course of his mental disease.

The intensity of emotional depression, the retardation of psychomotor processes, and the highly systematized delusion of the agencies conceived in his physical troubles would have made it tolerably certain to a psychiatrist that the case closely approximated to typical hypochondriacal melancholia, and some even would have added that the case had a strong tendency to what may be termed "secondary paranoia."



## CHAPTER III

### THE PHENOMENA OF AFFECTIVE TRIPLE PERSONALITY

IF now from the waking state, strongly tinged as it is with hypochondriacal melancholia, we turn to the patient's subconsciousness, we are confronted with a totally different state of things. No sooner did the patient pass into trance than a profound change suddenly swept over his whole being. A metamorphosis almost instantly took place in him. The intense misery of the melancholic state completely disappeared and instead of it a state of intense euphoria emerged. No greater change could possibly be conceived. The patient's face became radiant with happiness and lighted up with smiles; he could not utter a word without grinning and laughing with delight for the very joy of living. As far as affective states were concerned a new, totally different personality seemed to have emerged from the depths of the subconscious.

In spite, however, of the profound change of the whole affective tone and of the emotional states the focal delusion persisted as much as ever and appeared to be far more definite in its outline, far better organized in its constitution. The affective state of depression was gone and an opposite state of well-being

appeared, and still the delusion remained in its full force. This clearly pointed to the fact that the delusion could well exist without the emotional melancholic state, and that either the state of depression was of secondary formation brought about by the gradual organization of the systematized delusion, or that the delusion, though being of secondary origin, had gained sufficient strength and independence to stand by itself, even when the emotional basis of depression was completely withdrawn. In any case, the fact remained that, notwithstanding the change of the affective and emotional states to their very opposite and contrasting conditions, the delusion remained as firm as ever.

The trance personality, happy, contented, though still delusional, as far as the general mental state was concerned, approximated more closely to the patient's normal self before the mental trouble set in than the highly hypochondriacal waking self. Although there was such a profound change in the emotion of the trance personality, as contrasted with the waking condition, there was absolutely no change in the content of memory. The trance and the waking state were bridged over. In his trance the patient could vividly remember all that had taken place in his waking life. On the other hand, in his waking state the patient could recollect all that had transpired during hypnosis, though this occurred not without some effort. The memory was rather indistinct and was far from being



vivid, the recollection appearing more in the nature of dream memory, being vague and indistinct, and could only be made clear by fixation of the attention.

Later on, when in one of his subconscious states, the patient passed into a still deeper trance, and to our great surprise the whole affective emotional tone of the trance state with which we have become familiarized vanished, and a new emotional personality emerged. The metamorphosis was a very marked one; the change from one personality to the other was radical. From being happy, smiling, gay, and full of inexpressible delight, the whole attitude changed to one of quiet, composed, and even of grave demeanor. Things were not accepted in that easy-going fashion, with smiles and laughter, but were rather taken seriously and earnestly. The change that passed over the patient's countenance in his passing from one stage of trance into another and deeper one was extremely interesting to watch. It seemed as if from the depths of subconscious mental life a new person with absolutely different qualities and characteristics came to the surface of consciousness. The transformation was striking, and this change was all the more wonderful as the whole process took place rapidly. Not the least trace of sadness and dejection was left. The whole attitude of the trance personality breathed a quiet, composed contentment. The contrast to the melancholic waking personality, full of unutterable misery, and the antithesis to the



first trance personality, merry, easy-going, and full of unspeakable bliss, could not be more complete.

If the change was great in the life of feeling and in the emotional expression and attitude, the modification in the function and content of memory was still greater. The last trance personality could remember clearly and distinctly all experiences of the first trance personality, and also those of the waking personality, but neither the waking nor the first trance personality knew anything of the second trance personality. There were thus three personalities, each with its own moods and emotional states, with its own content and function of memory, but with the same persistent and stably organized delusion. The waking personality was melancholic and mentally diseased, with a narrowed-down content of psychic material. The trance personalities were comparatively healthy and with a wider and deeper content of mental life, with a greater activity of psychic functions than the waking personality; each succeeding personality being wider and more comprehensive than the one that had preceded it. As far as pure function of memory is concerned, the interrelation of the three personalities may be represented by a series of concentric circles, the two trance personalities being designated by B and C according to the order of their appearance. Designating the successive personalities by A, B, C,—A standing for the waking, B for the first and C for the second trance personality,—then their



inter-relations are such that while C has access to A and B, B has access to A, but not to C.

In respect to memory the phenomena follow the general law of personality interconnection: Out of a series of interconnected personalities the functions of reproduction and recognition are retained by the ones rich in psychic content and lost by the ones the psychic content of which is poor and limited. Memory

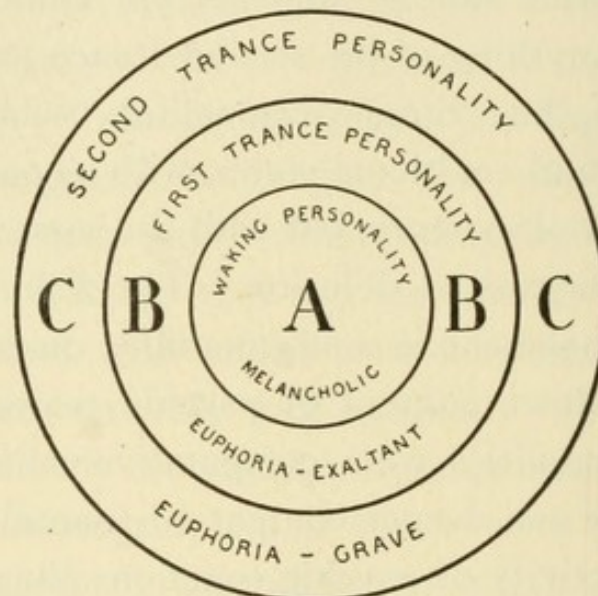


FIGURE 20.

thus is proportional to the amount of retained psychic content; this usually follows in the order of the depth of the uncovered psychic strata. Personalities spontaneously formed at a deeper subconscious level are the most comprehensive and have the best memory. *Amnesia runs parallel to the ascent of psychic states.*

On the affective and emotional side the gap between one personality and another was far greater than on

the side of memory. The three personalities, the melancholic, the exalted, and the grave, stood out clear and distinct in their outlines. Each personality emerged with its own distinctive affective physiognomy, the one passing into its opposite, not by transitional stages, but by abrupt termination with the emergence of one of the sharply outlined personalities. The affective emotional traits and characteristics did not intermingle to form a complex whole, but kept distinct and separate in their synthetic quasi-personal unity.

The waking personality and the first trance personality may be regarded as contrast personalities and may possibly be referred to the same fundamental relation of contrast effects, prevalent in mental life whether in the domain of sense or in that of emotion. Of the three personalities the waking is pathological, the first trance personality is exaltant though nearer to the normal, while the sedate, contented second trance personality approaches as nearly as possible to the patient's healthy condition.

It is well here to point out the fact that these sharply defined personalities form by no means a unique phenomenon; their course runs closely parallel to the well-known circular insanities of which *folie à double forme* may possibly be regarded as most closely resembling in type the present case. In the different forms of circular insanities we meet with just such contrasting states,—a state of depression, a state of



exaltation, and an intermediary more or less normal condition. These states are of longer or shorter duration, varying differently in the order of succession with each individual case.

The analogy of this case with the general course of melancholia may even be a closer one. It has been observed that in the course of melancholia, when the patient is on the way to recovery, before he returns to his fully normal, healthy state, a stage of slight exaltation is passed through, due no doubt to results of contrast effects. The three personalities in our case present parallel conditions and a similar order of succession to that observed in the course of typical melancholia. The succession of the three states or of the quasi-personalities was of the same order, namely, the melancholic, the exaltant, and the quiet,—the normal. In the fully normal individual a similar course of succession of contrasting emotional states is observed. When relieved from an intense state of grief or anxiety, we pass temporarily into a state of exaltation before we settle down into our previous normal state bearing the marks of the outlived experiences.

## CHAPTER IV

### THE PSYCHOGENETIC LAW

THESE alternating personalities, however, were but ephemeral ; the process of regular alternation was but of brief duration. At first the patient had to pass through the exaltant stage in order to reach the level of the second trance personality ; soon the first trance personality was observed to shrink in its dimensions and duration and finally disappeared altogether, the patient passing from the melancholic waking state directly into the state of the second trance personality. This first trance personality never reappeared ; its constituent elements seemed to have become dissolved and fused with the second subconscious personality. As a matter of fact one could clearly observe that the mood of the second subconscious personality became far more cheerful and had lost somewhat of its pristine gravity and sedate contentment.

This dropping out of the first subconscious personality was already observed in the reverse process of ascent from the deeper levels of the subconscious back to the upper levels of waking life. In coming out of the deeper states of subconsciousness from the



strata of the second personality formation, the patient returned directly to the waking state without first passing through the intermediary levels of the first subconscious personality. With the repetition of the series in its downward and upward course, this intermediary first-personality stage became shortened, shrank more and more, and finally was blended and fused in a condensed form with the last phase of the process, with the second subconscious personality.

The patient's states and the cycles with the stages through which he passed may be graphically represented by the following diagrams :

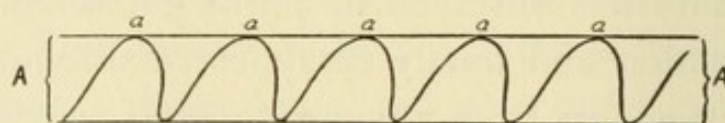


FIGURE 21.

Let A,A (Figure 21) represent the content of the stream of the melancholic waking consciousness; the waves *a,a* represent mental states of the upper stream. Although the waves and the states they designate are not the same, still for the sake of clearness and precision they are termed the *a,a* waves and the designated states the *a,a* states.

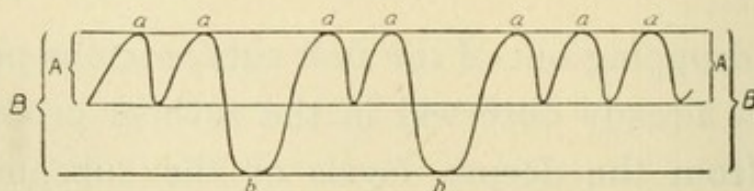


FIGURE 22.

In Figure 22, B,B represent the subconscious con-

tent of the first trance stratum and the waves  $b, b$  some of its mental states. The waves are termed the  $b, b$  waves and the designated states the  $b, b$  states.

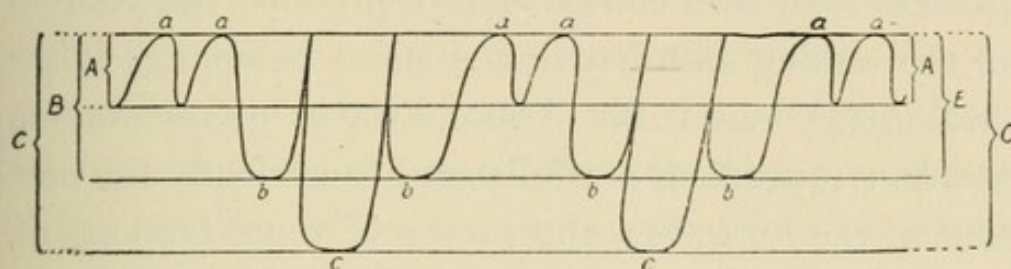


FIGURE 23.

In Figure 23,  $C, C$  represent the subconscious stratum in which the second trance personality has become developed, the mental states of which are represented by the waves  $c, c$ . The waves of the second trance personality belonging to the last stratum are termed the  $c, c$  waves and the designated states the  $c, c$  states.

The patient, in passing from the waking state through the strata of the first and second trance personalities, then from the second trance personality through the first trance personality back to the waking state, passes through a cycle which may be termed the *psychopathic cycle*. This cycle is indicated by its corresponding curve which may be termed the *psychopathic curve*.

The relations of memory content of the various mental states are indicated by the areas, or better to say by the volume, of the waves; thus the wave  $b$



possesses its own content and reproduces that of the waking state A,A. The wave falls short of the stratum C,C, and cannot reproduce the content of the second trance personality. The *c,c* waves of the stratum C,C possess their own content and reproduce the content of the waking and first trance states belonging to the strata A,A and B,B. The *a,a* waves of the waking stratum reproduce partially and imperfectly the content of the *b,b* waves, the power of reproduction failing with the progress of the psychopathic process and the frequent repetition of the cycles. The *a,a* waves are completely cut off from all access to the *c,c* waves with their special content coming from the subconscious stratum B,B.

The psychopathological process regarded as a whole passed through five stages which, though imperceptibly merging one into the other, were still distinctly marked.

In the first stage, the *a,a* waves of the stratum A,A, representing the upper consciousness, were alone functioning. Only the melancholic states, the *a,a* states, were present (Figure 21).

In the second stage, the *b,b* waves representing the *b,b* states of the stratum of the first trance personality were brought into active function, forming a cycle *aba* (Figure 22).

In the third stage, the *c,c* waves and *c,c* states of the stratum of the second trance personality began to function, giving rise to the cycles *abcba* (Figure 23).

The patient had to pass through the *b,b* states in order to enter the *c,c* states of the second trance personality, and on emerging from the *c,c* states the *b,b* states were passed through again before the *a,a* states of the upper waking consciousness could be reached.

In the fourth stage, the patient reached the *c,c* states through the *b,b* states, but on emerging from the *c,c* states the *b,b* states were omitted, the patient rising directly to the *a,a* states, the cycle becoming abbreviated to *abca* (Figure 24).

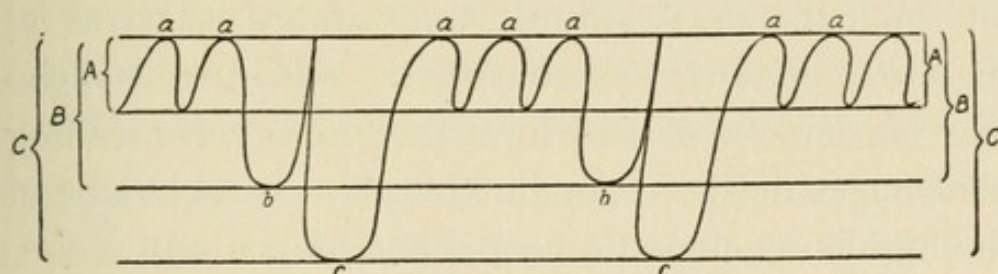


FIGURE 24.

In the fifth stage, the *b,b* states were altogether eliminated, the patient passing directly from the *a,a* states into the *c,c* states, and then back again into the *a,a* states, the cycle becoming reduced to *aca* (Figure 25).

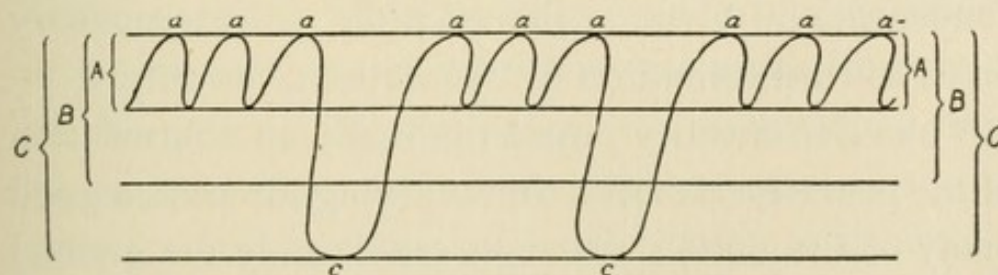


FIGURE 25.

The process of abbreviation in this case is the general course usually taken by series of subconscious



personalities. In a concatenation of a series of subconsciously formed personalities, the tendency is towards *condensation*. The intermediary links are dropped or suppressed in most of the detail traits and are incorporated with the last members of the series, which become more prominent in proportion to the frequency of repetition of the series as a whole. The last members of the series grow and develop by the process of assimilation of the intermediary links. The tendency, in short, is toward omission of the intermediary personalities and toward survival of the lastly organized personalities. Such personalities may become stable and form the *guiding*, controlling personages of the dramatic interplay characteristic of the highly developed subconscious life activity.

This process of elimination is no doubt of the same order as that found to be characteristic of psychic activities in general. In the compounds of sensory elements, both primary and secondary, in the fusion of feelings, and in the flow of association of representations and ideas we meet with a tendency toward condensation, toward abbreviation of intermediary links, toward formation of "short cuts," so to say.

Thus the memory process is really an abbreviation of the past experiences. In reviewing the past, a good many of the details are suppressed; only the general outlines, with the most important and essential features of outlived experiences, are preserved. A life of years is reviewed in a mental glance of a few moments.



Were it not for this process of abbreviation, for this dropping out and elimination of most of the details and preservation of the most general essential outlines embodied in the last act of recollection, it would require a lifetime to recall our life experiences. Memory would be a burden. Only on condition of suppression, of elimination, of abbreviation of most of the details in past series, only on condition of *forgetfulness*, can mental life grow and develop. Memory foreshortens the past; it looks at what has gone by through the other end of the telescope, so to say. In this respect, the process of recollection closely resembles that of conception, which is a highly symbolic representative summary of past sensations, perceptions, and representations. Memory is a symbolic epitome of the past.

Something parallel we find in biological series where the formation of a species is brought about by extinction, the extermination of the intermediary varieties and by the survival of the last links of the series, which in a condensed form represent the main traits of the so-called "missing links." The process of evolution of species and genera is one great illustration of this process of elimination of intermediary links. In the evolution of the individual, we meet once more with a similar process of condensation, inasmuch as the development of the particular organism presents a condensed and abbreviated history of the stages passed through by its ancestors in the long course of



organic evolution ; or, as it is often expressed in the well-known biogenetic law, that ontogeny is an abbreviation or an epitome of phylogeny.

Evolutionary series seem to be conditioned on this process of elimination and condensation of intermediary links ; it is economy of time and energy and makes possible further development. The biogenetic law holds good of all biological and psychological evolutionary processes. However the case may be, the fact remains that the first trance personality was suppressed and entirely disappeared, the patient passing from the waking state directly into the condition of the second trance personality, a fact characteristic of all *intermediary* subconscious personalities,—their fate being to come and vanish from the scene of life, without ever gaining a firm hold on the life-existence of the individual.

## CHAPTER V

### THE POWER OF ASSIMILATION OF THE DOMINANT SYSTEM

MOST remarkable was the curious fact that throughout these affective and emotional changes, throughout these subconscious upheavals, formations, transformations, and disappearances of personalities, the central delusion remained unshaken. New psychic material, however trivial, was immediately seized on and incorporated into this all-absorbing system. This highly organized system could possibly be best compared to an animal with a limitless appetite.

From the psychological and psychopathological standpoints of the theory of moment-consciousness this great power of assimilation is extremely interesting. As this is not a suitable place to discuss the subject of moment-consciousness, we limit ourselves to a bare mention of its important theoretical aspects, which are developed in a forthcoming work, *The Principles of Psychology and Psychopathology*.

What specially concerns us here is the experimental side showing the great assimilating power of this highly organized delusional system. Suggestions, motor and sensory, were given to the patient



during his different subconscious states ; they were taken and carried out only in so far as they could be assimilated by the dominating delusion, otherwise they were simply rejected. The suggestion developed gradually in proportion to its gradual absorption and incorporation into the guiding delusional system brought into relation to the "lumps" and "spots." Thus in one of the hypnotic states a post-hypnotic suggestion was given to the patient that on awaking he would see a black cat. One of the black weights which the patient used in the fatigue experiments was put opposite him so that the post-hypnotic hallucination should be easily realized, the false perception taking the character of an illusion, the black weight serving as a suggestion and nucleus for the realization of the suggested hallucination. When the patient awoke from his trance he remembered vaguely as if he had seen a black cat in a dream and that he was to see a black cat, but he did not see what he looked for. Then the weight attracted his attention and he looked at it fixedly, and gradually the post-hypnotic hallucination developed, though in an abortive form. The patient smilingly took the weight in his hands, but it was no cat though it had the color of a black cat ; then he began to pat the weight as if he were patting a cat, though he knew it was no cat. After patting the weight he looked at it for a long time with great attention and then began to perform exercises with it as in the fatigue experiments, though he



did not know the reason why he was making these movements. He was going through this process with great zeal and satisfaction. When asked why he was doing all that he replied, looking intently at the weight, it was good for him, it helped draw off his lumps and spots. The suggestion thus became absorbed and assimilated by the focal delusion.

Another time a similar post-hypnotic suggestion was given to him, and with precisely the same results. The black weight was substituted for the hallucinatory black cat, but the patient did not realize the suggestion ; he did not see the cat, but after some time he seized the weight and began to perform exercises with it, though he could give no reason for his action ; the only reason was that it did him good, it removed his lumps and spots. In short, he embodied the suggestion into his delusional system.

In one of his deep hypnotic states, when the patient seemed otherwise quite amenable, he was tried with a post-hypnotic suggestion of a snake. The element of fear, it was thought, might make it easier to have the suggestion realized freely without any reference to his delusional system. A suggestion was given to the patient that on coming out from his hypnotic condition he would see a snake ; a rubber belt was put before him to serve as a *point de repère*, so to say. On awaking, the patient's eye was at once fixed on the belt, but the latter at first gave rise to no hallucination whatever ; the mere word-suggestion emerged,



and that in a purely negative form : " It is no snake," he kept on saying. His look, however, was constantly fixed on the belt, as if the eye was fascinated by this enchanting object. From the standpoint of gradual development and realization of a subconscious post-hypnotic suggestion the experiment was extremely interesting, but more so was it from the psychological point of view of moment's power of assimilation, which will be discussed in its appropriate place.

The patient kept on looking fixedly at the suggested snake, and finally began to regard the object with great suspicion. " It looks like a snake, but it must be dead," he said. Gradually the dominating delusional system began to assimilate the percept, and on this basis the suggested hallucination began to develop, and finally became realized, but in a transformed condition fully in accord with the overmastering delusion. " It looks dead," he said, eyeing the belt suspiciously, " but my worms are alive ; this is not alive ; it is not my vein." The patient's attention became more and more fixed on the belt, as if his eye were riveted to it ; his face assumed a puzzled questioning look of doubt and uncertainty ; evidently he could not decide what in the world that fascinating object could possibly be. Finally a look of recognition, and also of terror, could be clearly seen coming over him ; the percept was being gradually assimilated by the delusional system ; and now the suggested hallucination began to develop rapidly. " I do not know what it



is, but I am scared at it; when my vein came I was scared at it. That thing must have come from somebody, and I am scared at it now. I shall throw it away." He threw the belt away, but picked it up soon, and, looking fixedly at it, ended by becoming really frightened, and concluded: "Maybe it is mine; it is no snake, though; I have no snakes." The patient could not see the belt as a snake, because his delusion was that he was possessed by worms, not by snakes.

The following experiments are still more interesting with regard to the tendency towards systematization in the further development of the given suggestion brought in relation to the fundamental delusion.

A small chain of links and small plates were attached to the belt. This chain attracted the patient's attention. He looked at the links for some time and finally said: "I have in my body such pieces; the vein takes them up by signs from the soul and the spleen." The patient then looked intently at the flat pieces and evidently was puzzled by them and at first he said he had nothing like them. The experience evidently could not be assimilated. Soon, however, the negative aspect of this bit of psychic material with regard to the assimilating system changed, and the patient doubtfully and hesitatingly declared that the vein had a mouth not unlike this flat plate, though not just like it. As he spoke his face brightened up markedly and a contented look of recognition



passed over his face, and he declared with an air of positive assurance that the vein did have a mouth very much like these flat pieces. The suggestion was partially realized, being first decomposed, digested, and modified by the assimilating power of the dominant delusion.

The overwhelming and systematizing power of this central delusional system, nourished by the delusional nucleus, was clearly brought out in the experiments made on the patient with the object of developing the phenomena of automatism. The patient for some reason or other took a great dislike to subconscious writing automatism. It was suggested that he would answer questions in subconscious automatic writing. The suggestion was not taken. As usual the patient modified the suggestion to fit the delusion, — he began to make dots with the pencil, claiming that these dots were his lumps and spots coming out from under his "mucous membrane" and flowing through the pencil on to the paper.

Whatever was possible was immediately pressed into the service of the delusion. The patient observed black spots under the nails of the toes. These black spots were immediately identified with the delusional lumps and spots. Another time, when the delusional system began to be broken up, its vitality was still clearly manifested by its remarkable power of assimilation. Thus when the patient was sitting and looking at his foot with the supposed delusional

spots in the toes, he happened to feel the pulsations of an artery, he immediately adapted this experience to his delusion. These pulsations were due to the spots continually flowing and running off into the hole.



## CHAPTER VI

### THE PREDOMINANCE OF MOTOR PSYCHOSIS

THIS firmness and stability of the organized system with the delusion as its nucleus were greatly in the way of the effective carrying out of suggestions, whether hypnotic or post-hypnotic. Suggestions were often altered beyond recognition; it took time before suggestions could be made more or less effective. Constant rehypnotization, repetitions of commands, insistent injunctions, numerous suggestions, were requisite to enforce with varying success some form of obedience and obtain some approximately satisfactory results. In this respect it is interesting to note the fact that suggestions of motor ideas and representations were the first ones to become amenable to control and were by far the easiest to enforce. The suggestions of purely sensory representations and ideas were, on the contrary, the most difficult to control, and even to the very last their enforcement was enacted with but partial success. Something similar is observed in the stages of hypnosis: sensorimotor suggestions are taken before purely sensory suggestions; paralysis, catalepsy, contractions, all motor and kinæsthetic illusions and hallucinations are

usually very easily enforced even in the very light stages, while it is only in the deeper stages that changes of sensation and perception can be brought about. The induction of illusions and hallucinations, positive and negative, is usually effected only in the very deep stages of hypnosis. The striking feature of the present case, however, was the fact that hypnotic and post-hypnotic suggestions of acts were easily effected, while suggestions of sensory illusions and hallucinations could not be successfully developed; they at once fell a prey to the dominating delusional system and were either suppressed or modified beyond recognition. Suggestions, however, such as opening and closing the door or lighting matches, were carried out without any resistance or even modifications.

Still more interesting is the fact that the motor suggestions have also proved more persistent in the patient's subconscious memory. Thus motor memories of fatigue experiments emerged in post-hypnotic hallucinations and were finally brought by the patient into relation with the dominant system. So persistent were these subconscious motor memories that it was by no means easy to have them dislodged from the patient's mind. The interesting fact about motor suggestions was the great ease with which they were accepted and their insistent tendency to recur.

The ease of acceptance of motor suggestions may be ascribed to the fact that ideo-motor life is more



subject to changes from slight stimulations than sensory life : motor elements enter readily into new combinations. From a biological standpoint one can see the importance of the greater ease of modifiability displayed by sensori-motor and ideo-motor elements, since in the adaptation of the organism to its environment it is these elements that are mainly employed in reaction to stimuli of the external world. From the standpoint of adaptation, a slightly appreciable difference of sensory experience may give a widely different and highly complex motor reaction.

Psychomotor processes form the most important and largest portion of mental life. With the exception of man, all the representatives of the animal kingdom, from the lowest to the highest forms, represent but different stages in the evolution of sensori-motor life. The great majority of mankind still leads a life closely allied to animal sensori-motor states. Even in the highest and most developed forms of mental activity, motor ideas and representations are by far the most predominant. Without motor elements, ideational life is arrested. It is these sensori-motor and ideo-motor elements that constitute the "stream, the flow, the current" of our thoughts. Motor elements enter freely into combinations with all other elements of mental life. This freedom in forming new combinations and associations makes the suggestion of motor ideas and representations highly effective.

Throughout the scale of animal life from the lowest



to the highest forms, intelligence is intimately related to the degree of development of the muscular system and the delicacy of its motor adjustment. Among the lower forms of life, the Cephalopods are well equipped with powerful muscular arms capable of executing a great variety of vigorous movements. Now the Cephalopods also possess a more highly developed nervous system with a higher grade of mental functions than the rest of the Mollusca. The great activity of ants and bees is notorious and their instinctive psychic life is the richest among the Arthropoda. Note the great variety of motor adjustments of the beaver and also the intelligence that goes along with it. Birds possessed of a high degree of activity and motor adaptability are also the most intelligent of their kind, such for instance as the crow and the different species of talking birds. Notice the activity and great agility of the fox and also the unusual cunning for which he is so celebrated. The suppleness of the dog, his quick reactions to stimulations, the resources of his motor adjustments, and the great extent of his modifiability under changing conditions, are all well known, and along with them goes a high degree of psychosis. Of all the Mammals, the Quadrumana are the most active, the most imitative and full of mimicry, and with the exception of man they are also the most intelligent. When we come to man we cannot help admiring the high complexity and extreme delicacy of his motor adjustments. Most marvellous, however, is the human



hand, that divine organ which gives shape and form to works of art, to all the outward visible manifestations of civilization. The great artists and thinkers of antiquity held the human hand in great reverence. One of the great Greek philosophers did not even hesitate to declare that man's superiority over the brute was due to his hand. Finally in the wonderfully delicate motor adjustments of speech we find clearly illustrated the intimate relation between motor and psychic activities.

Experiments prove the same truth of the predominance of motor ideas and representations in our mental life. If a series of syllables or numbers is given to memorize after one reading, five out of ten can be remembered, though with some difficulty; but if the syllables or numbers are written down at the same time, though not looked at during the writing, a far greater percentage, such as six or seven syllables, can be remembered. If the motor elements in a train of ideas are suppressed, the order of the series becomes confused, and even totally destroyed, showing that the motor ideas are important links in trains of association of ideas.

Biologically regarded, voluntary activity—will—is the organism's power of adjustment to the conditions of the external environment. In its last psychological analysis, voluntary activity, or will, consists of representations of various modes of adaptations—that is, of motor memories, of highly complex systems of kin-



æsthetic representations constituting the active subject of the highly developed personality. If this be realized, then the vital importance of motor memories cannot be too highly overrated. Motor memories are at the very heart of personality. We *are* what we *can accomplish*. Extreme variability and adaptability are the main characteristic traits of intelligence, will, personality, with their motor memories as their central nuclei.

The readiness of psychomotor elements and groups to enter into ever new combinations gives rise to the formation of a great wealth of associations which help to make the labile psychomotor groups and systems stable and easy of recall. In fact it may be said that *the ease of recall is proportionate to the mass of associated kinæsthetic memories*. If under the action of adverse conditions associations are dropped or lost, many more still remain to recall the affected system, some of the functional bonds of which have become loosened. The great wealth of associations formed by motor memories brings about their ease of recall, also their recurrence in consciousness even under unfavorable conditions of dissociation. The great modifiability and variability of systems of motor memories requisite in the adaptation of the organism to the varying condition of its environment make the ever greater instability of motor memories an imperative necessity in the struggle for existence.



Forming the predominant elements, both as to intensity and mass, of the most complex, relatively stable, though ceaselessly shifting groups and systems constituting the highly developed organization of the personal self, *the motor elements, presentative and representative, are also the first to become involved in the process of dissociation.* In the various forms of nervous and mental diseases, under different conditions of intoxication and auto-intoxication, in the traumas caused by shock, physical or psychic, the delicate movements of adjustments are the first to become affected, dissociations of systems of motor representations are first to occur with their concomitant motor derangements.

The instability of motor memories and of psychomotor elements in general may be brought into relation with the fact of the early affection of muscular and kinæsthetic sensibilities, and with the predominance of sensori-motor over purely sensory symptoms so frequently occurring in the course of nervous diseases. With this may be correlated the significant fact referred to by Mosso, that "all substances which slowly destroy the organism must produce phenomena analogous to those of curari, since the motor nerves, according to our researches, have less vitality than the sensory." It would be more correct to substitute for "motor" the term "sensori-motor," because muscular and kinæsthetic sensibilities are also involved in the same process of degeneration. It may



also be observed in passing, that cellular kinoplasm with the "kinocentrum," the centrosome and its archoplasmic structures, possibly the most primitive motor organoids of the cell, similarly manifest a high degree of variability and instability.

Motor memories may be regarded as the labile elements of consciousness; they become easily and frequently dissociated and dropped into the subconscious, but for that very reason they are also very easily reproduced or regenerated. In this respect motor memories follow the general biological law of organic regeneration: Organs that are easily and frequently lost in the struggle for existence are also easily regenerated, as, for instance, the legs and claws of Crustacea or the tentacles of the starfish and the octopus. Dissociated systems of motor memories often become regenerated and under pathological conditions when synthesis is impossible they may even recur with great insistence, giving rise to the most uncontrollable types of insistent ideas and impulses and to various forms of so-called "psychic epilepsy," especially of the motor type, closely mimicking typical organic epilepsy. Dissociated subconscious systems, like rudimentary aborted organs, are very persistent and often very injurious to the organism. The recurrence of the subconsciously submerged dissociated systems has its parallel in the biological phenomena of reversion, or atavism. The development, growth, and recurrent persistence of a subconscious dissociated system is



like a malignant sarcomatous neoplasm the cells of which present a reversion to the embryonic type.

In the present case, this greater ease with which suggestions of motor ideas and representations predominated and persisted in consciousness was specially prominent from the very nature of the mental malady, of the hypochondriacal systematized delusion. Ideas and representations derived from the special senses and the great mass of sensations coming from the functions of the internal organs, from the viscera, especially from the sympathetic system, all of which play an important *rôle* in the formation of moods, affections, and sensations, have become more firmly and rigidly systematized and organized into the body of the central delusion than the freer and more mobile psychomotor elements.

This fact, that the psychomotor elements, motor ideas and representations, enter more easily into combinations and form extensive associative systems, makes them easier of recall and hence apparently more persistent in memory. From an educational standpoint, one realizes the importance of this fact of persistent recurrence and great ease of recall of motor memories. Children learn and remember things best, not by abstract notions, not by looking at objects and hearing of things, but by acting out whatever is taught them. Not only is the interest increased on that account and knowledge made more vital and better assimilated, but the content acquired is also



far better retained and more easily remembered ; it emerges with greater ease and is at the child's command at any time, because of the nature of the interwoven motor memories. In the training of the mentally defective, the best method followed is that of motor instruction ; the best way of teaching the mentally defective is to have the ideas acted out and from the actions get at the meaning, even if it be only automatically, of what is requisite to be learned. As a matter of fact, even the perfectly normal and well balanced mind gets at the meaning of things by handling them, by having the attributes of the object and the processes of the work to be learned acted out. Acting forms the greater part of man's life.

In giving suggestions intended to be persistent and lasting, their character should be motor rather than sensory ; the suggestion given should be associated with kinæsthetic sensations and motor ideas. I have often found that when a suggestion is not taken, even though insisting on it, this same suggestion will be effective, if the subject is made to repeat it. The auditory sensory stimulations were not sufficient ; when, however, kinæsthetic sensations and motor ideas were interwoven into the suggestion, it became effective, and without any insistence on the suggestion. When given under such conditions, the suggestion was usually carried out without any opposition.

For therapeutic purposes it is certainly of importance to have the suggestion as stable as possible. To



effect this, the best way is to utilize this fact of persistence of sensori-motor and ideo-motor elements, of the greater ease of recall characteristic of kinæsthetic sensations and ideas. The patient should be made to repeat orally the given suggestion, or to write it out, and, if possible, to *act* it out. *Motor and kinæsthetic sensations and memories make suggestions durable.*

It is, of course, preferable that the associated motor memories should not be of a passive, but of an active character. To guide and move the patient's limb, for instance, is not as good as when he carries out the acts of his own accord. In other words, active kinæsthetic associations are most potent in suggestion. Along with other methods, the use of kinæsthetic associations is of the greatest value in the process of formation and also of disintegration of a stably organized system.

## CHAPTER VII

### SUBCONSCIOUS DISINTEGRATION AND THE AFFECTIVE PERSONALITIES

THE whole make-up of the mental systems constituting the delusion was so firmly organized that the process of disintegration had to be started from various points and worked in different ways. Since the waking state was of a distinctly melancholic type, in which the central delusion was high inaccessible, the only way to attack it was through the subconscious, which presented the line of least resistance. Hypnosis, and the deepest stage of it, was the only practicable way of making any attempt at all to break up these stably organized systems constituting the central delusion. Direct emphatic suggestion during hypnosis is the most usual form of disintegrating stable systems, especially if the latter belong to the upper waking consciousness. The defect, however, of this form is the fact that it is not always permanent in its results, and that the disintegrated elements tend to reunite into groups and systems and re-emerge.

The usual way is to have the systems disintegrated, submerged into subconsciousness, and then have



them frittered away by various means largely dependent on the nature and individuality of the case in hand. In such cases possibly the method that suggests itself is that of substitution. Of special importance is the method of emotional substitution, and we shall see farther on what use was made of this method in this special case under investigation, a method that can be utilized in other cases of similar character, of which this particular case may be regarded as one of a type. What is specially important to point out in this case, and which at the same time is true of any other cases of like character, is the fact that the work of changing the delusional system had to be a slow one, the central delusion persisting in spite of all insistent suggestions.

Without directly touching the nucleus of the delusional system, some unimportant sensory changes were first attempted,—changes which could not possibly meet with any resistance. The lumps felt to the patient alternately hot and cold. This was to him a source of much annoyance. An attempt was made to have these delusional sensory experiences modified and if possible got rid of. This was but partially effected, and with great difficulty. The thermic changes of the lumps were no longer so troublesome; this evidently brought some relief in the general condition of the patient; the affective tone seemed to have become somewhat raised though to a very slight degree. On the whole, the method of



substitution of sensory elements in the structure of the delusion, thus aiming to bring about a transformation of the delusional system and finally its disorganization, signally failed.

Realizing that any attempt at modification in the delusional system, even by such an indirect method as that of sensory substitution, would be unsuccessful, the course of disorganizing the apparently unassailable systems had then to be taken up on altogether different lines. The delusion had for the present to be left alone. The direct modification of the delusion was impossible, whether by substitution or by any other direct method; in fact, it was only conducive to the strengthening of the central delusion. Whatever suggestion was given, whatever combination of stimuli was brought to act on the delusion, resulted in the increase of material and in further growth and development of this highly systematized and systematizing delusion. The very nature of the case did not allow of any direct action,

The course taken, however, to bring about a disintegration was suggested by the character of the mental trouble and by the traits of the case under investigation. The vigor and growth of the delusion were to a great extent aided by the predominant melancholic affective conditions characteristic of the waking state. The delusion was in fact cemented and fortified by the melancholic emotional states. A change of these states, it was thought might in some



way or other without changing the content of the delusion, affect this central organized system, this mental cancer, so to say.

The changes of the affective states were not expected to modify directly the delusion, but being steeped, so to say, in a different affective mood the rigidity of the system might give way, it might lose its coherence, and thus make the process of dissolution practicable and possibly easy. All efforts then were naturally directed towards one purpose, toward the changing of the affective states forming the medium of the delusion. It was attempted to carry over the pleasant affective states and feeling of well-being present in the subconscious trance personality into the melancholic waking state, and thus displace the affective states of mental depression and substitute states of pleasure and well-being. In other words, the main purpose was to mingle and synthesize the dissociated emotional personalities, the melancholic, the gay, and the grave. Since the first and the second subconscious personalities, the gay and the grave, became mingled and synthesized in the course of their own growth and development, the gay emotional personality lapsing into the grave and forming a stable synthesis, the dissociated states were reduced to two. What had to be accomplished was the union or synthesis of these two contrasting emotional personalities.

This fusion of the two emotional personalities was



effected gradually and not without difficulty. At the later stages of this process of fusion, the work of disintegration of the central delusion also began. To go at it in a cautious methodical way, the work was started from the subconscious regions. For this purpose, dream states were employed. During hypnosis dreams were suggested to the patient with the object of effecting changes in the body of the central delusion. Although at first the results were rather meagre and by no means fully satisfactory, still the central system was on the way to dissolution. Thus in one of the dreams the patient's father was to come to him and tell him that he will soon get rid of the lumps and spots and become fully well. These dreams worked on the patient slowly and left their effects deep down in his subconsciousness. Thus in one of his hypnotic states the patient volunteered the remark that his father had told him the truth, and that his toes were really getting drier, but that they were not yet completely dry.

This method of working at the dissolution of the delusion by dream states was all the more important, because they really formed an indispensable substitute for the depressive, frightful dreams which aggravated the patient's melancholic condition and increased the stability of the delusion. Occasionally the bad dreams took the upper hand in his sleep, but soon they ceased to work and gave way to the good dreams.

When the two emotional personalities began to



intermingle and the good dreams became well established; then some effect could be expected to result from assaults on the delusional vein, soul, and spleen. Finally the delusional soul and spleen were dissolved, —they dropped out of the delusion. The patient began to feel very happy. An electric current was substituted for the active soul, and the patient felt the change as highly beneficial. After emerging from one of the hypnotic states, he began to laugh and smile and told us he had had a good dream. "This is the first time I slept well; my spots are removed; since my last year's trouble this is my best sleep."

## CHAPTER VIII

### DYNAMOGENESIS AND DISINTEGRATION OF THE DOMINANT SYSTEM

SEEING that the delusion was giving way, that the soul and the spleen were out of the way, the nucleus of the delusion was then attacked. Instead of lumps, small spots were substituted, as the total annihilation of the former could not possibly be effected,—it would have met with too much opposition. The line of least resistance was to follow the delusion and now and then to effect modifications and substitutions. Immediately after emerging from his hypnotic state, the patient felt so well that he asked to be rehypnotized. The spots persisted, but they were now associated with pleasant affective states and happy moods. Upon awaking, the patient was happy and laughing, and declared that the “spots” (no longer “lumps”) ran off very quickly, which gave him the highest satisfaction possible. “I do not feel mixed up,” he said; “I like such treatment, for I sleep well; my toes are going to be dry; the spots do not stay thick, but thin; I am soon going to be well and happy. I wish the spots would move at night as they do now; I feel light in my feet; I feel bright and strong.”



In order to be more sure of the working of these subconscious dream agencies and also to get rid more effectually of the old memories, amnesia was specially enforced. To weaken the intensity of the melancholic delusional states they were projected into the far past of the patient's life. The patient was to feel them as past, as faint, as long gone by, as difficult to recall. In other words, the disintegrated elements as well as the disintegrating forces were merged into the subconscious, there to work out their effects without the patient's knowledge.

This enforcement of amnesia is all the more important, because of the very effectiveness of the disintegrating forces: *When a system present in the upper personal consciousness is to be disintegrated, the suggestions given should be kept out of the patient's personal memory.* One can observe this fact clearly in post-hypnotic suggestions. If a post-hypnotic suggestion is fully remembered, it usually miscarries,—the suggestion loses its efficacy, and most often comes up as a word-memory without the stringency of realization, motor or sensory. When, however, amnesia is enforced, the post-hypnotic suggestion is fully realized. *A dissociated system present in the subconscious when coming to the surface of the upper strata of consciousness becomes manifested with intense sensorimotor energy. Dissociation gives rise to greater dynamogenesis.* This principle of dynamogenesis is very important, and cases of so-called impulsive in-



sanities and psychic epilepsy are really due to this cause and are worked on this principle with great success.

A system entering into the association with other systems is set into activity not only directly by its own appropriate stimuli, but also indirectly through the activities of the various systems associated with it. These associative interrelations bring about an equable and normal functioning activity, controlled and regulated by the whole mass of associated systems. The mass of associated systems forms the "reductives" of each individual system. In dissociated systems the controlling influence of the "reductive mass" is lost and the result is an over-activity unchecked by any counteracting tendencies.

This relation of dissociation and dynamogenesis is closely related to periodicity of function with its concomitant manifestation of psychomotor activity characteristic of all passions and periodically appearing instincts. Dissociated systems present impulsiveness, because of lack of associated counteracting systems. The only way to diminish the overpowering impulsiveness with which the dissociated subconscious systems make an onset in their rush into the upper region of personal consciousness is to bring about an association, to work the dissociated system into the tissue of the patient's consciousness. As we shall discuss this principle of dynamogenesis in its proper place, we make here only a reference to the subject.

Physiologically, it may be said that a neuron-



aggregate, entering into association with other aggregates and being called into activity from as many different directions as there are aggregates in the associated cluster, has its neuron energy kept within the limits of the physiological level.<sup>1</sup> A dissociated neuron-aggregate, on the contrary, is not affected by the activity of other aggregates; it is rarely called upon to function and stores up a great amount of neuron energy. When now an appropriate stimulus liberates the accumulated energy, the activity is overwhelming and is very much like the eruption of an underground volcano, giving rise to temporary attacks, to "seizures" by subconscious states of the whole field of the upper consciousness,—"seizures" which being really of the nature of post-hypnotic automatisms are generally mistaken for epilepsy, the attacks being regarded as epileptic manifestations, as "larval epilepsy," as "epileptic equivalents," as "psychic epilepsy."<sup>2</sup> With the restoration of equilibrium of the neuron-aggregates, with the synthesis of the dissociated systems, a synthesis which can be brought about by different methods, the subconscious eruptions, attacks, or "seizures" vanish never to return. This principle of synthesis of dissociated systems is clearly demonstrated in our researches, some of which appear in the present series and will be fully developed in subsequent series.

<sup>1</sup> "Neuron Energy," *Archives of Neurology and Psychopathology*, vol. i., p. 1.

<sup>2</sup> "Epilepsy and Expert Testimony," *State Hospitals' Bulletin*, vol. ii., p. 189.



In cases where a stably organized system is to be disintegrated by the artificial formation of counter-acting systems, the principle of dynamogenesis by dissociation is of the highest consequence.

What was necessary to do in the case under investigation was to follow the lines of this dynamogenetic principle and enforce amnesia for the disintegrating agencies, in order to give them the energy of bearing down with full force on the central delusional system and shattering it into fragments, which in their turn were to be further dissolved in the subconscious and absorbed and assimilated by various systems to which they could offer but little resistance. At the same time pleasant dreams were inserted with full memory of them on awaking. The object of these dreams was to raise the pleasantness of the affective moods in waking states. Thus dreams were inserted in which the patient was to see one of the experimenters who was to assure him that the spots would soon disappear and that he would get well. In this way the forces that were at work day and night in undermining the delusional system could not possibly be counteracted by the patient's consciousness and were fully effective in their results.

More often the dream states were absent from the patient's upper consciousness only in so far as content was concerned; what was remembered was their affective tone,—nearly all of them were pleasant. The patient used to tell that he had pleasant dreams,



but that he had forgotten them. No effort was made to bring them out as it was rather preferred to have them remain in the subconscious. Sometimes what remained reverberating in the patient's mind after he had emerged from his normal sleep in the morning was just a phrase, "You are well and dry," evidently the remnant of some forgotten dream. The mode of breaking up the established system by means of dreams lapsing from conscious memory proved very successful; the patient used to wake in a happy mood feeling that his melancholic state was almost totally gone.

One of the important modes employed in breaking up and dissolving the delusion was that of limitation of the delusional nucleus. The spots, instead of being left in the dispersed condition as conceived by the patient, were by a persistent effort more and more confined and limited to definite areas. By different modes, sensory and motor, the spots were finally confined to the legs and arms, while at the same time the lumps were reduced to small spots, which the patient insisted on feeling as "wet"; hence they went under the name of "small wet spots," of which the patient made a diagram. The hole through which the lumps used to make their escape was of course preserved in order to have a well established place of exit for the small wet spots. Further limitation brought the spots down to the legs, and there they finally became confined to a single foot, and then

most of them became localized in the toes. This limitation and localization of the spots on a small circumscribed area, so as to diminish the importance of the spots by the reduction of their massiveness and extension, met at first with much resistance. Only after persistent repetition did the attempt at limitation finally succeed.

The sensation of wetness, which the patient attributed to the toes, was found to be very persistent. An attempt was therefore made to have this sensation assimilated to, or rather substituted by, a normal sensation,—that of sweat. It was expected that once this was effected the illusory or rather delusive perception of wetness could be removed in some very simple way, such as by thermic or electric stimulations. It turned out, however, that this wetness could not be removed, and although it could be assimilated to, or substituted by, the sensation of sweat, still that suggested delusional sweat of the spots could not be fused with the ordinary normal sensation of sweat of the toes. The patient persistently distinguished two kinds of sweat sensations: that of the spots, which he termed “inside” sweat; and the normal, which he termed “outside” sweat. Suggestions given to the effect that the spots should be felt *on* the toes were not taken by the patient,—he felt the wet spots *in* the toes. It is very probable that the sensation of the spots was given rise to by some form of paræsthesia. The whole course of the



process of dissolution was towards further disintegration of the now degenerated nucleus of the delusion, namely, the wet spots. The spots became limited to a small area, and the sensation of wetness was counteracted by a suggested sensation of dryness.

One thing that specially deserves our attention is the fact that the delusion formed such a stably organized system that the only way of getting at it was to follow in its wake and attack it in the rear, so to say, but never face it. The patient was *led* by apparently closely *following* him. The complete destruction of the delusion and the full restoration of the healthy normal state had to be put in such a way as to make the patient feel that they came all of his own initiative, of his own free will, so to say. The diseased mental state is to disappear, and the healthy condition is to come spontaneously. Hence, it is highly characteristic to find that the patient often makes his own diagnosis as well as prognosis, and foretells changes in his own mental condition. This method of having the changes wrought in the patient's mind appear to emanate from his active sense of personality was demanded by the very nature of the case. This method was found highly satisfactory in other cases unlike this in character. The modifications effected by this method in the mental condition of the patient are permanent; they become part and parcel of his living personality. Meanwhile, the process of disintegration of the organized delusion went on slowly but surely.

## CHAPTER IX

### RE-EMERGENCE OF DISINTEGRATED GROUPS AND THEIR FINAL DISSOLUTION

THE broken-off chips and fragments from the main systems were not soon dissolved, but persisted for some time in the subconscious and now and then emerged into the patient's upper consciousness. More often they appeared in the hypnotic states, and also in the dream states, and at frequent intervals they reappeared in the fully waking states. The patient often complained that in his sleep the memories of his bad feelings came back and made him feel worse on awaking. In another of his dream states, a physician resembling Dr. N., about whom amnesia had been enforced, reappeared and gave directions bringing about a reinstatement of disintegrated mental systems. Fragments broken off some months ago and seemingly destroyed have been coming up, showing that it takes time before the complete dissolution of the constituents of an organized system actually occurs. In one of his hypnotic states, the patient suddenly referred to sensory troubles in the rectum, troubles that could be traced to a question put to the patient some ten months before.



The unexpected emergence of fragments of disintegrated and subconsciously buried mental systems is not infrequent in the domains of the subconscious. A group which is almost completely forgotten and is regarded as dead, and has seemingly entirely vanished from life activity, suddenly revives and comes to light again from the depths of subconscious regions. The mode of manifestation of these isolated broken-off chips of formerly extensive mental systems is very much of the same nature as found in the phenomena of fixed ideas, impulsive insanities, and psychic epilepsies. An isolated mental system suddenly emerges without apparent relation to the patient's mental life and brings about psychomotor disturbances often of considerable extent and of serious character. Many forms of attacks with characteristic auras of seemingly epileptic character can be traced to recurrent upheavals of such subconsciously buried fragmentary mental groups and systems.

When such systems do come up, and it is of vital importance to bring up as many of them as possible so as to get rid of psychomotor disturbances and "attacks," the only way is to bring them into the clear light of consciousness and have them associated with antagonizing mental systems, thus re-establishing psychomotor equilibrium. The course of the process of dissolution of the depressed delusional mental states in this case of typical functional melan-

cholia was from subconscious disintegration to conscious reintegration.

The physician, the psychiatrist, who has also the practical aspect in view, will no doubt be interested to know that the patient is now in good condition,—his melancholic delusional state has completely disappeared and he has resumed his former vocation.



# Mental Dissociation in Depressive Delusional States.

## EXPERIMENTAL DATA.

*By*

BORIS SIDIS *and* GEORGE M. PARKER

THE following experimental notes are selected from a mass of material collected during studies of the case in the laboratory. They are given in the form in which they were taken, with many details omitted, but without any attempt to make them more connected and readable. The interesting feature of these notes is that they show the condition of the patient at various periods in the progress of his disease. The unmodified character of these notes puts the reader in closer touch with the actual manifestations as they were directly observed in the laboratory, manifestations on which the preceding paper is based :

J. F., aged twenty-six, clerk. Family history is negative ; there are six children in the family, the patient is the third. He had been temperate, and denied syphilis ; never had rheumatism, or scarlet fever, or diphtheria, typhoid ; had been working very hard up to the time of his illness. There were no special causes of worry, no excesses.

In February, 1900, the patient began to lose appetite, to have headaches, there was loss of attention, memory became unreliable, there was a desire to seclude himself, great emotional depression, bowels became costive, and bodily condition generally poor. There was a probable history of malaria persisting for some time previous to the disease, but this could not be well verified.

At his first attack, there was considerable nausea, abdominal pain, depression passing into intense anxiety, etc. He was seen by the local doctor, who told him that he had "lumps." The suggestion of lumps formed a nucleus of a highly systematized delusion. The patient actually felt them for the first time, and described them as being beneath the mucous membrane of his stomach. Since this time the delusion of the lumps has persisted and developed. The lumps spread to other parts of the body, to the arms, to the legs, with sudden changes of location. He believed he had worms that ate the lumps, and the soul and specially the spleen were the chief scavengers. The soul and the spleen communicated by signals.

Five days before he became sick, the soul began working, rubbing the lumps out and getting them out of the way. At that time the lumps went in the same hole at which they now enter. The spleen would grunt when the soul worked right, but not like a "man's grunt." The worms meantime were working



against the soul. He could feel the soul come out and open the mucous membrane and clean out the worms. The worms were very angry. Then they became still; they had been eating the lumps, but did not like them; the lumps apparently anteceded the worms; the lumps and worms did not agree. The soul also cleaned all the lumps out of the head into the veins, and the veins brought them to the stomach; when the patient became inattentive, however, and too weak to notice these lumps, the soul did not work so well. The spleen told the soul at this time, by signs, to stop; the soul never answered, but understood.

At this time he went to the hot baths. Here the veins began to "draw," and then the spleen began to work in order to get out the lumps. His bowels were especially costive at this time, there was considerable abdominal pain, and he was sleepless. He said, "I looked out of my eyes and I could not see." The lumps in the body began to feel alternately hot and cold about September, 1900.

Since this time, the localization of the lumps has become more definite. The heat and the cold are less shifting; his veins continue to "draw." Patient has no definite idea as to causation. No external or objective references. No history of anything further than noted. Especially has there been no intestinal disease.

November 30, 1900: Patient examined as to his



sensations, no changes were evident. There was no hypnosis at this time.

December 5, 1900: Hypnotized; patient becomes completely changed; melancholia is gone; he is jovial, merry, and keeps on laughing and roaring without any provocation. Says, "I feel well." Delusion of lumps persists. Suggestion made as to heat and cold; as to anæsthesia, entirely successful. During pricking of the hand some exhibition of subconscious phenomena as evidenced by shaking and shivering, but the patient makes no reference to this sensation. Later, suggestion as to diffuse warmth, which was successful. Post-hypnotic suggestion as to localization of the spots, of the heat and cold to be limited to one area, the right forearm and hand. Condition apparently improved after hypnosis.

December 7, 1900: He states that his right hand is cold, that his left and the rest of his body, except the right foot are warm; no amnesia as to the suggestion. He dreams of frightful characters, never about being hurt or damaged. During early part of his sickness, dreamed that his spleen was jumping around and removing the lumps. Denies ever having read of this. One night he cried out that he was afraid his spleen would jump out through his chest. No somnambulism. One time, after rubbing turpentine over the body, with some consequent pain, shortly after he felt the same pain over diffuse and separate areas of his body, as if some one had thrown the



turpentine upon him. During this period, in reading he could not follow the type, he became mixed up and would not know what he was reading about. If he attempted to carry it on he would have an increase of pain until he had to cease. At times very melancholic.

Thermic tests showed that his sensations as to heat and cold, were normal at this time. No kinæsthetic abnormalities. It was suggested that there would be absence of pain, absence of heat and cold except in the middle finger of the right hand.

December 11, 1900: Condition much improved; the heat and cold sensations have not limited themselves to the area circumscribed as in last suggestion, but are noticeable, especially in the legs and lower part of the body. With this increase in somatic sensation the synthesis is apparently increased. He can read and not forget; he walks without being frightened; sleeps better, and has had no further dreams, until last night when he felt the spleen pull for the first time. He always remembers his troubles better when he is feeling well. He felt distinctively better after leaving here; very happy and joyful. He is constantly recounting his delusions and likes to dilate on them. Suggested constant insistence upon the disappearance of the spots. Of not remembering the chill or the cold experienced in his first hypnosis, but rather of constantly feeling warm.

December 12th-14th: Pain again in his leg. He



calls it a "separation of the mucous membrane." He can read more intelligently and remembers more. Under hypnosis, it was suggested that the pain disappear. He seems to be hypnotized more readily.

The second hypnosis far deeper. Change very great. Looks quiet and grave though contented. Contrast to the melancholic waking state and merry hypnotic state is very striking. Remembers well. No memory on awaking. Attempt towards raising general affective tone. Instead of directing the measures toward changing of sensation it is rather an attack on the affective state.

December 15th-21st: Feeling happier, memory is better, reads more and more rapidly; he sleeps better, and has no dreams. Feels pain in right leg only, then it is rather a feeling of "grain over the skin." He brought a sample of grain to show this. He limped from the pain in his leg; this limp was removed by suggestion. The subconscious phenomena of heat and cold, which appeared during the first hypnosis, are still present. Suggestion is still directed toward affective states. Constantly improving.

December 22d-29th: He looks brighter, is more attentive, reads continuously with a distinct memory of what he has read. Does not think as much as usual about himself. Pain only in the right foot with a feeling of heat and cold, as per suggestion. Nowhere else is this found. Electricity was begun at this time.



He feels happy in the evening ; the change is immediate after hypnosis ; is no more afraid ; he has seen the effect of the lumps in the black underneath the nails ; as he feels them drop off, he smiles. In all attempts at diffusion of the feeling, there is an insistence upon a warm feeling in the region of the epigastrium. All attempts at amnesia of the suggestions given when patient is in the "gay" state are unsuccessful. Feels that he will be well within two weeks.

January 2, 1901 : Suggested that he should, after waking up, hand a "lump" to S. Amnesia enforced ; at first he could not remember ; gradually the memory came back when asked if P. had not told him something, and then the specific recollections emerged. The second time hypnotized, the same orders enforced, and post-hypnotic suggestions made more specific. Patient woke up but did not remember ; still the suggestion developed partially. Hypnotized again, with post-hypnotic suggestion still more strenuously enforced ; still not successful. Put into hypnosis ; when partially awakened, patient looked out of the window, thought he was in his own home, looked about with amazement, but recognized no one ; thought some one had been speaking to him in his own home. Said nothing for a moment, and soon completely awakened and recognized those about him ; he remembered about his shoe being off. Post-hypnotic suggestion was not efficient. He goes back into

the state of hypnosis readily. Patient was put into a deeper hypnosis. Sudden marked emotional transformation; from boisterous, gay, and light-hearted became quiet, sedate, and grave. He awakens in a startled manner; could not remember taking his shoes off. Complete amnesia; post-hypnotic suggestions are not followed out.

After awaking, he says he does not remember having seen Dr. S., but remembers P. When asked what time he would come, he could not remember, but said he remembered what P. said. Does not remember that S. has told him something.

January 19th: Has said that at some time he saw and heard things without understanding them; feels the lumps now only between the toes; dropping out now every day; knows that they will disappear at this rate in two weeks; extremely sensitive over extremities; feeling of cold and warmth reproduced as in first experiments. Movements of his arms and toes produced as though bathing. This is in hypnosis and afterwards.

January 21st: He feels better, the lumps are getting better; he knows they are dropping out; cannot catch them because they run away; idea of lumps is very indefinite; lumps also run up the bowels and run down the bowels and emerge with the movements; he feels them in the passages of the bowels.

The succession of the two contrasting affective



personalities is still very striking ; the gay is of very brief duration.

January 26th : Feels worse ; notices the spots upon the mucous membrane for the past two days. His attitude and expression are again depressed ; in taking a tremor tracing of the right hand, he felt the spots run off his left leg. The same as to the spots in his head ; he has a pain in the right side of his head when his left hand is engaged. On awaking from hypnosis, there is a reverse procession of the affective states ; the superficial states, which are now very brief, being characterized by gaiety, the deeper states by quietness. Hypnotic suggestion that he must light a match after awaking ; on awaking and hearing the signal, he began to laugh and stretched out his hand for a match ; asked "whose are they" ; then said, " Maybe I will light one " ; said he would pay for it, and insisted upon lighting it in spite of our efforts to the contrary ; said he liked to smoke, then later said he wished to warm the room. After lighting the match, he said : " I dreamed about lighting a match, that I would have to see fire ; some one wanted to take away my memory." During his hypnosis he was pricked in his hand ; he remembers this also as in his dream.

He goes now rapidly into the deeper hypnosis ; the "gay" stage is extremely brief ; the emotional change is very marked ; he is no longer gay and laughing, but quiet and grave, still very cheerful



and contented. After awaking from hypnosis, he looked in the chair, asking to see "the black cat," which it had been suggested he should see after awaking. He took up a weight which had been placed purposely in the chair, and said "This is not the cat." It was suggested that it was a dead black cat. He looked around for it, then said he wanted to see the cat, that he would find the cat, that he had dreamed about it, and wanted to take it and pet it. Then he took up the weight and laughed, and said it has the color of the cat, and took it in his hands, and passed his hand over it. When asked why he rubbed it, he said, "There is no question about it." He asked how much it was worth. When asked why he wanted it, he said it was the color of a black cat, and he wanted to buy it. He then took it and pushed it back and forth, as in the fatigue experiments. Again when asked why he rubbed it, he said that he would go into the next room and rub it.

He said, "It is the first time I have seen it"; he reiterates this. When insistence is made upon the reproduction of the sensory suggestion, the motor associations of the fatigue experiments only are realized. He rubs the weight on his leg, then incorporating these motor associations into his delusional system, says that in so rubbing it the spots come off. Complete amnesia after awaking.

Before awaking, the weight had been put in his pocket, where he found it. He asked who put it there,



and if some one were not in the room. He thought that the matches and weight were in the chair — that they must have been in the chair. He does not care for either the matches or the weight. Absolute amnesia afterward. He thinks somebody has told him that he could have the weight. When asked if he remembered anything about the hypnosis, he remembered nothing, not even of any dream, but he thought the weight was good for exercising, and for ironing,—both of which are memories from the states intervening between the hypnoses.

January 30, 1901: He feels the lumps still. They are still coming up to his body. Hypnosis, very readily effected, but less of the emotional disturbance which characterized it at first. Post-hypnotic suggestion that he will see the picture of P. Picture was represented by a circular outline of head and shoulders. Complete amnesia on awaking. He looks at the picture, and laughs and says that it is not right, but that he could identify it among others; he says it has no nose, nor eyes, but that it must be his picture, because "it is on the paper used here when I came." Later, says it is only some marks; that it is nothing else, and that the paper is the only thing which helps him. No illusory phenomena; sensory element recognized exactly. Patient put in deep hypnosis; suggestion that he is to see on paper a man in a suit about whom he is to dream; he is awaked; said that the man is not swell, that he



has no good clothes on, that he is not well dressed ; the man has black clothes ; he sees the picture plainly with a double-breasted coat. The picture is simply a few lines, but he works out all the details. He evidently has blended the two suggestions,—the general about the man and the particular about P. Said he had dreamed of an iron burning him ; this was due to the weight with which he played in the hypnotic state at a previous time, and under previous suggestion, that he would feel better with this weight.

P. hypnotized patient, suggested sensory hallucination of a figure (fly) ; when a signal (knock) was given, suggestion realized, saw the fly and caught it, let it go, then looked for it everywhere ; he picked up P's picture, the one suggested previously, and said it was P's picture, and wanted to take it ; pointed out all the details.

Hypnosis, suggestion to see father, and speak to him ; wakes up, took P. to be his father, and spoke English, although his father speaks only Russian. When asked where Dr. P. was, said he had him in his pocket. When insisted that he see P., said that he did not care to see him, that P. was very busy ; re-hypnotized and suggested that he see sister open the door and come in, while it was further suggested that his father was going to help him in his trouble and take his spots away ; awaked and said, " May I go to the door ? " He did not see his sister until D. came in, and then he took him for his sister.



Finally, when we attracted his attention to the difference between D. and his sister, said we were mixing him up, and finally told D. to go away, that everybody laughs at him, and said, "I shall not take you up here any more." When we insisted that he open his eyes and see D., he still insisted that D. was his sister, and that he was not out of his mind.

February 1st: Still feels lumps; said he had a bad dream, that two men were trying to kill him, and that he had called the firemen for help; the men in the dream resembled no one; he felt mixed up after awaking. He remembered this in the night, directly after waking up, but not on the next morning. Did not dream about his father or sister; does not remember having his sister or father here last time. Remembers that the picture was one of P., but now it does not look like him; he knows it is not one of P., he only dreamed of it. As soon as he wakes up, he knows that the spleen works between his toes, where during hypnosis the electricity is applied. The spleen takes everything away and pushes it down the bowels; he heard a few days ago a signal from the soul to the spleen; the soul is working and rubbing away the spots. The delusional system is still complete, and its integrity is but little affected.

He is hypnotized; post-hypnotic suggestion that the lumps will jump at a signal to the hole near the spleen, then through the bowels and out of sight; he lies down upon his left side in order to have these



spots go in the hole ; he feels the flesh dry ; feels the spots jump to the arm, and then to the head, and then to both holes, both behind and in the side ; he cannot tell how many minutes longer it takes. When the toes flex, the lumps come up on the anterior surface of the leg ; when they extend, they come up the under surface of the leg.

Second hypnosis was easier ; suggested that all the spots on the right and left foot would disappear within one minute, and he would feel much happier after awaking.

Awaked, he said, " Some one in my dream told me to count the spots ; I can't do it, for they are all there ; I would like to have them all go ; they would all go through the holes." After two minutes he thinks they are all gone except a few ; when asked to guess how many are left, he holds himself in an attitude of attention, and counts to twenty on the right side, and to ten on the left. Said " I dreamed that my spots will go right away, and when I count them they go quicker."

February 2d : No dreams ; diminution of spots ; believes that the spots are worse when the weather is wet ; thinks it will take a long time. It was suggested in hypnosis that after awaking he would see writing upon the paper and read it, the writing being that " the spots are going fast." When reading this the spots will begin to go much faster. After awaking, he says " I cannot count them " ; this is a revival of a



former hypnotic state ; he said, " I have been asleep, and I heard some one say for me to read upon the paper and to count the spots, but I can't read." Re-hypnotized with post-hypnotic suggestion that his father would speak to him and tell him that he would get well, and after awaking he would speak of it to P.

He awaked and said : " I saw my father in a dream, and he told me that my feet would get well and dry, whether in wet weather or dry ; that even in damp weather I would be well ; my father, he tells the truth " ; he has not responded to the latter part of the suggestion, as to telling P. about his increased strength ; only that which interests the delusional system in question is adopted. The amnesia is complete.

He said, " If my memory for those spots would only go then I would be well." Also said during hypnosis, " When my feet get dry then the spots go away." The upper current of the spots to the body has possibly been suggested by the feeling of the electrical current up the legs to the arms and hands. The positive tendency towards extension of the systematization is not so marked, but the negative tendency as to the exclusion of any ideas which cannot be fused is still strong.

The merry hypnotic state is now markedly dwindling away and the patient rapidly passes into the grave state, now greatly moderated. Patient begins to smile in his grave hypnotic state. There seems



to be a blending of the two contrasting hypnotic states, with predominance of the main features of the second state.

February 8th: Says his father has told him the truth, that his fingers and toes are getting drier; that his father has told him they would gradually get drier. But they are not yet completely dry. This is from a dream, but he does not remember at what period. In hypnosis, anæsthesia of the left hand was suggested, with warmth of the right hand, and a negative auditory hallucination. None of these was successful; apparently they were too numerous for assimilation by his delusional system.

In second hypnosis it was suggested that when a pencil would be put in his right hand, he would answer the question by writing. A negative auditory hallucination involving S. was given that he would answer S's question by writing without remembering how or why. He was distracted by P. while S. spoke in his ear. Patient says that P. has asked him about his sister. It was really S. He further says, "I can't write for my arm hurts me." When S. speaks he jumps and discontinues any conversation with P. In third hypnosis there was insistence on writing and the negative hallucination of S. As before, he says that P. is speaking to him about his sister, about matches; each time after S. speaks to him he lapses again into a slight hypnosis. There is a fixed objection to writing. Evident lack of initiative. When



he once begins he finishes completely; he said he wrote because in his dream he was told to write. He said he heard only P. Says he does not hear S., but answers S., explaining that it is P. who is talking to him. He insists that he does not hear S., but only P. Says some one bothers him, meaning S. Patient looks at S. and then turns away for he only hears P.; whenever he answers S. he shuts his eyes and says he is talking to P. He takes the paper and says that when he writes upon it with a pencil the spots will emerge through the pencil and be dropped upon the paper; he refers to the spots upon the paper made by him as the spots which have emerged.

He tries to keep this paper; it is snatched away, whereupon he gets up and looks for it; he talks to S., yet says he is talking to P. Says he does not know how the spots get away with the paper, but thinks that the spots have carried it away. When shown some spots by S., he sees them, but says they are not the ones. It was further suggested in hypnosis that when writing he will see the spots come off, and each day more will come, and each day he will forget more about the spots which are left. Also insistence upon the paternal authority, with verbal repetition; upon awakening, he asked who was talking to him in a dream.

February 12th: He has not attempted to "write out the lumps," because he has not felt like writing; says his father has not told a lie, because his feet are



becoming a little drier, but not entirely so. Hypnotized, and suggested that he see upon awaking a black cat with a white tail; that he pet the cat, and pull her tail. On awaking, he said he dreamed of a cat once, but "this (the weight) is no cat"; he says it is simply something for exercise; he insisted, however, that he wished to put it in his pocket, but did not wish to steal it. This is from the previous hypnosis of two weeks past.

Second time hypnotized; suggested he would see a dog; on awaking, said "it is no dog, no face of a dog, does not look like a dog"; exercises with the weight.

Patient's memory of the motor elements, as before, is the best; he begins to exercise with the weight as before, although he says he has never seen it before. Rehypnotized, and suggested that he would perceive a snake; the snake being a pneumographic belt. He looks at it and says "it is no snake, it must be dead; my worms are alive, but this is not alive, nor is it my vein"; he looks at it very frequently, and with questioning and uncertainty; he keeps looking at it; says: "I don't know what it is, but I am scared at it, for when my vein came I was scared at that; that thing must have come from somebody and was once alive, and so I am scared at it now, and I shall throw it away." There is here a complete systematization. He puts it away, then takes it out and again looks at it, saying each time, "I am scared at



it"; then he says, "Maybe it is mine; I will keep it any way; it can't be a snake, for I have no snakes."

When shown the chain connected with the belt, he said, "In my body I have such a piece as that. Those dry pieces the vein would take by signs from the soul and the spleen." He did not appreciate what the flat pieces were,—he said, he "did n't have anything like that; the vein had a mouth something like this, but not just quite"; a look of recognition passed over him as he gazed at the plate; and he said, "I can't exactly remember what the vein had here," pointing to the plate, "but it was some kind of a mouth."

In the fourth hypnosis, amnesia for all this was complete.

After awaking he sees no use in the weight; does not regard the rubber belt as the vein; he looks very happy; there is evidently complete amnesia.

February 16th: "Yesterday the spots were upon the arm and the head, and my sleep was poor, because my brains are mixed up, and because of my memory of the bad feeling, which comes back when I sleep; after I wake up I can't remember anything except the memory of the bad feelings." He has slept poorly; his appearance is more depressed. Application of electricity, without hypnosis, suggesting indirectly a limitation of the area of the spots. After the application, he was happy and laughing. There



is a constant reversion to the manifestations described earlier in the course of the disease. The patient passes now directly into the deeper grave state. The first light, "gay" hypnotic state seems to have completely dropped out.

The idea of getting advice of Dr. N. has become fixed in the mind. He reiterates constantly, "Will Dr. P. see Dr. N.; it is in my head and I must see him, for it is always in my mind and bothers me." In hypnosis it was suggested that he forget Dr. N., that he have no desire to see him or any one else except P.; that he will want to be hypnotized, that he will feel better; that all the spots will be on the right foot, and that on awaking he will feel easy and happy. After awaking he says, "I do not care to see Dr. N., I have no desire at all to see him." He still thinks that his sleep is bad for him, because while he is sleeping the lumps stay still and do not move, but he sleeps better, because his "brains are not mixed."

February 21st: "Two days after I left here the spots begin to come up through my veins and to the head, and then I feel mixed up in my brain and unhappy." Lightly hypnotized, with suggestion of limitation of spots as before. After this hypnosis he began to feel better, saying the spots begin to move more to the hole; "When I walk, the spots go somewhere else and not to the hole, but when I lie still they go to the hole"; there was no mention of Dr. N.;



"when the spots go away they stay away." He says that whenever he tells any one about the trouble in the past he feels mixed up and feels that his "chest wants to cry." "The dreams I have here, I have again at night; my memory of the past is worse, and I feel very unhappy; when I walk the spots keep still and when I sit still then they move." He makes a line of demarkation of the veins which separate the small toes from the great toe; he also says that as the spots run off the right foot they also run off the left.

He was now hypnotized, and for the first time amnesia of the delusion was attempted; it was suggested that the delusion would be rather indistinct and be felt as a past experience; that the memories would seem so long ago that they would be faint and amusing, that they would seem to make him laugh without knowing why; that he will never dream of them, except as having been long ago. Special emphasis laid on the destruction of the delusional spleen and soul; that after awaking he would feel only small wet spots over the feet; that there would be nothing else, no feeling of the soul or the spleen, nothing but the spots; that these spots would make him happy, because they go so fast.

Upon awaking he was laughing and happy; said "I had a good sleep"; "this is the first time my spots are going out when I sleep; since I had my trouble of last year, this is my best sleep"; this is due



apparently to the suggestion, now successful, of partial amnesia of the delusional systems.

Patient asked to be allowed to go to sleep again ; he was rehypnotized ; suggestion of small wet spots instead of lumps ; that they are so small that he can hardly notice them ; that they are amusing him. This is an attempt to remove them from the active malevolent ideas given in his own system and transfer them to pleasanter groups. Upon awaking he again was happy and laughing and said : " They run off very quickly ; I don't feel mixed up ; I like such a treatment for I slept good ; my toes are going to be dry ; the spots don't stay thick but thin ; I am soon going to be well and happy ; I wish the spots would move at night like they do now ; I feel light on my feet ; I feel bright and strong " ; he was brighter than ever before.

The " gay " emotional personality no longer emerges. Attempt at disaggregation ; amnesia as to the past ; transfer or metamorphosis by means of association with pleasant emotional states. It was suggested the spots be absolutely limited to the foot ; that they are simply small wet spots which get dry as they go to the hole ; attempt to make these sensations less and less focal.

Suggested first that the past memories are funny ; that the spots are amusing him ; that they are not unpleasant. The task is to limit the wide systematization which has taken place, pleasant groups of systems are



continually to be assimilated to the old systems, substituting themselves for portions of the old.

February 26th : He says "the spots do not go to the hole when I walk, only when I lie down ; the spots are hardly felt, they are now only slightly wet or dry ; but on the head there are sometimes spots when they come up, that is, when the wet comes up, it dries out and makes the spot." This statement is elicited upon a question as to how there could be spots on the head, when there are no spots on the feet, but only wetness. It is simply a question of development of existing systems in the patient. He proceeds to say, " When I sit still then these dry spots go to the hole ; if I walk they go to the head and from there to the hole ; I don't think over my troubles any more, I have pretty near forgotten them ; it is no use to me ; I don't get nervous any more." In hypnosis the same suggestion of the pastness of the delusion was given to him, associated with a pleasant affective state as to the present sensations ; also suggestion of indistinctness of the wet area over the feet ; also for the first time associated this wetness with the idea of sweating. Suggested that the wet must be sweat ; that it is so slight that it is rather amusing ; that it is so slight that it cannot go above the feet, to the head or to the body or to the arms ; that it runs off waking or lying still ; that the spots must have been wet like sweat ; that all the wetness he has had must have been wet sweat. His sleep is deep. Upon



awaking he says that "the feet are only wet with wet sweat, that it can't go anywhere else; that when they get warm they will be cured, that it runs off so fast to its hole that I can feel it." The attempt to limit the spots to the feet and to create a new system for the dispersal of the sweat did not work; the old systems are still strong and cannot at present be disturbed.

After hypnosis he further said he did not feel so much running off because not much was left to run off; he was getting better.

March 2d: "Am getting better; for two days after leaving here everything was all dry, then when the weather changed, a little sweat came under the nails and a little on the face, just like sweat; it seems to be different than before, it is more like sweat; it still feels like an inside wet" — he cannot just tell; he does not feel it as he did before because it does not collect; he cannot tell where it comes from; feels more happy, and wants to get up and go to work; says he dreams about business, but cannot remember what it is; says he feels differently; says he can read now, and that it does not bother him so much, that he can talk more to people; he does not remember about the "past sickness," and when he tries to remember, he feels he cannot. The wet does not trouble him—says he can stand it. In hypnosis, suggestions as before; that the delusion is an experience of the past; that the wetness is on the outside just like wet sweat,



that the inside wet seems "long ago"; is nearly forgotten; that the outside wet is *on* the toes, none on the body, that it runs off like sweat; that he will think of business; that he will feel happy and strong.

March 5th: "I am getting better; all my trouble is now 'in' the toes and feet; simply the toes, not the feet any more, just underneath the nails"; he feels "no more wet, just little spots of dryness. Now it moves up to the body dry, it does not go up wet. I cannot feel the wet places any more for something dry comes up from the toes." The dry feeling is like sweating, but still "inside sweating"; the dry spots come up the body and get warm and then pass away; his hole is closing up, and when that closes up then things will be over; he thinks it will be shut in a week's time; "things are going out rapidly" and he is getting fleshy; "the hole has no chance to close up until the spots stop coming out."

He says that when he wakes up in the morning "there is nothing on the body, it stays only on the toes; they are just dry spots, not wet"; that when he wakes up his face is bright and he feels good; that when he comes into a warm room "something goes to his head." In talking he combats the idea of sweat being the same as the wetness, that his wetness cannot come outside, as his sweat does; that "it must go out through the inside"; this apparently explains the inability to fuse by suggestion "inside" and "outside" sweat; it is necessary to follow as yet



along the lines of least resistance ; patient says the "spots will get less and less, and then the wet and the warm of the body will go, and my hole will close ; whatever comes up in the body gets wet and warm and then goes out through the hole."

Patient says that "the holes are so very little the spots must go in now more rapidly, because they have to be soft and warm to get in" ; asked what side the spots go in, says "they go inside to the front ; then sometimes in the back side ; but now all go in one hole in front upon the left side."

In hypnosis the suggestions as before were directed toward making the delusion a past experience ; the spots to be limited to two toes only, that they are to be so small that they can only go to the one hole, taking the course back of the knee to the thigh, and thence to the hole. This route he had described while in his waking state. Further suggested that the hole is closing ; that in two days only one toe will be left "dry" ; that he is fast getting well ; amnesia as to the other hole ; continuous thinking of the route of the spots while in hypnosis ; that after awaking he will feel it ; that the dry spots will go every day ; that then the wet and the warm of the body will diminish, and he will feel the hole close. Feels fine and strong on awaking.

March 9th : "I feel better than ever before ; I feel the spots on the toes very dry, they did not run ; beginning with to-day they began to move ; they went



direct to the hole ; now the hole is beginning to close " ; on the last two days, after his former hypnosis, these feelings were less indistinct, due to the apparent reappearance of the more stable systems. " Only one toe is sick now, just one ; others are warm and dry, but they are made sick because of the sick one ; if the sick one becomes well, then all will be well." He feels in the sick one something like squeezing and heat ; feels like a nail pulling ; he shows the foot. Over the toe that is sick is the last of the wet spots ; " I had them on two toes last time ; now it is dry, and all that is left is cold and dry " ; as his toes move he says, " There, it is working ; I don't feel it move, only when I look at it I know it moves." The kinæsthetic sensations were tested at this time and found normal. Though he says he feels more in the other toes than in the sick one, no hypoæsthesia can be demonstrated.

In hypnosis, suggestion as before ; localization of spots to one toe ; to be warm and dry ; to run off by one route along the inside of the thigh to the hole, with subsequent gradual closure of this hole. That the spot on the sick toe is so little that it can only effect the toe next to it, and no farther.

March 21st : Patient has been ill with a genuine attack of influenza ; it is significant that the decided change in the painful tone of organic sensations did not produce any reinstatement of former systems.

He says that now all his " weakness is still in the



second toe"; that any sensations in the other toes originate from this one. That the coldness under the nails of the other toes is less. It runs off to the body during motion and only to the hole during rest. There is still a tendency to assimilation by the delusional system. It was suggested that he would have no more bad dreams, that his dreams would be pleasant and happy. In this hypnosis he tells of a former dream of breaking a bottle of medicine, and being told by some doctor not to take that medicine; after awaking in the morning he remembered the bottle described, and did not feel like taking that medicine, because in the dream it had been told him not to do so, "because it drew in the spots on the stomach." Here is a revival of the old systems about which amnesia had been enforced. Nothing had been said of these stomach spots for months; there was some resemblance of the doctor in the dream to the Dr. N., the idea of seeing whom had formerly been fixed and had later to be removed by hypnosis.

In this hypnosis it was again suggested that the spots go to the hole and that they must close the hole, and that as the hole needs them they can go nowhere else. Amnesia as to the doctor in the dream insisted upon; further suggested the spots will not spread from the sick toe; that they are to run off to the hole whether he be walking, riding, or sleeping, that they will run only to the hole.

March 26th : One toe and between the first and



second toe is still "sick." "The spots still run to the body ; I think about it and it runs to the hole, and the spots must close the hole ; I have this in my mind. As I think of this it runs up faster ; it must run dry very soon, as the toe could not hold very many more spots ; it does not get any worse in bad weather. My right arm begins to feel better, therefore the spots must be running rapidly to the hole, even though I do not feel them. If I think of anything else the idea of the spots comes in and stops my thinking ; *it does not make me sad any more*, because when I think about it the spots move faster."

In hypnosis it is suggested that only at night will the spots be felt, not during the day, that the toe is so nearly dry the spots run only at night ; that he will be free to think of business.

March 30th : " I am getting better, the spots run very little, mostly during the night ; in the daytime it moves to the body and not to the hole." The appreciation of sensation is becoming less distinct in the toe. Says he has dreamed of hearing and seeing Dr. P., also of Dr. P. telling him that unless the spots went soon the toes must be cut off. In the morning following this he felt the spots less ; there was suggested by hypnosis a dream content ; that he would hear and see Dr. P. tell the spots to go only to the hole and not to the body, and only at night ; and that he was getting well.

April 2d : " Mind is getting better," feels free in the



daytime; spots run during the night; dreams at night pleasant, but cannot remember them; there is no more heavy feeling, because the spots run to the hole; he does not feel them run to the hole and does not really feel the hole. Suggestions are continued as before. The patient said that he had something he wished to tell me of. Dr. S. thought it possible that there might still exist a fixed nuclear idea; after hypnosis, the question proved to be not anything focal, but simply a slight development of a system involving sensory elements proceeding from the rectum, the origin of which could be traced to a question by P. ten months previous in regard to the second opening. Following this, amnesia of the previous experiences was suggested.

April 6th: "Since I had the cold in the throat it moves in the daytime again." Patient had had a slight pharyngitis. This additional disturbance of sensation has been sufficient to redevelop the recently limited systems. On questioning, it was found that the patient had developed this idea from his belief that "the spots in the toe came from cold," therefore with a new cold the spots will redevelop. It is necessary to limit not only the delusion as to time and place, but also under all conditions, as in a former case of wet and dry weather, which at one time constituted a large factor. Suggestions in hypnosis were made especially emphatic towards eliminating the influence of the sore throat.



April 21st: The spots have been moving fast, and since they have been doing so they must come from somewhere, otherwise the demand would outrun the supply; he describes their source as between the toes; he does not feel the hole any more, simply feels the running off; says he feels happy, because he knows where they come from. "Spots don't stop in the toe at all, and the only place they do stop is between the toes."

In hypnosis it was suggested that the excessive running off was due to the constant application of the battery, with the repeated suggestion that they were running into the electrode; that as the spots disappeared from the end of the toes, those farther up would follow; the spots to disappear entirely.

April 28th: Condition improving; same suggestions as before; spots are now very deep and very few; they have been going fast all the week to the hole; dreamed of hearing Dr. P. say, "you are well and dry." And the next morning awoke happy; since then the toes have remained dry; in hypnosis, same suggestions, with special emphasis directed to the dream life.

May 5th: Since suggestion as to the limitation of spots to one toe has been omitted, there has been a consequent extension to the other toes or metatarsal spaces. Tendency for the systems to redevelop. In the remaining three outer spaces, the spots remain on the "mucous membrane, but not on the toes; there



is nothing more on the flesh, but only in the mucous membrane." As he sat looking at his foot he noticed the pulsation of an artery ; he immediately assimilated this into his delusional system as being "a spot which was running off." He has dreamed, but remembers only of dreaming that "the last spot in my well toe went out through my ear."

He now thinks that there is some unnatural power that removes the spots, and he consequently cannot think of anything else. This is again a novel systematization, incorporating the idea of the battery as the power. At times as the patient's toes move, he declares he cannot feel them move,—“that it is only the spots running off which move the toes.” No kinæsthetic anæsthesia can be demonstrated.

May 12th : He feels much better ; he thinks there is but little left to do ; he cannot feel where the spots are ; they are rather scattered, and the only time that he can localize them is when lying down ; he is not so tired ; he thinks they will be gone in a week, because he has promised a friend that this will be the result.

In hypnosis, the suggestion formerly given as to the scattering of the spots and their indistinctness is continued.

May 19th : Spots only under the nails now and they run off very rapidly, especially during warm weather. In hypnosis, as the current was applied, it was suggested that the spots were all to go, that the flesh was



to feel natural ; that he is not to be able to remember the spots, simply to remember that there was something there, and that it is gone. After awaking, amnesia incomplete.

May 26th : He comes in smiling and bright ; says he feels almost well ; says he can feel the spots no more, but just a little wetness : substitution here of the "wetness" for the "spots." The wetness is very little ; for the past week he has kept his toes in the sunlight — thinks it helps spots to come out. This additional system involving spots coming out, as the effect of the sun, is partially the result of previous suggestion. He says "I feel the flesh on my toes like it is everywhere else, only it is slightly wet ; I feel that the spots never can come back, because the power gets everything out." The "power" is still substituted for the former "spirit" and "soul." Says the wetness is but slight. He says his "toes look skinny now, because the spots are gone ; when the spots were there, they were swollen." In hypnosis, the period of happiness and joy was again prolonged ; says he cannot sleep because he is "so happy and so near well." The suggestions were continued as to the elimination of the wetness ; as to the natural feeling of the flesh ; as to the amnesia of the spots.

June 2d : For two days the wetness has moved so much that he had to lie down ; in only two toes is the wetness warm, and it is very slight ; he says it runs occasionally to the head. The former suggestions



that the spots run to the hole had been omitted, with insistence upon amnesia as to the hole.

July 2d: Certain systems still persist; apparently based upon some definite sensory condition, described as coldness and numbness of the extremities; the left foot is warm, but the toes of the right foot are definitely cold to the touch. There is no reappearance of former systems.

July 12th: Says his "toes feel natural like flesh, in every kind of weather; I feel only wetness; the wetness goes to the bowels and then away." The improvement in regard to the character of sensations is definite, as evidenced by his statement that he now "feels the flesh." In hypnosis, suggestion has proceeded on the line of the removal of the wetness to the bowels, emphasizing by means of pressure on the abdomen; absolute amnesia being enforced.

October 8th: He felt better last week, toes felt warmer; he worked; felt nothing in his body; since Sunday the wetness has run to the bowels, has had a slight sore throat; says he fancies that "the cold air has pulled the wetness from the toes to the throat, just as by a magnet." The systems have not been as yet entirely demolished. There is certainly a coldness very marked in both extremities. Blood analysis shows slight anæmia. In deep hypnosis, an attempt at heightening the temperature of extremities was unsuccessful.

October 15th: Patient says that "there is a little



wetness only in the centre toe ; can't feel it very well ; does not notice it much " ; that when he does not notice it " it runs away most probably. " " Occasionally the spots run to the body and thence to the bowels ; they are not the old spots, for I cannot remember them ; if I try to tell about them, it does not come ; it is now only in one of my toes, and nowhere else ; I am getting better all the time, I feel stronger and heavier ; the power still works in me at night, and draws the spots from the toes to the bowels ; only when I am tired during the day does this happen. "

The patient has been seen from time to time, the last vestiges of his delusional system have entirely disappeared. He is now in a normal mental condition ; has resumed his work under his old employer ; has been advanced to the position of foreman and has given entire satisfaction.

# Mental Dissociation In Functional Motor Disturbances

*By*

GEORGE M. PARKER

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## CHAPTER I

### HISTORY AND EXAMINATION

CASES of motor disturbances apparently due to no organic cause are becoming more frequently noted in psychopathological literature. While possessing their own individual features, all such cases present certain elements in common, to which we would direct the reader's attention.

Miss A., the patient, is twenty-five years of age. The family history contains certain determining factors. The paternal grandmother is described as having been a willful, unmanageable individual. The patient's father possesses many traits apparently derived from this genealogical branch. He is highly emotional, excessively sentimental, readily unbalanced, a very poor sleeper, an active dreamer, though



not somnambulistic. Maternal side presents no point of interest. To neither side can presence of definite, transmitted disease be traced.

Personal history details an almost complete absence of ordinary somatic diseases of childhood and adolescence,—no diphtheria, no scarlatina, no rheumatism, no cholera, no trace of tuberculosis either pulmonary or articular, no anæmia, no trauma. Menstruation was established at the age of sixteen; it has been regular, though occasionally painful.

Further investigation, however, discloses the development of certain innate peculiarities, further accentuated by the action of environing conditions. Primarily, the resemblance to her father is marked. As a child the patient was bright, but entirely lacking in persistency of purpose and action. The patient is described as irresponsible and eccentric. As possessor of a brighter, if less responsible, mind than the sister, her life has been that of constant favoritism, with the consequent wider divergence of these primary deviations. Succeeding years have exaggerated rather than ameliorated these peculiarities. Of especial interest is the undoubted existence of *somnambulistic* tendencies in childhood persisting up to adolescence. Her dream life has been active; content of dreams is distinctly unpleasant.

The accident, initiating the present illness, occurred two years ago. It was apparently a simple sprain, induced by foot turning, while walking a heavy country



road in a light house slipper. Considerable pain attended the accident. There was the usual swelling, tenderness, etc., with no evidence of a fracture. Ordinary methods for reduction of swelling were employed followed by applications of a Gibney plaster. Although the foot apparently mended exceedingly well, the physician in attendance was greatly puzzled by the excessive general pain declared by the patient as accompanying the slightest movement. Frequent readjustment of the straps failed to remedy this condition. Patient finally attempted to walk after removing straps. She succeeded only in augmenting the symptoms. At this point she was advised, one month after the accident, to employ crutches. Since this time, she has continually used them. At the end of three months, patient's condition was unchanged. The swelling was slight, but the pain was excessive. The medical adviser again insisted upon patient's walking. A commiserating family and diminishing initiative defeated him. As the Gibney straps were still maintained, walking with the leg suspended naturally produced a slight degree of stasis in the toes. Its increase was very gradual until six months later. During this interim, the patient had seen several surgeons in New York, both general and orthopædic. Their diagnoses were largely negative, but the questions directed to the patient made a deep impression on her. At this time the persistency of the pain, coincident with a marked increase of the œdema, led



to her admission to the hospital. The œdema was not confined to the foot, but invaded the leg to the region of knee. Shortly after admission to hospital, a distinct bluish coloration appeared at the toes, extending upward and over the area of the œdema. Œdema and coloration controllable only by elevation of foot. Foot gradually assumed position of equino-valgus. Repeated examinations of foot by the surgeons could disclose no articular lesions. A plaster cast was applied to prevent further deformity. The patient was seen by a consulting neurologist, and the opinion of hysteria was advanced. From this time, galvanization and massage were intermittently applied. Contrary to advice of surgeons, patient refused to leave until one year after admission. Her condition, when discharged, was unimproved.

Previous to discharge, a skiagraph of the joint revealed an apparently normal condition, both of the bone and membrane. It was my good fortune to see this case directly after patient's discharge from hospital. The joint in question presented a rather startling appearance, both in its relative and real position. It rested upon a level higher than the patient's head; the only level in which it could be maintained without the appearance of œdema. The position assumed was that of marked equino-valgus.

There was no swelling about the joint. Bony prominences were distinct. Examination produced a characteristic display. At whatever point pressure

might be exerted, an exceedingly vigorous reaction was manifested. Especially was this true over the malleoli, os calcis, along the entire extent of the tibia, —in short, wherever bony structures were superficial and apparent to the touch. The focus of greatest intensity could readily be varied by diversion of attention. A similar variability of reaction was noted towards stimuli of touch,



FIGURE 26.

pain, and temperature. Over the mesial surfaces of the foot, the reaction was rather delayed than diminished. Hypoæsthesia was demonstrable in kinæsthetic sensibility. Passive motion was impossible, every attempt to move foot apparently producing great pain. The joint furthermore was exceedingly rigid, antagonistic muscle groups being decided agents in this result. Active motion exhibited only a feeble movement of the toes. This slight movement was accompanied by violent protestations of inability, with equally violent contractions of opposing muscle groups.

After a brief, but painful struggle, the equilibrium between flexion and extension was disturbed, with resultant production of slight movement. There was considerable atrophy of the posterior parts of the leg.



No suspicion of tubercular disease could be entertained after examination of the joint, although by direct questioning, grounds for almost any diagnosis could be obtained. Demonstration of œdema was readily afforded by lowering the level of the foot. It rapidly appeared, beginning in the toes, and extended upward to the knee, a dark bluish coloration immediately following, its limits being coterminous with those of the œdema. This coloration was general; it was not preceded by sudden pallor. Slight drop in local surface temperature was evident. Considerable pain accompanied the appearance of œdema and coloration. There was no bilateral display of these symptoms at this time, no tenderness along the course of nerves. There was gradual disappearance of all symptoms upon re-elevation of foot.

## CHAPTER II

### THE PSYCHIC TRAUMA

IN the consideration of this case, there is primarily traceable from grandmother to granddaughter, through the father, a tendency towards similar disproportionate reactions under approximately similar conditions. This tendency, which presumably in grandmother and in father did not approximate a psychopathic condition, has definitely reached this point in the present case. In her father the dream life has been exceedingly active, with disproportionate influence upon waking states. In the patient this activity developed into somnambulism. This persisted to the patient's fifteenth year. The character of the trances was not recalled, except in regard to their general tone, which was decidedly unpleasant.

Revival of these states was not attempted, because of limitations placed by family. The persistence, therefore, of dominating subconscious memories could not be demonstrated. Patient's history, previous to accident, can be briefly reviewed. The general tone of her life was idle and purposeless. Further, there were no somatic diseases of an exhausting type which at times precede as agencies of a causative series.



The manner of the determining accident has been previously detailed. A slight sprain, usually invaliding one for a period of seven to ten days, in this case produced conditions persisting for two years. The preceding history of the joint was not of a nature to warrant such a reaction as the result of an even more severe strain. The degree of stress to which the joint was subjected certainly was alone insufficient to produce the result. The main factors were evidently psychical in character.

It has been observed that with individuals of so-called "peculiar temperaments" accidents slight and insignificant produce many and diverse untoward effects. In this case, the excessive pain and the emotional shock was preceded by a dissociation primarily slight, but which, by a systematization developed to a considerable degree of extent and fixity. From the field of consciousness, certain normally contributory psychomotor systems have been dissociated. These systems, dropping to the subconscious, produce psychomotor disturbances.

As to the pre-existence of determining subconscious memories, nothing further than a suspicion could be maintained. An examination clearly revealed the fact that the patient's subconscious life was rather highly developed; patient was an active dreamer and a somnambulist. Of the sufficiency of affective states to produce such results, a number of cases are on record.

The similarity is to be discovered in their common



reference to one cause—that of psychic origin, usually consisting in a mental dissociation of psychomotor states. Of the many cases on record, we take a few for illustrating our point of view :

In the *Journal de Médecine et Chirurgie*, Paris, 1895 (pp. 888-890), a case is reported in which the contracture evidenced was traceable to a slight fall and severe mental shock, with consequent amnesia for a short time. The contracture noted at the time of his later attack was an exact reproduction of that assumed at the time of the psychic trauma causing mental dissociation.

Janet reports cases in which contractures regularly followed dissociated states or dreams. In one case, for instance, the patient had dreamed vividly of playing the piano, compassing octaves rapidly. The "hands became contracted in the position a pianist would give them in trying to stretch an octave." In another case, the contracture assumed was presented by a young woman in a state of religious ecstasy. The rigidity, sufficient to maintain the body, is a marked psychomotor manifestation of the subconscious working of a dissociated system.

In another case a young man, a sailor on a merchant-vessel, received upon the chest and abdomen the shock of a barrel rolling on the deck. He was not hurt, but he remained bent forward by a permanent contracture of the muscles of the abdomen and thorax.



Féré reports a case of paraplegia following a dream. The patient dreamt that she was pursued by men, and awoke with a feeling of weakness in both legs. For two weeks in succession this dream kept on repeating itself, occurring even in the daytime, finally developing complete paraplegia.

An interesting case is reported by Dr. Henry L. Winter, Associate in Anthropology at the former Pathological Institute of the New York State Hospitals. Since the case is closely allied in character to the one presented in this paper, a more or less full account of it is given here :

“ Edward S., married, aged thirty-eight years. Born in United States of German parents. Occupation, barber.

Family history : Grandparents, negative. Mother died of apoplexy during confinement, aged thirty-eight years. This was the second attack. First attack three years previous. Mother's only brother living and well, but of very emotional nature. Father, living at present, aged seventy years, suffers from double cataract. Two of father's brothers became blind at about same age from the same cause.

Personal history was negative up to ten years of age. The death of his mother occurred at this time and was announced to him under conditions which excited him greatly. He became mentally depressed and at the funeral attempted to throw himself into his mother's grave. From that time he has continued



to be very emotional, and at present laughs and cries without provocation, not infrequently laughing when the occasion calls for serious action. These emotional outbreaks are so pronounced as to interfere with his business and the discipline of his home. At eleven years of age, the patient had an attack of Bell's palsy, which has never entirely disappeared. He has had no other illness up to April, 1899. At that time he says that *while asleep he dreamed that he was falling, and awoke to find a considerable loss of power in the right hand and, somewhat less marked, in the right leg.*<sup>1</sup> His voice, previously firm and clear, became weak and husky. He told his wife that he had had a 'stroke.' These symptoms continued for about two months, during which time he was under treatment. The arm recovered first and then the leg. Patient says that speech never became perfectly normal. Patient has always had the well-defined idea that he would die of paralysis, and the same idea was apparently held by other members of his family. He had been bowling considerably about the time the above symptoms appeared, and his family had told him to stop that form of exercise because it would lead to paralysis. He, himself, ascribed the condition to excessive bowling. On November 13, 1899, he began to suffer with severe occipital headache, which continued for several days. On the 17th, four days after the onset of the headache, the right hand

<sup>1</sup> The italics are mine.



began to feel numb and weak and the headache ceased. About two hours later the voice began to diminish in volume, and after the lapse of about two hours more the leg began to feel 'lifeless.'

I first saw the patient three days later, November 20, 1899. At that time there was a right hemiplegia with almost complete aphonia. The paralysis was more marked in the leg than in the arm. Pressure on the dynamometer registered 40 with the right hand and 100 with the left. The superficial and deep reflexes were slightly increased on the right side. The muscles were slightly spastic. Irregular spots of partial anæsthesia were present on the dorsal surface of the hand, over the right deltoid muscle, and on the right side of the face. There was complete anæsthesia about the mouth on both sides. Examination of the throat by Professor Coakley revealed a perfectly healthy larynx, without any paralysis. The emotional condition above referred to was very marked; patient cried during entire examination. Heart, arteries, and kidneys were normal.

The history and condition of the patient were suggestive of a psychical origin for the hemiplegia, and I decided to treat him on that basis. I gave the patient positive assurance of speedy recovery and advised him that the leg would recover first, then the arm, and finally the voice.

On November 27th patient reported improved. The paralysis in the leg was greatly diminished.



Dynamometer registered a pressure of 50 with the right hand and 100 with the left. Condition of voice unchanged. Reflexes still slightly increased on right side. The anæsthetic spots disappeared from the hand and diminished in size over shoulder, but remained the same on the face. Patient was advised that the leg would be entirely free from paralysis when he next returned, and that the arm would be greatly improved and voice stronger.

December 4th patient again reported. The paralysis had entirely disappeared from leg. Dynamometer registered a pressure of 65 with the right hand and 105 with the left. Reflexes normal. Condition of voice unchanged. Anæsthetic areas had disappeared from shoulder and diminished in size and degree on face. Patient advised that by the time of his next visit he would be entirely well.

Patient reported on December 11th. At this time the paralysis in arm had disappeared. Dynamometer registered 110 right and 100 left. Reflexes normal. The aphonia, however, was still present. The inability to speak above a whisper did not appear to the patient to be of grave consequence, and he ceased treatment.

On December 12, 1900, about one year after the occurrence of the conditions just mentioned, the patient came into my office dragging the right leg and with the right arm hanging. He could not speak above a very low whisper, and it was only by putting



my ear close to his mouth that I could hear what he said. He pronounced the words properly, but seemingly with great effort. He said that, except for a weakness in his voice, he had been perfectly well from the time I had last seen him until two days before. At that time he went to his home, after bowling for about two hours, and was preparing for bed when he felt dizzy. He sat down and almost immediately lost consciousness. This lapse of consciousness lasted for about five (?) minutes, and when he recovered he could not move his arm or leg nor make himself heard when he tried to speak. He suffered from a slight occipital headache and soon fell into a deep sleep which lasted all night. In the morning he felt well, with the exception of the paralysis.

On examination, I found a complete right hemiplegia, including the face. (At the first attack there was no paralysis of the face except what remained of the old Bell's palsy.) The muscles were in a spastic condition and the leg and forearm were contracted. The reflexes were only slightly increased. The vocal cords and larynx were not examined. The entire right side of the face was anæsthetic, but there were no areas of anæsthesia elsewhere.

This time I concluded, if possible, to decide the nature of the paralysis, and gained the patient's consent to induce hypnosis. I made him no promises beyond stating that I believed the treatment would be of benefit to him. During the first three days I



was unable to induce anything but a light sleep, failing to get the patient to respond to any suggested movements. At the fourth trial, however, the sleep was considerably deeper. In this state the conditions remained unchanged. At this time I told him that I was going to apply a very powerful drug to his tongue, after which he could speak distinctly. Taking a swab of cotton, I wet it with warm water and applied it to the tip of the tongue, at the same time asking, 'How do you feel now?' 'Very well, thank you,' the patient replied in a moderately strong voice. I then told him that I was going to awaken him, and that after five minutes he would feel that his tongue was warm and would speak about it, his voice being strong and natural. After awaking him I waited six minutes, and then, as he failed to speak, asked him if everything was all right. He shook his head, but said nothing, and after waiting a moment took up his hat and said that he was going home. His voice was about the same as before the hypnosis.

The same plan was pursued on the following day. About five minutes after I had awakened him he suddenly put his hand up and touched his tongue, at the same time saying, 'Doctor, my tongue burns.' His voice was loud and clear, but he evidently did not notice this fact, because when I said, 'Why, your speech is all right now,' he began to deny it, but was convinced by the continuation of its full volume, and became greatly excited. After the excitement had subsided



I examined him and found that the paralysis of the face had also disappeared (except, of course, the remains of the old Bell's palsy). The patient conversed with me for several minutes, the voice retaining its strength and fulness.

On the next day the voice still continued strong, and has remained so to date (June, 1901). The paralysis of the face had not returned. Patient was again hypnotized and asked if he could walk without dragging his feet. He replied that he could not. 'Yes, you can,' I replied. 'Try it!' He refused to try, and I again ordered him to walk. This time he stepped, but dragged his leg. The command was repeated. He hesitated for a moment and then walked normally. I asked him what was the trouble with his arm, and he replied that it was paralyzed. I told him that it was not, and ordered him to put it out. He tried, but apparently could not; then tried again with greater success. I urged him to put it out straight, and he complied without hesitation. I placed the dynamometer in his hand and commanded him to press it, which he did, registering 100. After making him exercise the arm in various ways, I told him that the paralysis was all gone, and that it would never trouble him after he woke up. Then seating him, I told him to open his eyes. For a few minutes he sat watching me while I wrote, and then, apparently forgetful of the former paralysis, reached out his right hand and took his hat from the table. I then bade



him good-morning, and he left without making any reference to his condition.

The next morning he returned accompanied by his wife, who said that while he had used his arm and leg well he had been stupid and dull since he arrived at home the preceding day, and had failed to take any interest in things which ordinarily appealed to him. Patient appeared still to be partially under hypnotic influence, and I accordingly rehypnotized him, and after repeating the same commands as on the previous day, I told him that he would be wide awake as soon as I touched his eyes and told him to open them. After I had done this, the patient remained seated for a moment, and then jumped up and began walking up and down the room considerably excited. I spoke to him, and he immediately controlled himself and sat down and talked rationally. There was absolutely no paralysis (except, again, the remains of the Bell's palsy), and the voice and speech were perfectly normal.

The patient reported to me from time to time up to May 1, 1901, when he left town. There has been no return of the trouble, but the emotional disturbances still occur, though not so frequently."

Characteristic tremor-tracings under conditions of fatigue taken of this case by Dr. Sidis in the Psychopathological Laboratory are interesting from the standpoint of the relation of neuron energy and fatigue to various states of dissociation, with their underlying



conditions of neuron-disaggregation and neuron degeneration. Along with other experiments and tracings they will be published in a special paper.

Dr. Winter goes on to say : "Several theories have been advanced, the most widely known of which is probably that of the Nancy School. The conceptions of Bernheim do not, however, appear to explain the various conditions with which we come in contact clinically. My own views are based upon the theories advanced by Sidis."<sup>1</sup> We agree on this point, but as the more theoretical aspect of the phenomena under investigation is relegated to another place, we omit Dr. Winter's discussion. What is specially interesting in the case is the close similarity of type with the one presented here. There is a history of patho-psychosis, of a high degree of emotionalism and suggestibility, a tendency towards psychopathic dissociations caused by the death of patient's mother, the presence of a psychic trauma subconsciously experienced in a vivid dream and giving rise to psychomotor disturbances, to loss of kinæsthetic sensations and memories in waking life. From this standpoint we can realize the paramount importance of the account elicited from the patient, that "while asleep he dreamed that he was falling, and awoke to find a considerable loss of power in the right hand and somewhat less marked in the right leg."

The reverse process, however, may happen : In-

<sup>1</sup> *The Medical News*, New York, January 4, 1902.

stead of taking place subconsciously the psychic trauma occurs in waking life, the dissociated system sinks into the obscure, dreamy, subwaking region of the subconscious, and from thence causes psychomotor disturbances in the normal waking state. Such was the course of the process in the present case. From whichever region, however, whether waking or subwaking, the psychopathic process may start, the outcome is the same,—the psychomotor disturbances are due to persistent dissociated subconscious systems.



## CHAPTER III

### DISSOCIATION AND SYNTHESIS

TO return then to our case : what remains to be considered is the further development of these complex series of dissociation, based upon the established genetic point. By reason of the dissociation which has evidently occurred in this case, a certain system became subconscious ; its very intensity served to accentuate and make it dominant.

With a system of such freshness and intensity, the tendency was rather towards extension than even relative fixity. The application of the straps to the foot, a necessary measure, was here another of the causative factors. The resultant prevention of movement produced a deeper lapse of kinæsthetic sensations and memories relative to the particular affected member. The growth and development of the dissociated system progressed, aided by the very failures of attempts at its disintegration. It will be recalled that, three weeks after the accident, patient removed straps and unsuccessfully attempted to walk. That success, which would have disintegrated the previously constructed system, here was wanting. This plainly signified that thus early was the systematization compact and strong. Crutches now were

ordered. During all this time, the sympathy shown by the family, appreciably aided the result. After six months, the patient was taken to several surgeons. Unwisely, also, series of suggestive questions, were offered to the now sensitive mind of the patient. Following one of these consultations there began to develop a rather novel extension of this system. Over all bony surfaces hyperæsthesia soon prevailed. Its source was readily traced to the marked attention directed by the surgeon to these identical points. So marked was this development that one year later it presented itself as one of the prominent aspects of the case. The dependence of the œdema upon the systematization was evident. The œdema did not appreciably develop until six months after accident. At this time, it appeared in a slight degree, as a consequence of the continuous application of straps and suspension of leg. Its appearance was duly noted by consultants, and the dissociated system thereby correspondingly nourished. At least, we know that about this time an increase became apparent, accompanied by pain, later by discoloration. That aberrations of vasomotor control form prominent features of so-called "hysterical" syndromes countless citations would confirm. In the present case, a grasping powerful subconscious system undoubtedly aided in the result. The slight pain, primarily produced by stasis, further increased the assimilating power of the dissociated system.



At the hospital was enacted the last act in the production of an absolutely functionless joint. The application of a plaster cast, the marked elevation of the foot, were the finishing details. Repeated examinations, with and without anæsthesia, availed nothing. The examination, however, confirmed the surgical opinion, that further care in the hospital was useless. The obstinacy of the family, however, delayed the patient's discharge, until six months later. The description of the joint, at this time, has previously been given.

In the study of the case, much was left undone that should have been done. The reluctance of the family towards the use of psychopathic methods prevented a clear analysis of the genesis. The failure to utilize these measures undoubtedly extended the time limits of the subsequent treatment. What was necessary here was the recovery of the normal functions, by synthethising the dissociated systems into the patient's personal consciousness.

The groups which had most probably lapsed in the functioning of the joint were the kinæsthetic sensations and memories. Towards their recovery our efforts were first directed, as it was evident that their function was especially affected and formed the nucleus of the dissociated system.

With both feet before her, the patient was told to close her eyes, then to flex and extend both ankles. The normal only responded. Then she was told to



especially note and intently think how the ankle felt when moved. During this time my position was directly behind patient. When the normal joint was fully flexed, she was suddenly commanded to flex the (left) invalided joint. There was an increased response.

Taking, then, a small dry-cell battery of weak potentiality, an application was made to the left ankle, with insistence upon reproduction of sensation of flexion. At first only the toes moved, but with increased and unremitting insistence there suddenly occurred a more or less complete normal flexion. The patient saw it, but insisted she did not feel it, attributing it to the battery, which at that particular moment *was not* applied. As illustrative of the strength, compactness, and resistance of the system, it need only be added that not for three months did so complete a flexion again occur. The utmost endeavors,—under the limited conditions set by the family were insufficient to reproduce this almost initial result. Had other methods been employed at this time, the termination of the case might have been greatly hastened. That which did date from this period was the gradual restoration of the psychomotor function. A certain degree of flexion was soon induced; later, in three weeks, freer locomotion. The œdema was similarly handled. The removal of the supports, the immediate lowering of the foot coincident with the tepid douche of the spine, of itself non-remedial, but in conjunction with



suggestion speedily removed the œdema. The maintenance of a normal vasomotor control was further conditioned by the recovery of the lost kinæsthetic elements.

In order satisfactorily to accomplish a complete functional restitution, a maintenance of definite conditions is a distinct necessity. Intelligent directions must be given, so that the patient may not undo all that has been done. To the interference with such directions may partially be ascribed the duration of the case for six months, rather than for six weeks. That the recovery or synthesis of dissociated elements has not been completed has been demonstrated by the occurrence of contractures in other joints for short periods of time. Until the synthesis is complete, such recurrences must be foreseen.

Association in this case has not been fully effected. The œdema disappeared. The joint has attained a fair degree of function. The angle of motion is somewhat less than normal. Locomotion is easy, free, though not entirely perfect.

Cases as the one described here are by no means rare. What is specially interesting from the psychopathological standpoint is the common typical traits presented by all of them, namely, kinæsthetic anæsthesia and loss of motor memories. As pointed out by Dr. Sidis in a previous paper, sensori-motor and ideo-motor groups, though normally more persistent, on account of the wealth of associations which they

readily form, are for that very reason also more subject to derangements, to dissociations. *In the process of mental dissolution, motor memories are the first to become affected.*<sup>1</sup>

<sup>1</sup> See pp. 197, 198, 199.



Mental Dissociation  
In  
Psychomotor Epilepsy

*By*

GEORGE M. PARKER

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CHAPTER I

PSYCHOMOTOR MANIFESTATIONS

THE patient is a German, thirty-three years of age ; single. He has followed the seas for many years, in both the navy and the merchant arm of the service, chiefly in the capacity of fireman. Of his family, he can give but little information. His mother was a woman of violent temper ; her rages have been marked by great excess and chronicity ; of his father, he knows no facts of interest or importance. The status and education of both parents were ordinary. The memories of his childhood are rather scanty. His education was no more than that of the routine German common school.

He was fairly interested and advanced in his work.

There is no evidence of neurosis in his early history. Of the diseases of infancy nothing can be obtained. In his childhood he had measles and pertussis, neither of which was followed by any grave sequelæ. His later history, although more varied, is equally uneventful.

His life as a seaman has subjected him to somewhat severe experiences. He has undoubtedly suffered numerous traumas. None of these, however, have invalidated him to any extent. He has never contracted any specific troubles. He is moderate in his drink. The patient has had two severe fevers, from both of which he made a complete recovery. Later he continued his service in the navy. Three years ago, while upon shore duty, he became interested in a young girl who resided at his boarding-house; to her he represented himself as younger than his papers showed. The landlady quietly informed the young lady of this deception; a mutual upbraiding followed, and the girl deserted the patient. The distress of the patient induced him to drink, and for three days nothing but whiskey was taken.

At the expiration of this period his condition was weak and overstrung. On the evening of the third day of this debauch, he entered the front door of the boarding-house, walked through the saloon, past the lunch bar, into the kitchen where he found the landlady. Towards her the patient directed his invective, as being the source of all his evil. As he was talking, suddenly his hands were extended, and he fell.



He awoke in a dark room off the kitchen, and was told that he had been "sick." He could remember nothing beyond having talked to the woman, feeling weak, and falling. There was some stupor following the attack. There was no aura,—no sensations, general or particular,—preceding this attack.

Since this time, he has had numerous attacks at varied intervals. In the beginning, the attacks occurred but once in two or four weeks; the interval gradually declined until, for the last six months previous to treatment, the attacks were manifested three or four times per week; at the latter end, once or twice per day. Preceding all attacks subsequent to the primary, there has been a feeling of pain and distress over the epigastrium; it proceeded upward, and was immediately succeeded by an attack. In these attacks he has usually fallen, lying quietly outstretched, with fingers clutched; sometimes he is restless, his hands fumbling aimlessly. At times he has had general motor disturbances, his arms and legs twitching, frothing at the mouth. Again, occasionally he did not fall, but sat upon a chair, staring fixedly before him. Any degree of excitement sufficed to initiate an attack. Card-playing altercations have invariably produced attacks. There has been complete amnesia succeeding all attacks. His stupor following has also been an unvarying feature. The change in his mental attitude has been very noticeable. He has become progressively

less able to attend to his duties ; constantly forgets ; fails frequently to comprehend remarks or orders given to him. His memory as to the past antedating his attacks has been weakened. He has described himself as being in a state of constant confusion. His depression and so-called stupidity have been very evident. He has secluded himself ; has become unsocial, brooding, irritable. He has evinced but little interest for his friends or occupation. His sleep has become light ; his dreams distressing. Upon awaking, his depression is exceedingly acute. His somatic condition has been lowered ; he is far below weight ; his hands have become tremulous ; his gait is uncertain.



## CHAPTER II

### FIRST ATTACKS AND AURA

WITH this history the patient presented himself on the 14th of October, 1901. A history like this is without any hesitation regarded as epilepsy, and in fact the physician who treated the patient pronounced the case as that of typical epilepsy, with *petit mal* attacks as the predominating "symptoms." Let us see what a closer scrutiny revealed. There were certain features about the case which did not seem to indicate epilepsy. There was the absence of any aura at the initial attack, with later an appearance of a very definite aura at succeeding attacks. Further, the patient now and again could give a stray memory from one of the attacks. This aroused our suspicions. The definiteness of the flash of recovered fragments of memory did not quite resemble the mental condition of the attacks of typical organic epilepsy. Should he now be able to give a full account of experiences during one of his attacks, his condition would still less resemble organic epilepsy. If memory of one attack could be regained, the entire series might well be recoverable. This would definitely prove a functional psychosis, a psychosis *simulating* epilepsy.<sup>1</sup>

<sup>1</sup> See introduction, also pp. 199, 212, 218.

With these possibilities in view, on the 22d of October, one week after initial examination of the patient, systematic work was begun. The patient was deeply hypnotized. During this condition there was a strong insistence upon his recalling all the incidents of his first attack.

The patient was profoundly affected. He spoke at first hesitatingly, with some motor disturbances, his hands twitching. He was very restless until he had begun; after this but little assistance was needed. He said: "I was standing in the kitchen, talking with the landlady, when I felt weak and fell."—"No, I was not dizzy, simply weak." He was asked, "What were you thinking of?" He answered, "Of the girl." He was asked, "Did you fall to make the landlady feel badly?" He answered: "No, I fell because I was weak. Then, when I fell, the missus called to her man, and he came and picked me up." When asked, "How?" he said: "By the shoulders. The woman said, 'William is sick.' I remember it all now. Then they carried me to a little dark room and laid me down, and I asked where I was and why they do that. Then the girl she came in and asked me, 'Billy, what is the matter?' and I told her, 'Nothin', everything is all right.' Then she asked if it is her fault, and I said, 'No,' it has nothing to do with you. Then the missus say to her, 'You go away now,' and the girl goes away crying. Then I wake up and ask all about it, but they tell me nothing, except that I was sick."



Interruptions in the form of questions retarded and troubled him, thereby causing a mild excitement. A short rest was given, during which the patient sank to the former depth of hypnosis, from which he had partially risen during the revival of these memories.

A description of the next attack was entered upon. There was hesitancy at first, soon followed by great ease and facility of reproduction. He said: "I was standing in front of the house, talking with a fellow, in the evening, when I suddenly get dizzy and fall. As I lie on the ground, I remember now seeing him run to the house for the boss, saying, 'Come out, William is sick.' Other people were there. Yes, I remember them now. They were from the same house, and they all looked frightened and asked what was the matter with me. I remember the boss coming out with the men and putting me in a chair, and then I woke up."

He was awakened gradually and slowly. When asked, if he now remembered about his first attack, he assumed an attitude and expression of extreme abstraction. In this condition, with great detail, he related all the incidents previously given. The emerged memories were very vivid. "I see them out of my own head," he said. "I see the people, the street; God! I see it all. It is not like some one telling me; it is like seeing it yourself. I remember it all now."

We have here seen that the memories of the first



two attacks were fully recovered. If now we could trace the genesis of the aura and the content of experiences of the psychomotor attacks, the functional character of the epilepsy could be clearly demonstrated.

During the latter course of the previous conversation, the patient voluntarily stated that he had just recalled that, beginning with his second attack the seizures had been preceded not only by a stomach pain, but also by an immediately succeeding foul taste in his mouth, accompanied by a most fetid odor.

A sense of nausea overlaid all. Particularly, it is to be noted, that this aura appeared at the second attack. This would seem to refer the time of its genesis to that of the initiatory attack ; yet nothing that could be elicited from the patient in his waking state seemed to strengthen the supposition. At the time he fell in the kitchen, dinner was being prepared. The smell was like nothing there. To him the smell resembled that arising from the floor of the fire-room in a steamboat upon which has escaped the surplus oil, remaining there until it has become rancid. Were this, however, the true genesis, then the first attack should have been so conditioned equally with those succeeding. Again, it will be recalled that the patient had been seriously ill with both yellow and malarial fevers, with general delirium. No medicine taken at the time, no odor of the hospital, nor of the fore-castle resembled that of the aura. Moreover, the same objection can be made against this supposition as against



the immediately preceding one,—the aura should have then been present at the first attack. It was evident that nothing further could be gained in the waking state. It remained only to tap the subconscious. Hypnosis was easy, as usual. An immediate search after the origin of the aura followed.

There was first an insistence upon the patient's recollecting the taste and the smell constituting the aura, as to how they came. With but slight hesitation the patient said, "It was a bad taste, like the taste of bad meat." When asked, if it was like the smell of bad meat cooking, he said: "No, it was like the bad meat—the same bad meat that I take from the bar and eat as I go through the kitchen, when I go to talk to the missus, just a moment before I have my attack. I had it in my mouth when I fell. I remember it all now."

It will be seen that thus readily we have traced the genesis of the aura and psychomotor attack to a previous dissociated psychic experience with which subconscious states became accidentally associated through the intense unpleasant affective tone. This experience occurred at the time of his first attack. The appearance of a definite aura only at the second and all succeeding attacks is hence explained.

Upon emerging from hypnosis all previously given details were retained by the patient. This particular memory, initially dissociated, had been recovered. The recovery and reassociation or synthesis of these



dissociated memories, with the method employed for so doing, will be exemplified in details to follow.

On the evening of this same day on which we found the origin of the aura the patient had a light attack while at dinner. He recalled putting his knife and fork upon the table, staring absently in front of him. He forgot all subsequent occurrences until some one grasped his arms, at which he awakened. There was no aura. This attack, however, had been unusually light. Further, after his emergence, he was aware that he had experienced it. Upon the day previous a similar attack had occurred, this time, however, without absolute amnesia. Within a few moments after the occurrence he had recalled all that had happened.

His appearance began to improve. He was brighter and less tardy in responding. He states that he remembers more accurately; his head feels clearer. His sleep is easier and less disturbed. It is to be noted that although he recalls all the reassociated attacks, beyond this he cannot go.

The first attack has been fully verified by the proprietor of the house. The latter has described the patient's falling down, remaining stretched out upon the floor, unable to be roused, later being carried to the dark room, where the girl came in and spoke to the patient, then left; of his remaining in this state for half an hour; of his finally emerging, being somewhat stupefied, and recalling none of the particulars of the attack, everything being a blank to him.



## CHAPTER III

### SUBMERGED EXPERIENCES OF LAPSED PERIODS

UPON the 28th he was again hypnotized. At this time the following lapsed periods emerged: "It was in the back room upstairs; we had a pint of beer and were playing cards, and I had only one glass, when I fell down. Then the woman she says, 'What is the matter with William?' and her husband he say, 'Nothing is the matter. He will be all right. It is just as he had it downstairs.' But she was afraid, and then they carried me to the bed. No, a man came in and helped the other man, and he took me around the waist and laid me on the bed, and I looked around, but I did n't say anything, and then I went to sleep. Yes, I remember it all. There was the same bad taste in my mouth and throat, just like the bad meat; the same bad taste that I had in the bar-room just before the time I fall down first."

After a short interval the next attack was attempted. With greater ease and facility he proceeded:

"It was on the *St. Louis*, in the fire-room. I was drawing fire, when I feel that bad taste in my mouth like rotten meat, and I go for a drink of water, and I fall. A man takes hold of my arm and drags me to

the hall, and they ask, 'What is the matter?' and then they leave me and go away. I saw a trimmer, and he asked them, 'What is the matter?' After that I climbed up the ladder to the deck, and came back without seeing any one, and go to the fire-room, and they ask me how I was and I say 'All right,' and then I wake up."

After his awakening, the patient apparently amplifies the account given during hypnosis. By careful comparison, however, it was found that the amplification did not hold as regards the memories brought out during hypnosis. It was effective only for those memories immediately preceding and following the attack, which had particularly suffered by reason of the dissociation, but which themselves had not been dissociated, or if so, but very slightly. Such states would ordinarily be regarded as epileptic "psychic equivalents." As a matter of fact, the very motor attacks were not of an epileptic nature, but of the character of functional psychosis.

The next revival of lapsed content was attempted on the 30th.

At this time, in hypnosis, the patient said: "It was in Harlem River Park; yes, it was after I came back on the steamboat. I was sitting at the table with a girl—not my old girl,—and then the bad taste come in my mouth, and I get up and say, 'I go to walk in the garden.' Then I walk up and down the garden. No, I see no one I know. They did not look at me



much, but make way for me, and I think about the girl and how I can leave her. Yes, the table was on one side, and I walk all around, and when I wake up I was in the middle of the garden, near the bar. No, I had not drank much beer, only one glass. The girl was not my first girl. I remember it all now." This woman has been seen, and has given a statement supporting in full the patient's account. Being the first attack which she had ever witnessed, it was particularly striking. She described his appearance, the fixity and blankness of his eyes, his sudden departure, his walking up and down the garden. When he came back to her and sat down he did not know that he had left her, could recall nothing as regards it, and was greatly frightened. He had had but one glass of beer.

After awakening from his hypnotic state, there was the usual recapitulation with customary detail and vividness. The patient said: "When I came back to the girl she asked where I had been, and I said, 'Right here,' and then she told me, and I told her not to let me do that again." This last memory emerged in the post-hypnotic state. It is, however, probable that the patient woke up in the garden, and that the time intervening between this awakening and the point at which he found himself beside the girl had been slightly dissociated, the patient still having been in a state of confusion.

A few days later, the patient reported having had two attacks. In the first, he was standing at the lunch

bar, eating a raw-meat sandwich, heavily seasoned. He felt dizzy, but had no bad taste in his mouth, no fetid smell, no nausea. He sat down in a chair and was unconscious for two minutes. It was told him that during that time he attempted to remove his shoes. In the second attack, there was no aura nor any unconsciousness, merely a passing dizziness.

Further recovery of the amnesic content proceeded as follows :

“ It was on the elevated platform, down-town side. I was with a girl. I was sitting beside her on a bench talking about coming to see her again, then I lost my mind. I remember now wanting to go away with her, but she laid her hand on my arm ; I remember I sat at her left side, and she said, ‘ I will go home with you,’ and I said ‘ I was all right,’ and I woke up.” “ The next time I was at Emil’s, a friend of mine ; we were playing cards, and I lost my mind again ; his wife was scared, and she said to carry me to the bed, and he say, ‘ Never mind, he will soon be out.’ I remember how she looked. Yes, I tasted the bad taste of the meat this time and the other.”

After a brief interval, he said : “ It was in the ship-commissioner’s office ; I taste a bad taste, and then I sit on a bench, and then I fall down on the floor. Yes, I see what they do ; the commissioner, he hol-lered to the man, ‘ What is the matter with that man ? come help me.’ And they come, and pick me up and put me on a bench. Then the commissioner, he tell



the other man to get a glass of water, that he knows me; and then the other man he asks about me. Then I sit there still, and they put the discharge in my pocket, and then the commissioner tells the other man to take me to the doctor's. Then he leads me to the doctor, down the stairs, and when I get on the street I wake up."

A period of seven months intervened between these two last attacks. During this time, he had been engaged in the Spanish War.

Dating from the 18th of November, investigation has been pushed more rapidly. Under hypnosis, the following memories emerge:

"Yes, I was walking up and down the bar-room, and talking, when I taste the bad taste in my mouth, and I think I go up stairs and lie down; when I get up to the sixth stair, I get dizzy and fall back, then the barkeeper he run out for help, and Steffer, he come and they took me on a chair near the door; then I sat down and looked at them, and the barkeeper, he said to Steffer, 'I think he break his bones'; and Steffer, he say, "No, for he is in no pain; we take him up to bed and leave him there an hour.' Then they carry me up and lay me down, and the barkeeper, he say, 'It is lucky he not break his neck,' and then I goes to sleep."

The barkeeper verified the details of this attack. He said that the patient fell back with great force, and lay for several moments entirely unconscious,



and that he recalled speaking to another man about it as the patient lay there.

The patient in hypnosis continues : " I was sitting playing cards, and a friend of mine and a boss was sitting there, and then I had a cramp, and dropped the cards, and fell back in the chair, and my friend, he asked the boss, ' What is the matter with William ? ' and the boss, he say, ' Let him be, he get it often, he be all right.' *I tried to get off my shoes, because I had some pain in the small toe,* and then they stopped me on that by holding my arms, and then I wake up. I had the bad taste too." It is to be noted in the next memories that the moment of falling asleep is as clearly demarcated from the termination of the dissociated period as is the moment of awakening.

He said : " I was on the *St. Louis*, coming off the watch, and I go to the wash-room, and get my shirt off, and start to wash, and then I drop down. Beside me stands Ted Horner and an Irishman, named Kennedy. The Irish fellow, he say to the other, ' What is the matter with that fellow ? ' ' Fred,' he say, ' never mind him, he will be all right.' Then they lift me up and take me to the fore-castle and put me to bed. The Irish fellow, he say, ' I go for a doctor,' and Horner, he say, ' Let him be, never mind.' They was sitting around the table, and they ask, ' What is the matter ? ' I said nothing, and soon I went to sleep. I saw Horner standing beside me, as I went to sleep."



The emergence of the dissociated subconscious memories is far easier than at the beginning of the investigation. The recovered subconscious memories have never again lapsed.

In the next hypnosis work was continued as before.

He said: "I was standing in the saloon after my trip, standing in front of the bar, and I have an argument about the war. Then I get excited and fall down in front of the bar. The boss come around and tell the man to leave this man alone, for he knows what is the matter with him. Then he get hold of my shoulders and put me in the chair, and he says to the man, 'Let him sleep here a little bit.' The other men were looking at me, but I said nothing. Then two fellows get hold of my hand and keep them open, for I kept *my hands closed, because I had a sort of pain that kept the fingers together*. As the men stood there looking at me, one said, 'I wonder where he get that sickness from,' and the other say, 'It is a bad thing for that man,' and then soon I wake up."

After a short interval patient continued: "I was sitting at the table in the bar-room, playing cards, and I feel bad with a bad taste, and I tell the man I don't feel good, and that he should wait. The boss he come out and ask me, 'What is the matter, William?' And he come in front of me and say, 'William, what are you looking for?' I was looking through my pockets. I tell him I have a letter this morning, and I was looking for it. And he says,

‘You have got him in your pocket,’ and I say, ‘No, I can’t find him,’ and he get hold of my hands and keep them away from my pockets, and then I remember some one else saying that when he goes up stairs he had it in his hand. The boss told him to ‘Watch him, that he don’t fall out of the chair, and then soon he wake up.’”

We have in these subconscious memories an example of a consistent psychological explanation of those peculiar movements so often described as occurring in epilepsies. This closing of hand, clutching of fingers, fumbling through pockets, all of which actions would be usually regarded as “purposeless,” movements characteristic of epileptic seizures, are really the psychomotor manifestations of lapsed dissociated memories.

The patient was again seen early in December. He reported having had four attacks, upon the 22d, 25th, 26th, and 27th of November. All of these attacks were readily recovered in hypnosis. The attack upon the 22d had occurred on a street car. The lapse was very brief. On the 25th, it had occurred in a saloon. The subsequent amnesia was very slight, as he recalled nearly all the details. Those upon the 26th and 27th were mere attacks of dizziness, with no loss of consciousness. No aura was present. These attacks of dizziness were found to be very persistent.

The revival of the subconscious memories is con-



tinued: "I was on board the *Paris*. I go on watch and start to clear up the fire. I had out half the fire, when I dropped down in the corner. The trimmer he called out for a fireman for the centre boiler. He said, 'Come here, quick, and look what is the matter with William,' and he say, 'Take hold of his arm and pull him this side.' They get hold of both arms and pull me back in the corner. The trimmer he asks the fireman, 'Shall I send for the engineer?' He say, 'No, leave him here alone. Go ahead and get the steam up. He will be all right in a couple of minutes.' The trimmer he started to clear the fire, and the fireman came in with a cup of water and asked, if I wanted a drink. Then I waked up after that, as he stand in front of me with the water."

"It was in the bar-room, along with Henry Barr, after I come home from the ship. Then I get paid off and sit playing cards with two friends, and when we were playing a half an hour I feel bad and put my head on the table. One fellow, named Fred, he called the boss and say, 'Henry, come here quick, William get it again,' and then he get hold of my two hands and *pull the fingers straight*. *I thought I had the cards in my hand*. The boss he said, 'Don't ask William to play cards again, for every time he plays he gets that sickness.' Then one fellow say, 'We did ask him if he feel all right, and he say "Yes," so we play.' Then I wake up."

There is to be noted here the clutching of the



hands as a motor phenomenon analogous to the phenomena previously mentioned. The patient's appearance was greatly improved, the apathy, depression, and tendency towards a state of dejection diminished in intensity. This state of depression is found to be largely dependent on the particular state of mental dissociation. Not only is there a dim knowledge of the occurrence of the attacks, but there is as well a faint apprehension of the submerged experiences by the waking consciousness. The gap is dimly felt. At times the subconscious memories almost emerge. The patient has frequently said that just before falling asleep, it seems as if he could almost remember. When he, however, attempted this, all was dark. Moreover, his depression was most acute upon awakening; his thoughts were very confused. Especially has this been the case after a night of singularly distressing dreams. These dreams might well contain much of the lost memories. The hiatus upon awaking was deep; the recall was faulty. The change in these factors was being effected by reason of the wider synthesis.

On the 5th of December, work was continued along the same line.

He said: "I was in front of the house, standing and speaking to a man, when I feel bad and drop down there. He opened the door and called, 'Come out here, somebody, William is sick.' A fellow come out and get hold of my arms and lift me up



and put me on a chair at the table. And he say to the boss: 'That fellow is getting worse all the time. That is the second time he get them here from the trip.' Then two were standing in front of me looking at me, and they tell me that I had best go upstairs; the boss, he tell them, 'Leave that man alone, let him come to himself'; and then I get off the chair and walk up and down, and then I wake up when I was walking."

After an interval, the next revival of attacks was entered upon.

He said: "I was on board the *Paris*, and we left Southampton for New York. The first watch, I come up and go to the wash-house and start to wash, and fall down there; the fellow he get hold of my arm and he try to lift me up, and he could n't get me up, and he was standing alongside of me watching me. I lay there about a minute, and I get up and go out, and a fellow came after me, as I was going down to the sailors' room. He say, 'Come this way, this is your room'; and he get hold of my arm and pull me to the other door, and get in front of me and get me down the stairs, and put me in the bottom bunk. The other men, they ask him what is the matter with me, and he say: 'He is all right; let him lay there; in a minute he will be all right.' I wake up soon."

The next attack recalled was as follows: "I come home from work in the factory at Staten Island; I have the bad taste in my mouth, and I drop down

in front of the house ; I have been laying there one minute, and a man come out and look at me, and he called his wife, saying : ' Come out here and see what ails this man ; he lays here in front of the house.' His wife, she say, ' What can that be ?' Then the man said to her, ' Come out and get hold of him, and we will get him in the house.' And they pull me in the house and leave me on the floor, and his wife say, ' Go get something to put under his head.' I lay there a minute, and then I wake up and walk out."



## CHAPTER IV

### LAPSED PERIODS AND HYPNOIDAL STATES

AT this time, one feature began to present itself very forcibly : the state in which the patient awakened from hypnosis became more and more one of confusion. He seemed not to be thoroughly aroused for several moments. His intelligence was confused. The emerged memories were completely dominant ; his expression being that of one oblivious to all things about him. It was a question as to what degree these memories were being really reassociated. There remained the additional question as to whether the frequent and deep dissociations produced in hypnosis were not of themselves conditioning further dissociations. For the past month, there usually occurred an attack upon the same day that he had been hypnotized. This was exemplified upon the occasion of his last hypnosis. On the afternoon of this day, when emerging from the theatre, he had fallen in the street. His attack was short, but apparently accompanied by entire loss of consciousness. The content of the attack was later fully recovered. There was no aura.

On the following day, he had a lapse at the clinic, the entire sequence of which was observed. A moment after

he had left my room with a prescription, the orderly found him wandering about in the chemical laboratory and asked the patient what he wanted. The patient replied in German, that it was his own business. The orderly recognized his condition, and brought him to me. He came into the room slowly with a confused expression of surprise and inquiry. He appeared not to recognize me, nor a friend of his at that time in the room. I made him sit down and began to question him. He replied in German, which before he had never spoken to me. When asked where he was, he said he knew, but that it did not make any difference. The sensations were hurriedly tested. No apparent change was discoverable. No memories of previous subconscious states could be elicited. After a moment, his head sank to his chest and his eyes closed. He remained thus for but a short time. He then awakened. He remembered only that after leaving the room he had been severely reprimanded by the drug clerk. Further than this he knew nothing. He was now hypnotized. The content could only be partially recovered at this time.

When next seen, upon the 17th of December, he reported as having had frequent attacks for one week, dating from the 7th. No aura was present in any of these attacks, and there was but once slight dizziness. His appearance was exceedingly poor. His eyes and nose were freely discharging; his skin covered with furuncles; he appeared stupid.



When accused of taking medicines other than those ordered, he confessed that he had bought some patent cure for epilepsy, which he had been taking for a few weeks. The only medication previously taken had been morning doses of sodium phosphate. It was clear that this patent medicine had produced a state possibly favoring a more ready dissociation. It was equally certain, however, that a method, other than that of hypnotization, must be employed in establishing the reassociation. From this time on, the hypnoidal method was employed.

Dr. Sidis has originated and used this particular means in many different cases. The psychological implications will be found fully established in his work, *The Psychology of Suggestion*. This method consists in producing a state of abstraction, of mental composure and relaxation. In this state, termed the hypnoidal, "the upper consciousness takes direct cognizance of these states or memories in the moment of their appearance." They are immediately reassociated. There is no deep dissociation, such as is produced during hypnotization. Its effect is radically different as will later be demonstrated. This method was highly efficient in the present case, and the following memories were readily recovered.

He said: "It was in a house where I lived. I was sitting at the table with Horner and Barr, playing cards for two hours, and I just had to deal cards, and I fell in my chair. Horner, he told Barr, 'Get hold.



Don't let him drop down.' Barr, he get hold of my arms and keep me in the chair. I was sitting there for two minutes. They were looking at me. The boss, he say : ' Don't ask him any more to play cards. It don't do him any good.' Then I wake up. After that I try to deal cards, and the boss, he say, ' Just wait a minute, William,' and then I was weak, but in my right mind, and I say ' I have to deal these cards,' and the boss, he say, ' No, William, you don't play no more cards.' " Following this, he continued : " The next time I was in my own room, and I just take my clothes off and I drop down on the floor and I hit my head against the trunk. I was laying there for ten minutes, and I get up on my feet, get a glass and put in it some water and drink it, and sit down on the bed, and then I wake up while I was sitting on the bed, and I have a pain in my head. I look in the glass and see I am skinned, and I wonder whether I have it in my own room, and I go down then and look at the clock, and it was half an hour. I was up in my own room. I remember lying on the floor. My eyes were open, and I was thinking about that letter from the girl that I got in the afternoon, and in it she asked me why I do not write. I had just read the letter in the room again when I fell down. As I sit on the bed, I put my head in my hand and I think about the girl. It was in my mind to give her up. I sit there a few minutes, and then I get up and get a drink of water and sit on the trunk. I was thinking



how I got that in my head. This was all after I wake up."

There is to be noted here the markedly increased wealth of detail. There follows the third revival. He said: "I was walking in the saloon up and down. I feel a headache all the morning. Then I feel the bad taste coming up. Then I try to get in the closet before any one see me, but I could n't, and I drop down, and the lunchman, he come and say to Theodore, 'Come here, William is down.' Then they get me on my feet, and I start to take off my coat and vest and my shoes, but the lunchman stop me. I had to go out that day, and an hour before I wished to go up and get ready. I think then that I was in my own room. Then two young friends say to the boss, 'We take him to his room.' When I was up two steps I wake up, and as I wake up I say: 'What is the matter with you? Why don't you leave me alone?'"

When this hypnoidization ceased, there was no confusion in the patient's demeanor, action, or utterance. He said to me: "I feel now very different from the other times. Then when I open my eyes I do not know where I am; I feel lost, and many times that same day I feel lost. Now I feel just the same as ever. When I lay down and am remembering, I feel just as awake as I do now. I know everything. I know what is going on. Before, I knew nothing at all."

The patient was seen two days later. He reported



that for the first time certain attacks had been recalled, other than those reassociated in hypnosis. He cannot develop these fully, some of the material being missing. These memories emerged as he lay upon his bed, after reading a paper, when in a state of abstraction. These additional revivals were due to no post-hypnotic suggestion. They were entirely derivative from the hypnoidal states.

Under the same methods of hypnoidization work was continued.

"I was sitting on a chair in the saloon, close to the door. I feel heavy in my head, and I drop from the chair on to the floor, sideways. A fellow stood alongside of me, and he called the boss: 'Come here. Give me a hand. Lift William up.' They put me back on the chair, six more men standing around me. The boss, he says: 'It is getting worser with William all the time. He must go and see a doctor.' Then the other fellow says, 'When he wakes up he must go to the dispensary.' The boss says, 'Bellevue is good.' Soon after this I wake up and the boss is standing in front of me, and he asked whether I knew I had had an attack, and I say, 'No, I did not.' " The next revival followed rapidly.

He said: "It was in the afternoon of the same day, about four o'clock. I had an argument with a man who worked on the coal at the dock. I was looking at him. I fall down in front of the lunch bar. The lunchman put me on the chair that stands in front of



the bar. The fellow that had the argument, and the lunchman said to him: 'You stay away. What for you make trouble with him?' And I was sitting there another minute, and the lunchman in front of me, and more people, but they keep them back, and then I woke up. After I woke up I was a little bit tired."

In the succeeding attack the increasing detail is to be noted. He said: "It was in Battery Park. I was walking along the water side. A fellow was with me. I say, 'I feel bad,' and he say, 'Come along with me,' and I drop down right away, and some fellow come to the bench and ask what is the matter, and my friend, he say, 'It is nothing'; then one of the fellows ask, if he had it before, and my friend say, 'Yes.' Then the policeman come and ask if he is drunk, and my friend say, 'No, he has had no drinks.' The policeman asks where he live, and my friend he gave my address. Then the policeman drive the others back and say, 'Give him air,' and he say to my friend, 'Come, help to put him on the bench.' The police, he ask, 'Do you think he get better?' My friend say, 'Yes, in two or three minutes.' Then I begin to look through my pockets for some cigars I had, and then I wake up. After I wake up, the policeman tell me I had better go home."

Attention should be directed in the following attack to the character of the motor phenomena present as he lay upon the floor.



He said: "I was standing in front of the lunch bar, and I feel a bad taste in my mouth, and I try to get in the closet, but I could not, and I fall in front of the lunch bar. There was a couple of people there, and they get hold of me and lift me up, and the lunchman say, 'Leave him lay there.' One of the fellows say, 'I never see that in William before.' The lunchman say, 'He get it very often now.' *And then I start to hit around with my arms and legs. I want to get room around me. I kick with my feet.* Some white stuff come out of my mouth, and the lunchman wipe it off with the towel, and then they put me on my feet and I walk up and down for a few minutes. I walk to the front door and then back, and then look in the closet. It was in my mind that I want to go to my own room, and I go to the door that goes up, and two fellows get hold of me, and the lunchman say, 'Don't let him go'; and then I go to the lunch bar and get a piece of bread and smoked fish, and, eat and start to walk again. Then the boss's brother come out and walk alongside of me. The boss say: 'Watch him good. Don't let him drop down.' Then I wake up. I felt very tired after I awake."

The lunchman, a person of more than average intelligence and experience, spoke of this attack: "A very bad one, where his arms and legs worked and he frothed at the mouth." This was a very fair description of the so-called *grand mal*. It was evidently



marked and was clearly of a purely functional psychic nature.

The hypnoidal states were continued upon the next day. Their content follows :

He says : " I was sitting in a chair and I fall back, and a brother of the boss, he say, ' What is the matter with him ? ' and he get alongside of me and hold me, and I come to myself. I was listening as I lay back to some one talking about the boss. Four men were in the saloon. They said nothing, but looked at me. The next time, I was standing with a friend of mine at the bar. He asked what I want. I say, ' Nothing, ' and then he take a drink, and then I have the bad feeling and he carry me back to the chair, and he say to the boss : ' What is the matter with William ? I know him for a long time, and I never see this before. ' The boss, he say, ' He get it a good many times. ' Then the man say : ' It is just the thing I had in the German Navy. I had mine from the drink. ' Then I wanted to stand up from the chair, and they come and want to keep me in the chair, and I sat there another moment, and then I wake up. While I was sitting in the chair, I was looking at them and thinking about the man. I think to myself, he is a great drinker, only he keep himself good and well all the time. "

We pass rapidly to the succeeding states.

He said : " I was sitting in the chair, with the boss. Two men were playing pinochle. I watched them

play, and as I watched them I feel bad in my head and lean back in my chair. The bartender he say: 'Look at William. He got it again.' The boss, he stand in front of me and *pull my fingers straight. I had some money in my hand, and I want to keep hold of it.* Then the boss, he tell his brother not to let me go on the *St. Paul*,—to keep me here. Then I fall asleep and sleep a few minutes, and open my eyes, and I did not know I had it."

"In the next, I was lying in the bed and sleeping, and then I get up and walk up and down the hallway. The boss's brother come out and say, 'What is the matter with you, William?' I gave him no answer, for we had trouble the night before. Then he get hold of my arms and say, 'Go to bed, William,' and push me in the room and lay me on the bed, and I lay there another minute, and then I wake up and see I have no blanket on me. I think I have an attack. I walked in the hall, because I was hot and sweaty. I was thinking that I told the boss to give me a front room."



## CHAPTER V

### HYPNOIDAL STATES AND SYNTHESIS

AFTER these hypnoidal states were discontinued for the day, the patient proceeded to enlarge on certain attacks which came later in the series and had not been revived in these states. Then, passing entirely over the attacks which had been previously reassociated, he arrived at the last attacks in the series, namely, those which had occurred at the hospital on the 7th of December and a few days following.

He recalled the hospital attack perfectly—described with great accuracy where he had been, whom and what he had seen, what had been said to him, and what had been his replies. These memories had not been revived with any degree of success under hypnosis. At this time, however, they were perfectly recalled. No new causative factor other than the hypnoidal states had been introduced. It was the hypnoidal states alone which had initiated the greater degree of synthesis.

In the hypnoidal states which now followed, much of the content had been reassociated in the interval. The revival continued as follows:

He said: "I was on the *St. Paul*, when we were

coming home from England, and I was on watch, and I had the bad feeling and fall down. The trimmer puts me on the side and runs to the engine room and gets the engineer. He say to the engineer, 'What is the matter with the man?' The engineer say, 'Get hold of his feet and carry him to the passageway, where there is more breeze.' Then two fellows come and look at me, and the engineer ask, if you ever see that before. One of the fellows say: 'Yes, I was on the *Paris* with him. It won't take long.' And then one gets water and lifts my head up, and I wake up."

The next: "I sit in the bar-room, and some one say, 'Come out, some one wants to see you.' I go out, and Lizzie was there, and we were standing. She say: 'You look pale in the face. You feel bad.' I say: 'No, I feel all right. If you go home, I will walk with you.' She say: 'No, you stay here. You look so bad.' Then I fall down against the steps. I lay there a moment, and Lizzie, she say, 'William, what is the matter?' She get hold of me and try to get me on the steps. Then I get up on my feet, and they tell me to go home. Then I say: 'I am all right. I am not sick.' Then they brought me before the house, and they call some one out to bring William upstairs. When I came in my own room, I wake up."

He continued: "The next time, I was walking up and down in the saloon, when I feel bad in the throat, and I sit down in the chair. The lunchman, he say,



‘What is the matter?’ Then the longshoreman, he come, and the lunchman, he tell him, ‘Keep away.’ Then one of the longshoremen say, ‘I never see a man get it so often as William get it.’ One man say to another, ‘Is it cramps, or what is it?’ The lunchman say: ‘Just keep away. That is no cramps. He only gets it when he gets excited. You never get cramps when you get excited.’ They stand in front of me still. Then I wake up and go to the front door, and come back, and the lunchman ask, if I knew I had it, and I say: ‘No. Was it hard?’ ”

It is to be noted that the aura is present throughout all the attacks.

He continued: “The next time, I feel the bad taste and pain. I sit down in the chair in the bar-room. I was only a little bit dizzy. I see everything that go on. After a few minutes, I get up on my feet.”

“The next time, I was coming down-stairs, and I go to the lunchman and I sit down quick in the chair and he say, ‘William, you want any coffee?’ and I say: ‘No, I just want to sit here. I think I get my trouble.’ I sit there a moment, and then all is right. I do not lose my senses.”

These light attacks were never before recalled in such detail. Not only have the attacks become reassociated, but much of the intervening psychic material which, while not dissociated, was at least feebly associated, has become synthetized. It will be remembered that his condition previous to coming to the



hospital had been very confused. It will further be recalled that the inception of a continuous amnesia seemed apparent during this period. This lapsed content has now been accurately reassociated. He has given the date of his visit to the clinic, to the Marine Hospital, and to the Hudson Street Hospital. A slight mistake made at this time, purposely uncorrected by myself, involving the date of his first visit to me, was corrected two days later. He said that now it was possible for him to think of the whole series as they had occurred. He fully appreciated that only for the past ten days has he been able to grasp them so clearly. This is the exact period of the use of the hypnoidal method.

He sleeps easily and quietly. There are no further dreams. The remarkable change in his behavior has been noted by all his acquaintances,—by men who are not over-ready to notice fine distinctions. There have been no further attacks of any nature. He feels that there will be none. The last of the memories are now recovered :

He said : “ I was on the *Philadelphia*, on my watch, and I was changing my clothes, and I dropped down. My friend come and look at me and put me on the bench. He come and stand and look at me, and I was lying on the bunk. Then I look at my clothes, and then get up and go through them. I was looking for some tobacco. The other fireman put me back in the bunk, and I start and sleep there, and I sleep



only a few minutes, and when I wake up all the fellows have gone."

The next time: "Lizzie was coming down, and I was walking with her, when I had the bad taste in my throat and I fall down, and the people stop and look at me. She say to them, 'It will be all right.' Then some man gave her a hand to help me up, and they start to clean my clothes, and I begin to walk up and down. Then she said, 'Do you feel better?' I give no answer, because I have some pain, and I would not let her know that there was any. Then she say, 'Come on, we go home.' Then, on the corner of Cortlandt Street, I come to myself. I did not know I had it."

"The next time, I was in the fire-room and leaning against the ladder, and I have the bad taste and fall down. The fireman he come and lift me up and wet my face. The water-tender he come and say, 'Well, he get it again.' Then I get up, and sit down and hold my head in my hands. The water-tender, he say, 'He will be all right soon. We don't need the other man.' Then I wake up."

"The next time, I was on the *St. Paul*. I feel bad in my stomach and fall down quick. The fireman, who was working, come and look at me. He say, 'What is the matter?' Then he call the engineer, and the engineer ask if he had it before. And the fellow say: 'Yes, he had it twice before. I saw him.' The coal-passer, he take my fire. I was sleepy



for ten minutes. Then the engineer come and ask me, 'How you feel now?' and I wake up."

"The next time, I was sitting in the saloon on a chair, when I dropped down. Two longshoremen picked me up. I started to take my coat and shoes off. They keep hold of my hands and stop it. The boss, he was standing in front of me, and he say, 'When he wake up I will tell him to go and get some medicine.' Then I put my shoes and coat on and sit up for a minute. *I take my shoes and coat off, because I think I am in my own room.* When I put them on again, I do it because I see I am in the saloon."

The hypnoidal states were continued. He said: "I was in the saloon when I feel bad. I go to the closet, that no one should see me. I drop down and lay there a minute, and the lunchman come and pick me up. He say, 'What do you do here, William?' I say, 'Let me alone.' Then I drink a glass of water. Then he say, 'Sit on a chair at the first table.' Soon I wake up and feel tired."

"The next time, I was walking up and down in the saloon. I fall down by the lunch bar. The lunchman come from behind and pick me up and put me on the chair. Some people come and look at me. The lunchman stand in front and keep both hands on my shoulders. When he take his hands from my shoulders, then I take off my coat. When I get my shoes off, the lunchman he say, 'William, you not upstairs, but down here.' Then I put on my coat again.



Then they both say, 'I wonder what he thinks when he starts to put his coat off.' Then they put some water on my face and I wake up."

A few lighter attacks occurring after this were re-associated by the patient himself without the use of the hypnoidal method.

The patient has had no attacks. His condition, mental and physical, is widely different from that displayed at the time, when first seen. He is well and has resumed his former occupation.

A review of the case shows a genesis of the aura and recovery of experiences of the psychomotor attacks, experiences belonging to dissociated mental states. It shows that these experiences, although dissociated, were recoverable. It clearly shows that what is often regarded as epilepsy does not really belong there,—that many a "typical" epilepsy may on a closer study turn out to be a *functional psychosis*. This is especially true of the so-called "psychic epilepsies," which, as the psychopathological researches of our laboratory on many other different cases incontestably demonstrate, are all pure functional psychoses, subconscious dissociated states, having the tendency to recur, periodically or not, with all the energy characteristic of a fully dissociated system, reproducing the original psychomotor conditions during the accident, and often closely mimicking the psychomotor manifestations of epilepsy.<sup>1</sup> It further demonstrates the

<sup>1</sup> See Introduction, also pp. 199, 212.

possibility in this case of recovering all the dissociated memories of the attacks. But, more than this, it definitely points out the great importance of bringing all these dissociated memories out of the depths of the subconscious and reassociating them in the synthesis of the upper personality, restoring all the lost psychic material to the contracted active personal consciousness, and thus bringing about a state of former mental activity which will maintain the formed synthesis.<sup>1</sup>

<sup>1</sup> See p. 218.





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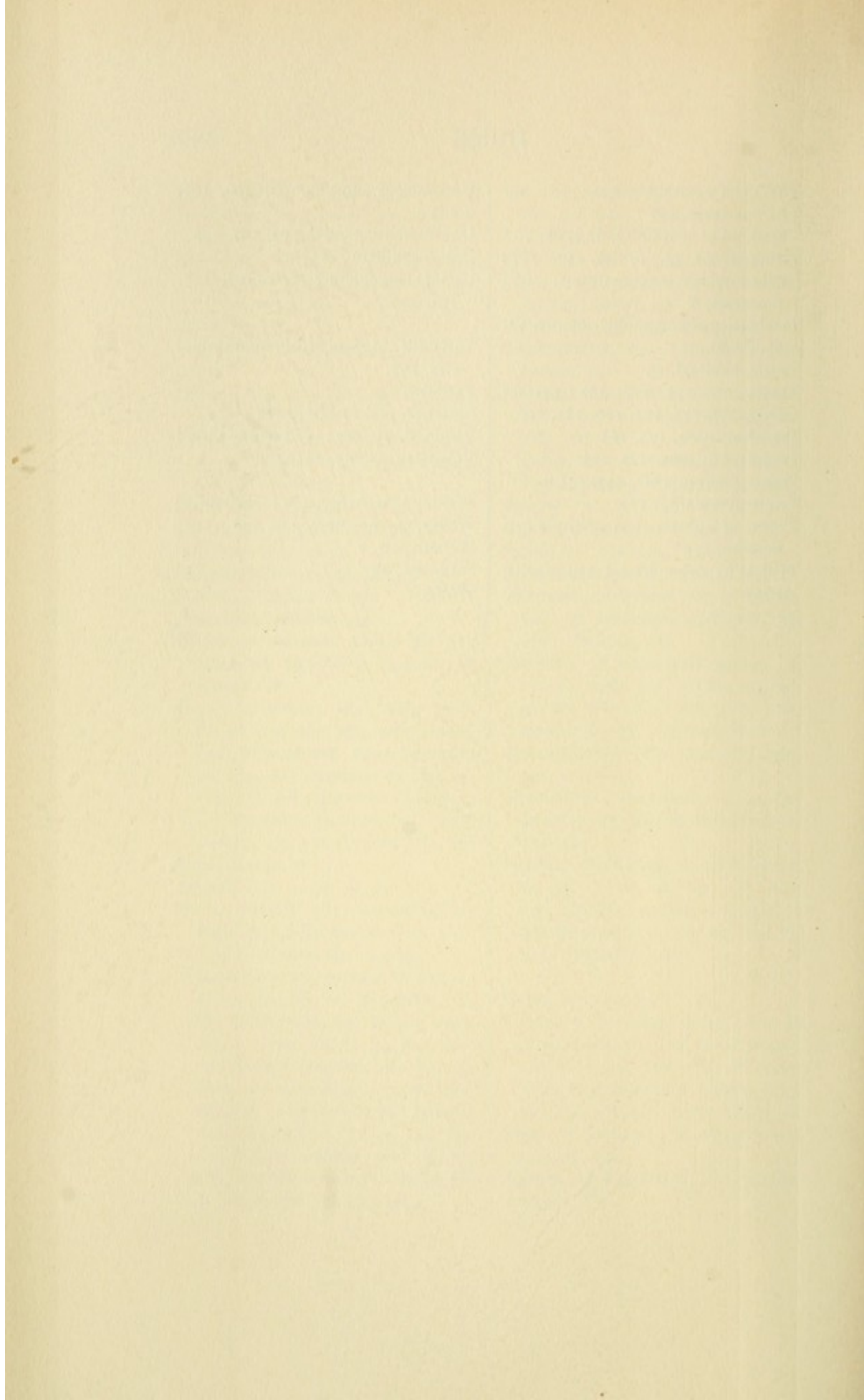


PLATE I



## PLATE I

Pneumographic tracings in the normal waking state. The first tracing is under perfectly normal conditions without any stimulations. The second tracing shows the same conditions with the only difference that the eyes were closed instead of being open. The rest of the tracings show the changes of the normal respirations under the influence of different stimuli, such as pleasant and unpleasant odors and pricking sensations.

PLATE I.

D. — F. — Sept. 3 '97



Eyes closed



s open Normal



ter pain & pleasure  
open R.R.



norm.

Oil  
Eye

Eyes open



normal

p  
t

Eyes open





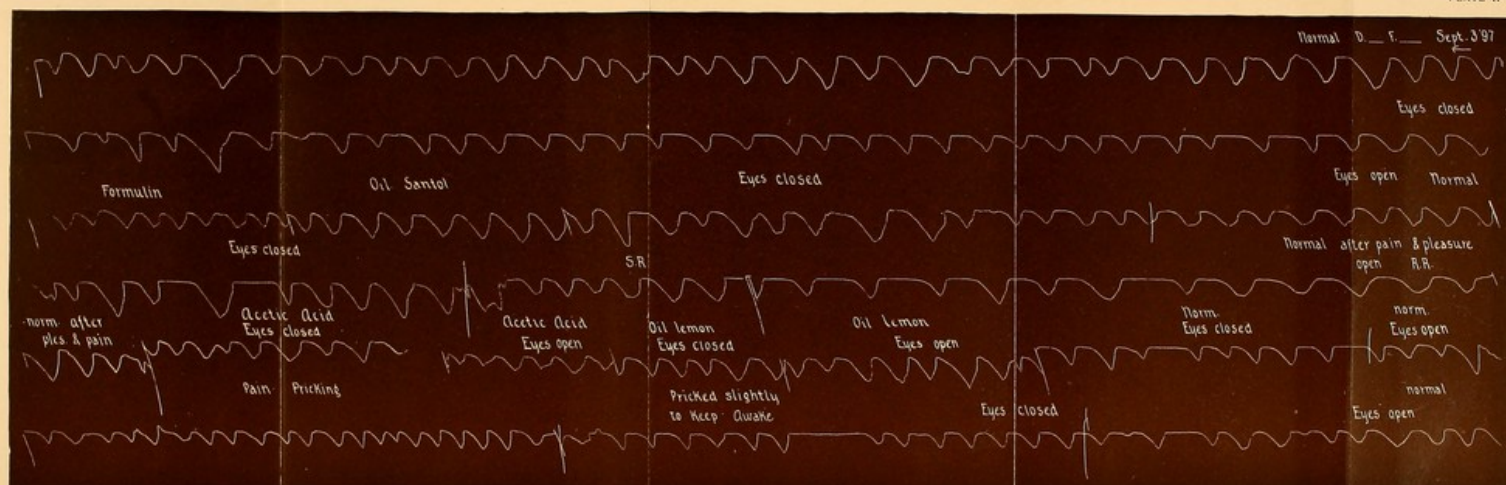


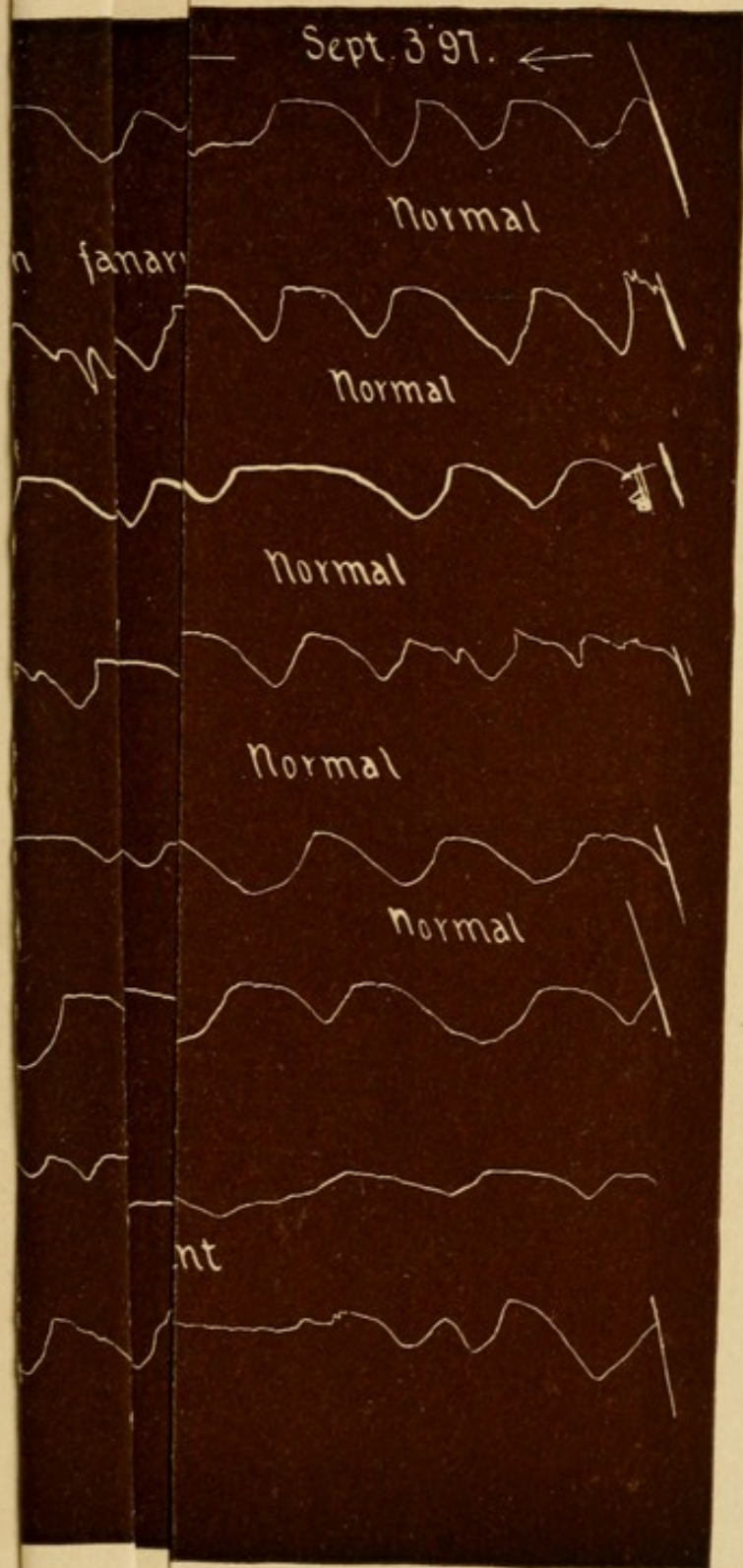
PLATE II



## PLATE II

Tracing taken in the normal waking state and also under the influence of more complicated sensory stimuli. It shows the conditions of the patient under different mental states. The first part of the curve in the first tracing is perfectly normal; the second part of the first tracing shows the influence of the galvanic current; the second tracing, under the influence of different painful stimuli as the faradic current and pricking. The third tracing shows the influence of intense sound stimuli. The rest of the tracings show the conditions of the patient in different mental states under the influence of more complicated stimulations, such, for instance, as reading to her passages from books, making her do mental calculations, singing to her, or telling her funny stories.

PLATE II.





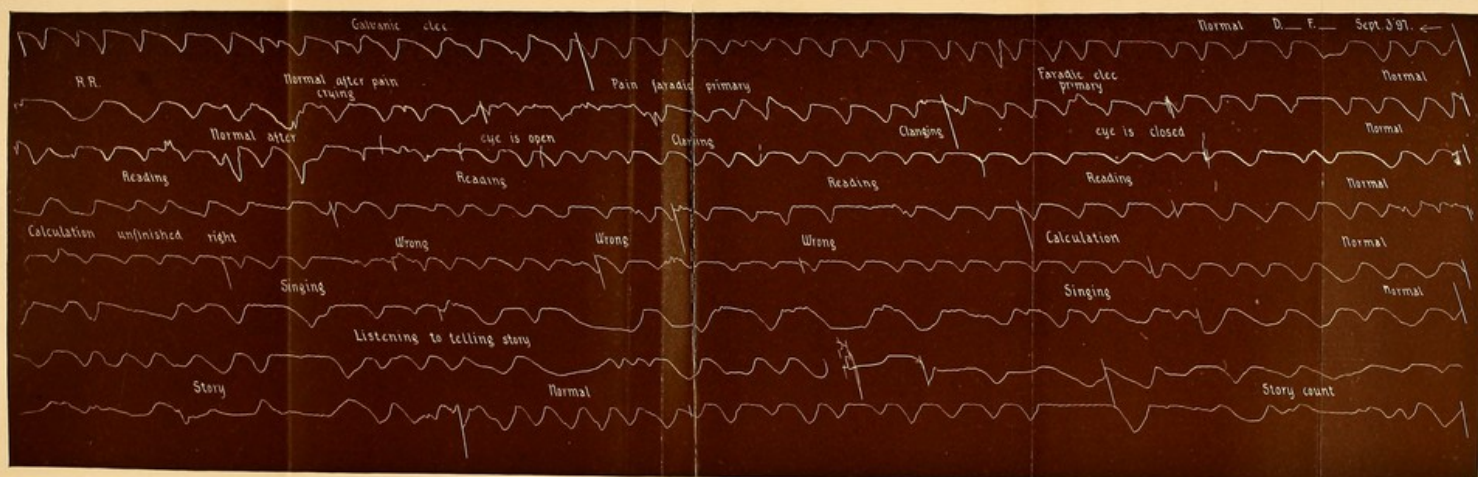


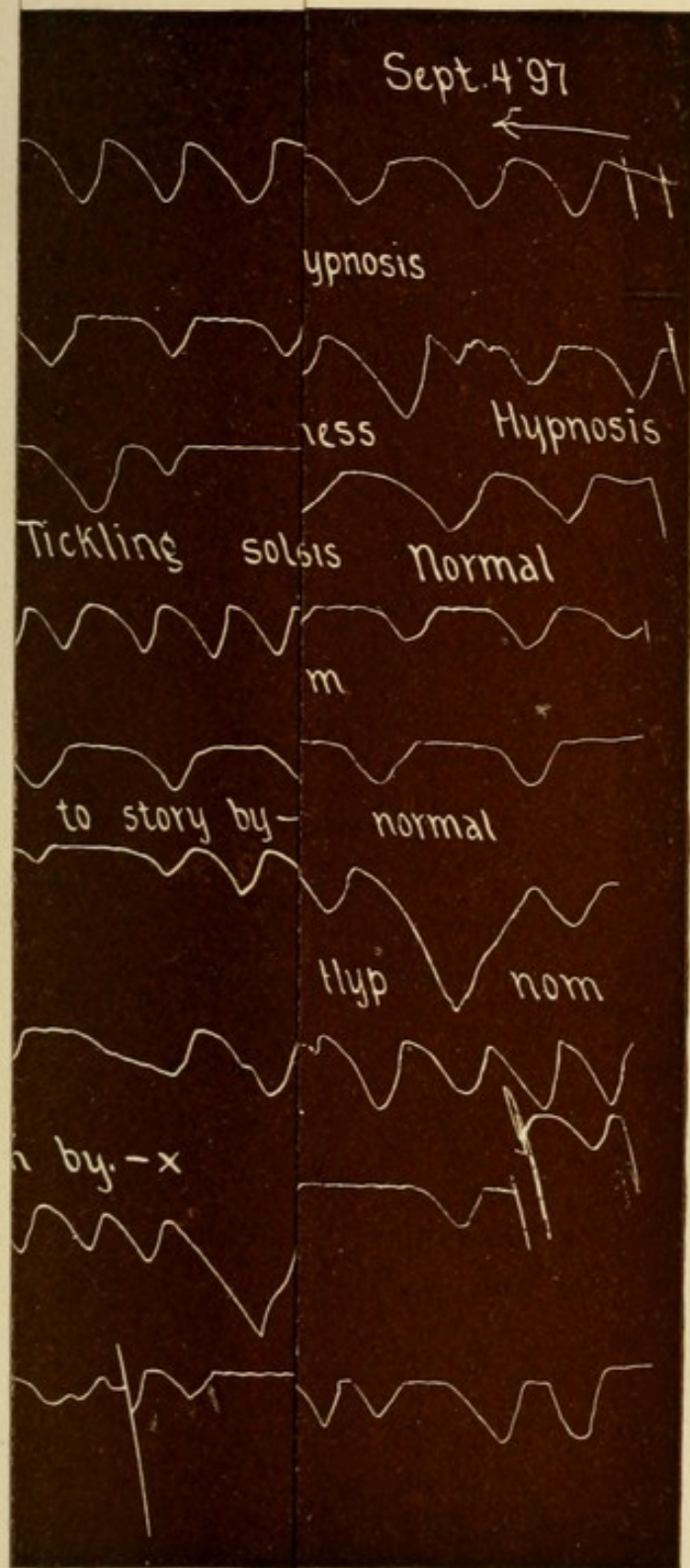
PLATE III



### PLATE III

The first tracing is in the normal state gradually passing into the hypnotic state. The rest of the tracings were taken when the patient was in the hypnotic state, stimulations being supplied either by people who were *en rapport* with her (designated by  $+x$ ) or by people who did not stand *en rapport* with her (designated by  $-x$ ). The changes due to the stimulations by  $-x$  are perfectly distinct. The different reactions here are far more emphasized, showing that the patient in the hypnotic state was more sensitive to stimulations given by either  $+x$  or  $-x$  than she was to similar stimulations in the normal waking state.

PLATE III.





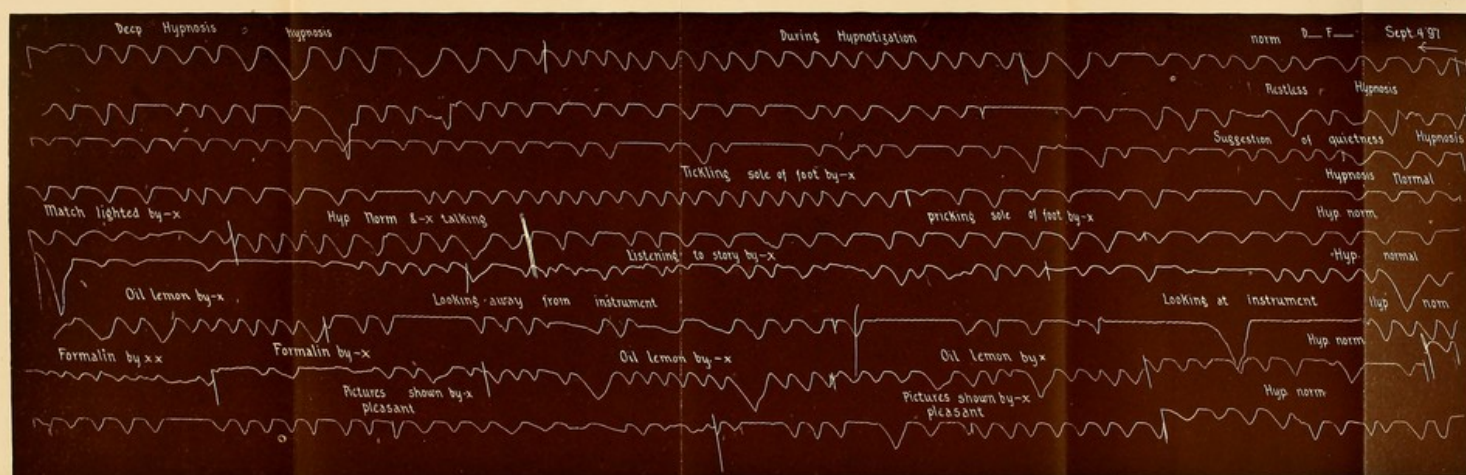


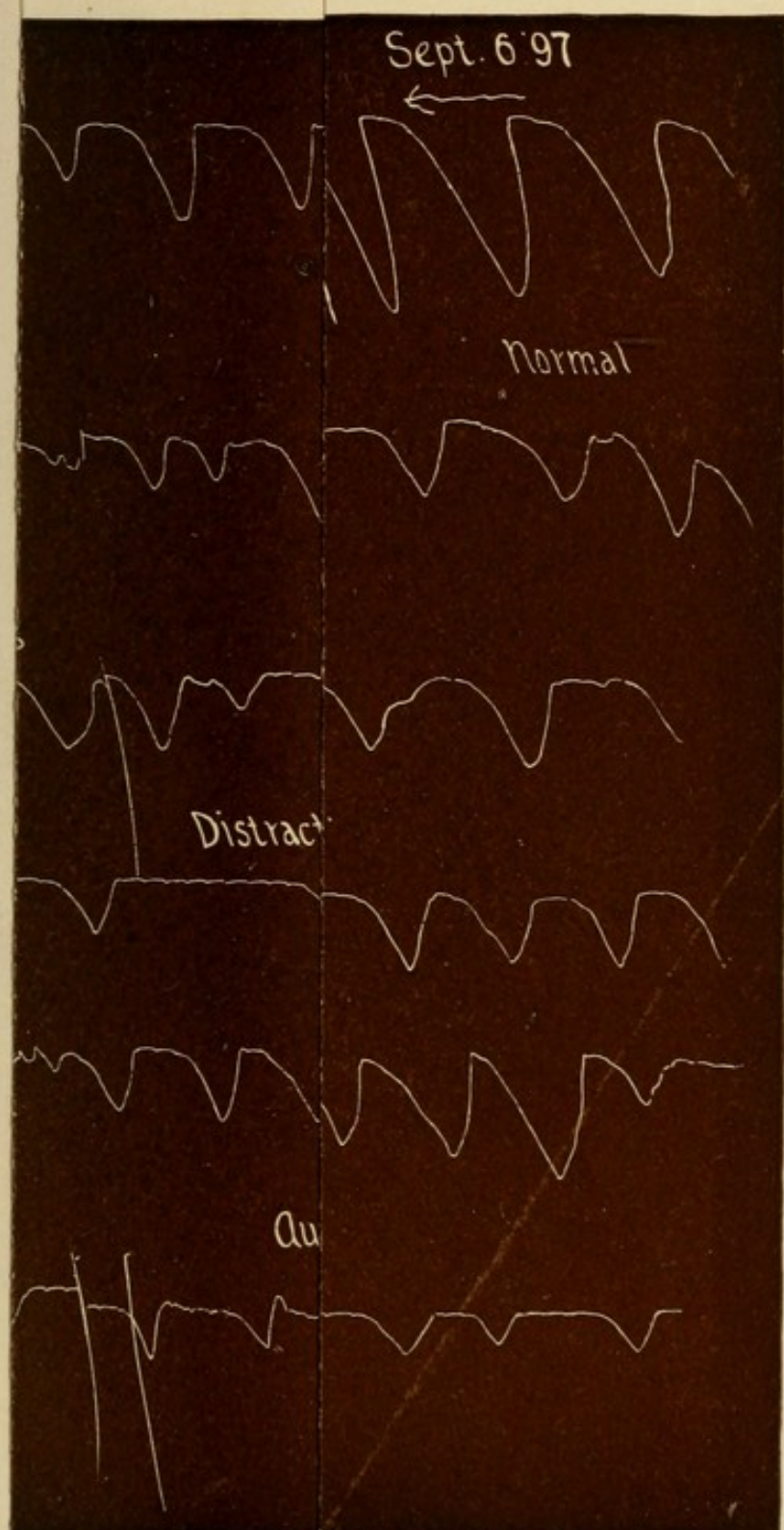
PLATE IV



## PLATE IV

The first tracing shows the curve under normal conditions, also the first part of the second tracing in which the patient gradually passes through the process of hypnotization into deep hypnosis. The transition state from the normal to hypnosis is marked, as it is also in the first tracing of Plate III. The awakening of the patient by counting is brought out well in the tracing, showing an abrupt change. Experiments by the method of distraction in the waking state: the patient absorbed in reading, while a sound stimulus was given a little later by (+  $x$ ). The effects of this stimulus, which the patient did not consciously perceive, but which she nevertheless perceived subconsciously and to which she accordingly reacted, are indicated at the end of the second tracing. The rest of the tracings, 3, 4, 5, and 6, are under similar conditions, the patient being first put in the hypnotic state, then awakened, and experimented on by the method of distraction. Tracings 4 and 5 show marked respiratory disturbances when the patient passed into hypnosis by stimulations of colored light falling far outside her contracted field of vision. Great hyperæsthesia shown to colored light; the field of colored vision is far more extensive than that of the average normal individual. The different changes from one state to the other and the condition of the patient under different stimuli when experimented on by this method are clearly manifested in these tracings.

PLATE IV.





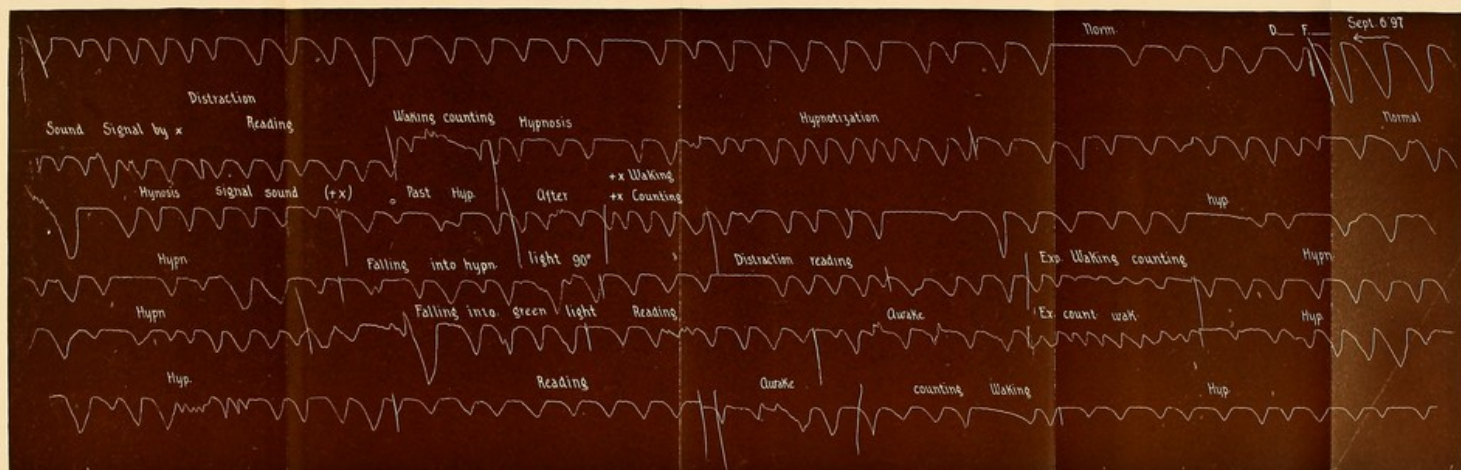


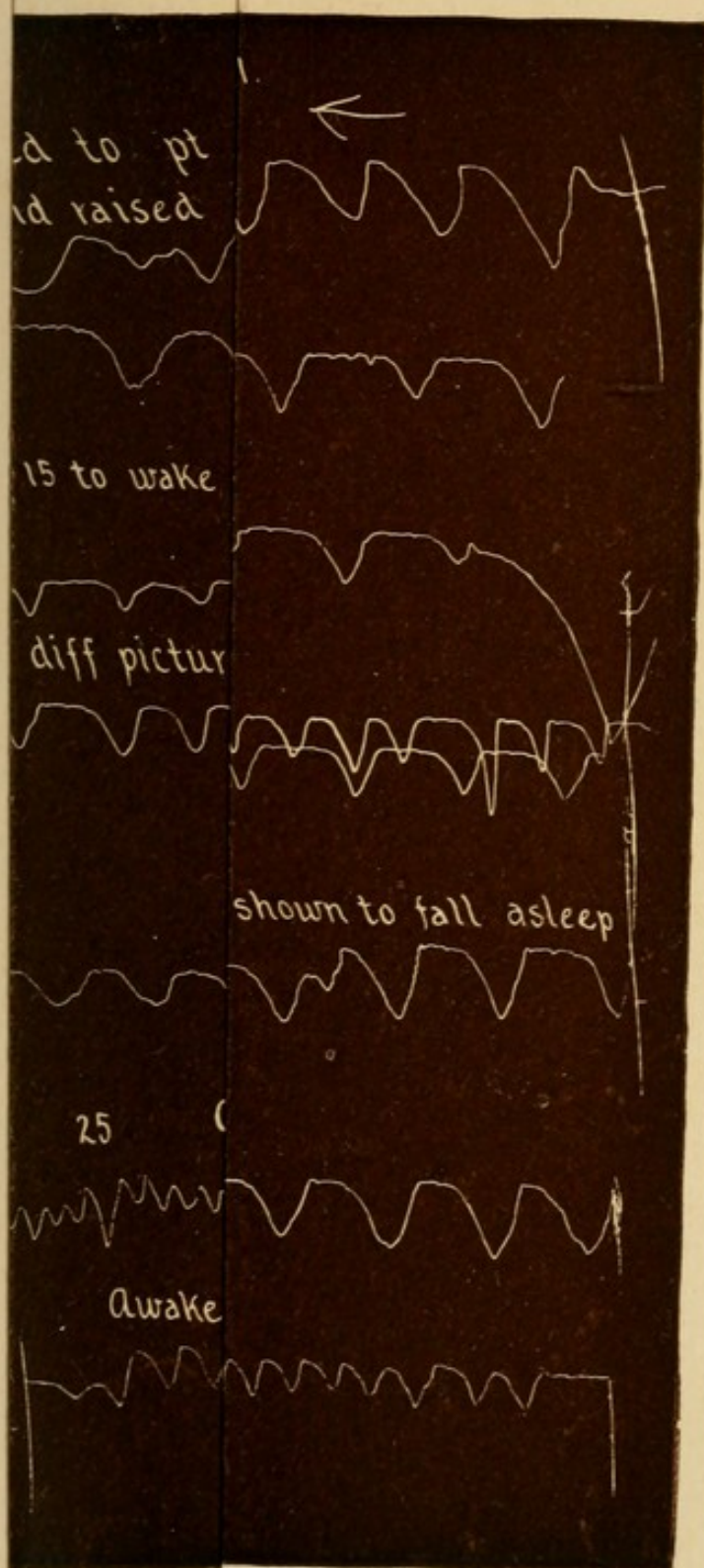
PLATE V



## PLATE V

The tracings show different reactions of the patient's subconsciousness to different stimuli that were not perceived by her personal consciousness. The first three tracings show disturbances when the intelligence of the subconscious is tested. The patient is not in hypnosis, but under distraction. Subconscious stimulations by whispering, for instance, are given, which the patient does not appreciate consciously. The patient is to pass into hypnosis when the stimuli are correctly perceived. The intelligence of the subconscious is tested by its adequate response to highly complicated stimuli and by the correct appreciation of them in passing into the hypnotic state at the right moment, when a certain correct judgment is made. The subconscious disturbances in the pneumographic curve are clearly marked. The subconsciously formed habit of disturbance at multiples of five, and of keeping pace with counting, is clearly brought out in the curves.

PLATE V.





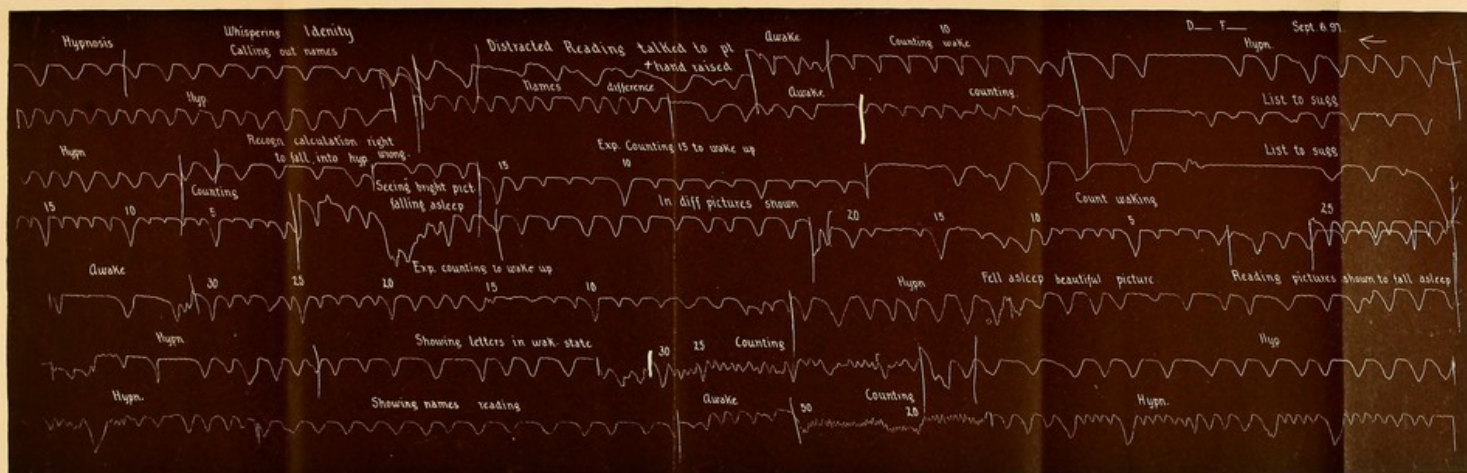


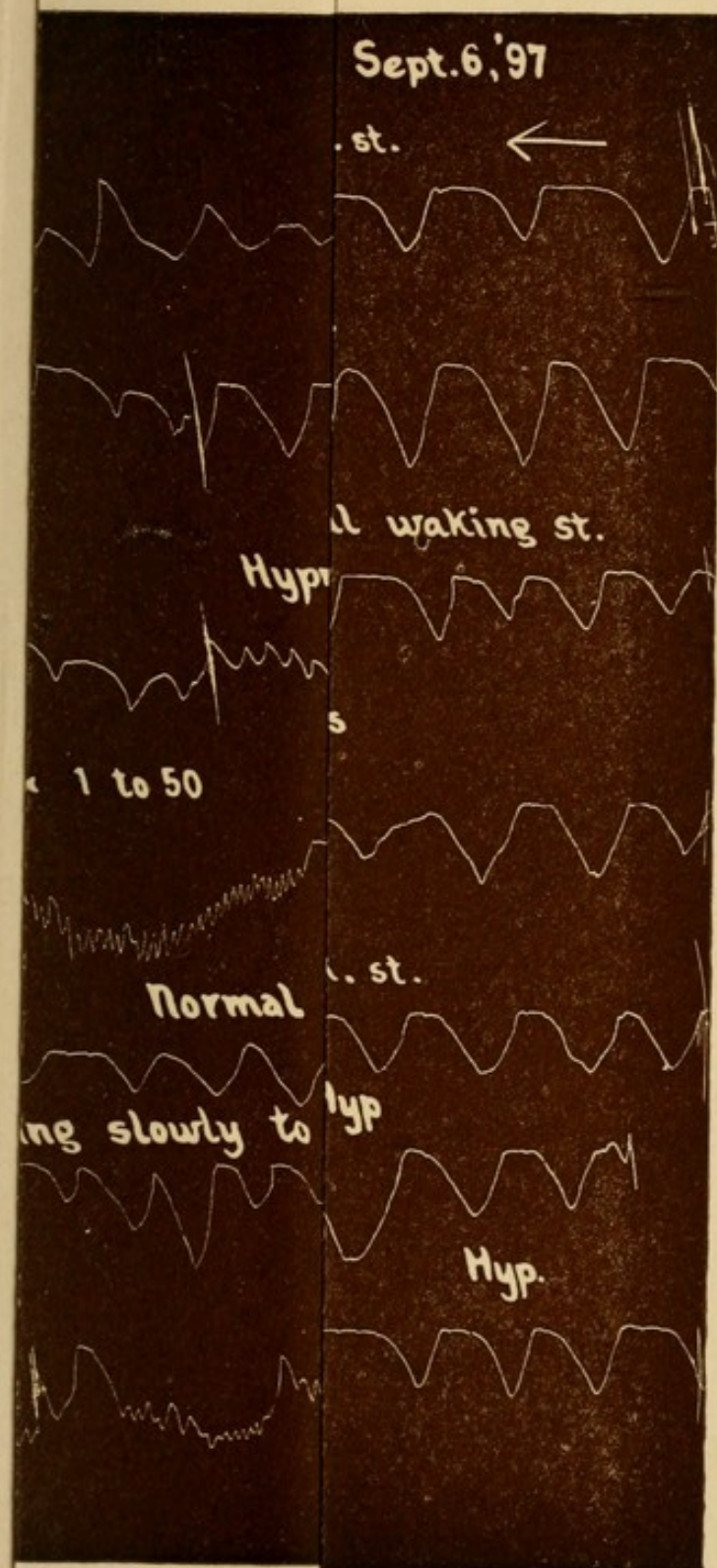
PLATE VI



## PLATE VI

The patient's subconscious reactions to rhythmic stimuli, especially to counting or to metronome beats, stand out quite distinct. The spontaneously subconsciously formed habit of keeping pace with counting and beats and of deep inspirations at multiples of five is well marked. These deep inspirations become manifested when the counts or beats are slow; when they follow in quick succession the deep inspiration is not marked—seems to disappear, but reappears with slow rhythmic. Counting and sudden stops bring about corresponding disturbances in the pneumographic curve, such as observed in tracings 5 and 7. All these changes are present alike in the different rates of rhythm given by  $+x$  or  $-x$ .

PLATE VI.





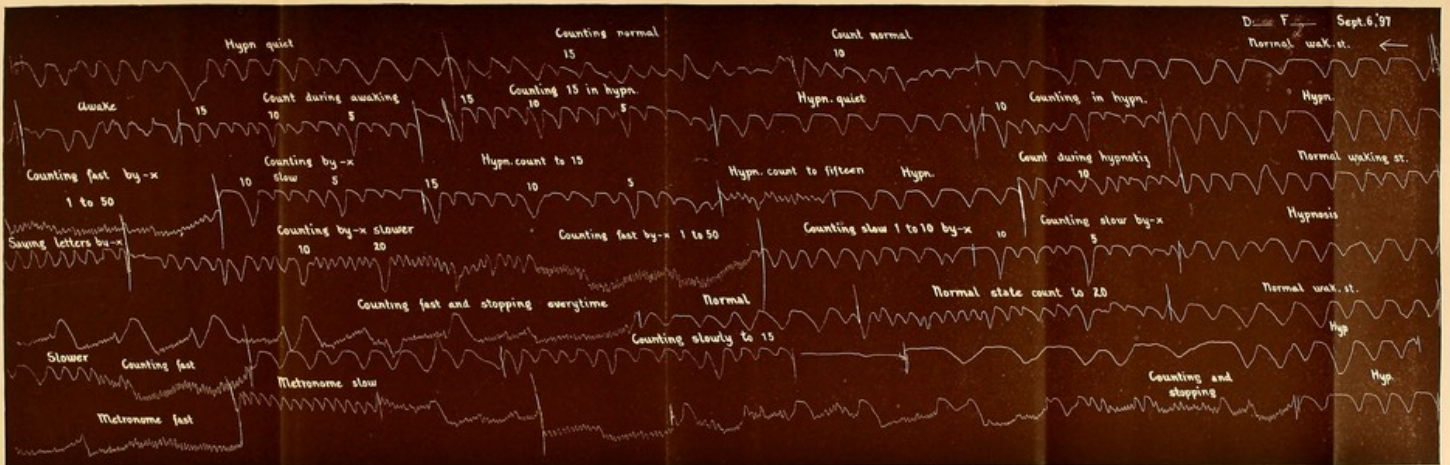


PLATE VII



## PLATE VII

The first tracing shows the state of the patient in normal sleep. At the very end the same tracing shows the reaction of the patient to rhythmic stimuli, such as counting. No disturbances manifested; rhythm is not followed. In the second tracing, in the part marked "counted," there is no manifestation of following the rhythm, but there is a recurrence of the deep respiration at "ten." The highly developed subconsciously formed habit is disintegrating with the process of synthesis of the dissociated subconscious systems. The rest of the tracings show the different reactions to stimuli in normal sleep and respiratory changes during different conditions of the sleeping state.

PLATE VII.

Sept. 8, '97.

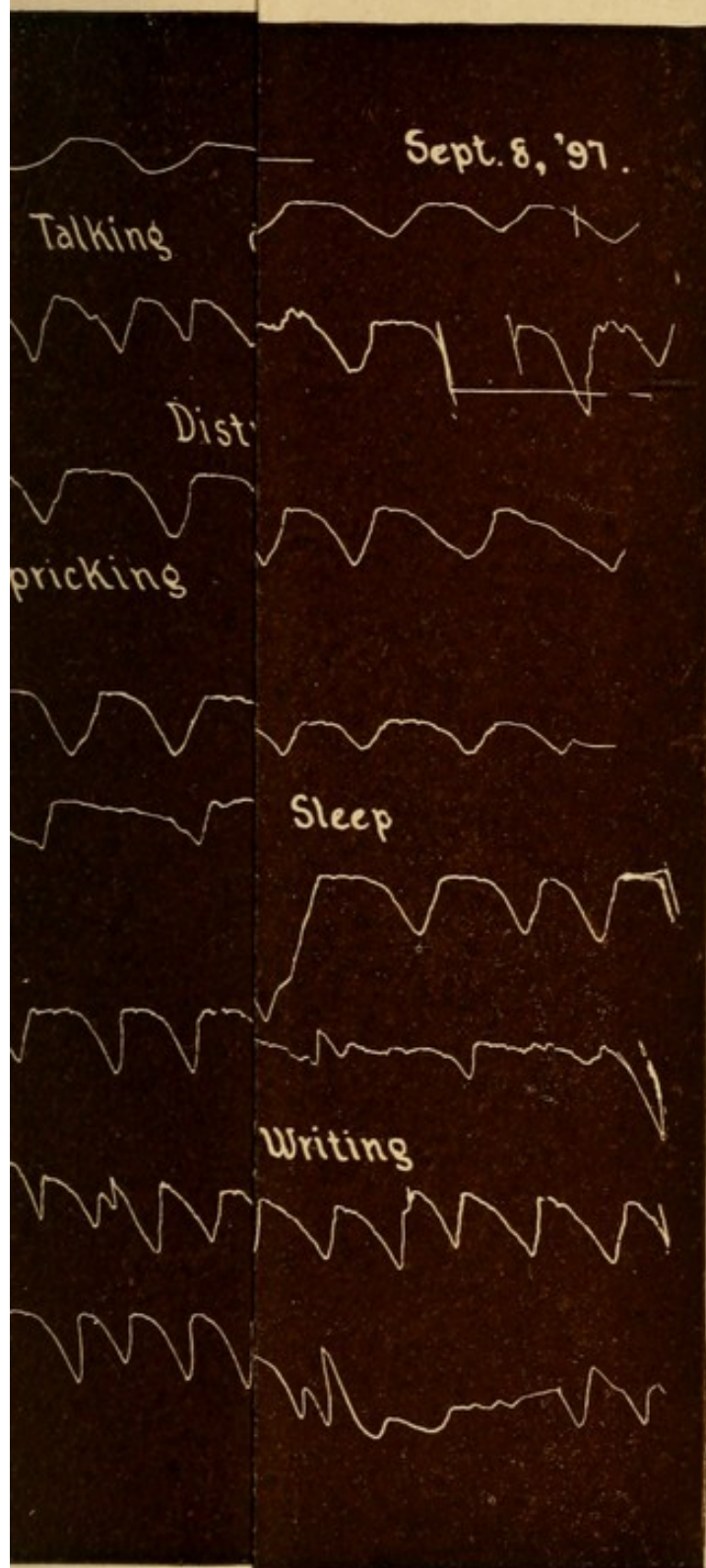
Talking

Dist

pricking

Sleep

Writing





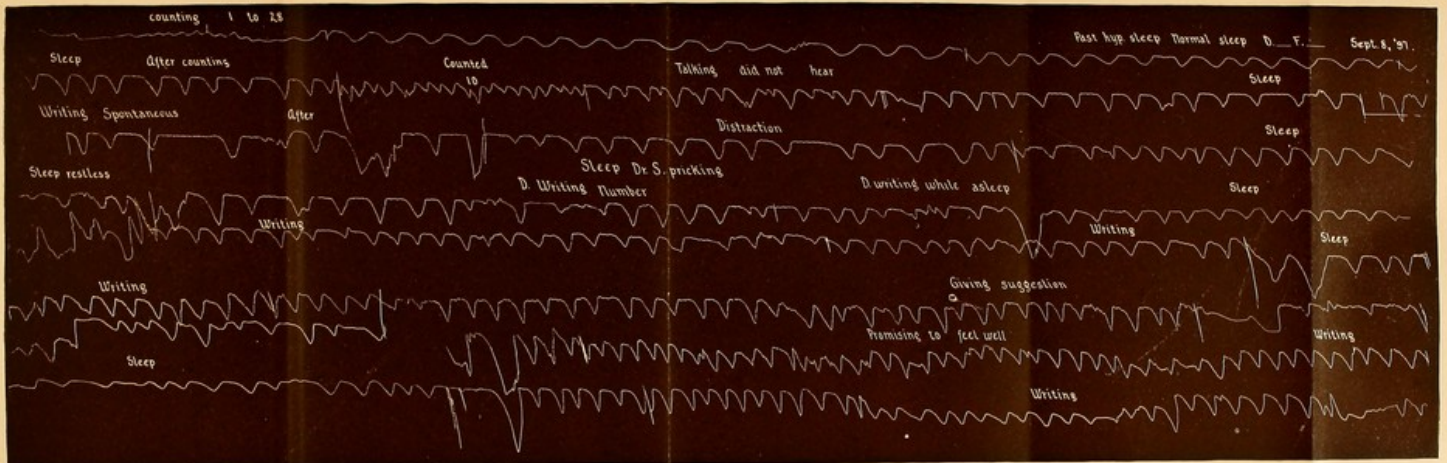


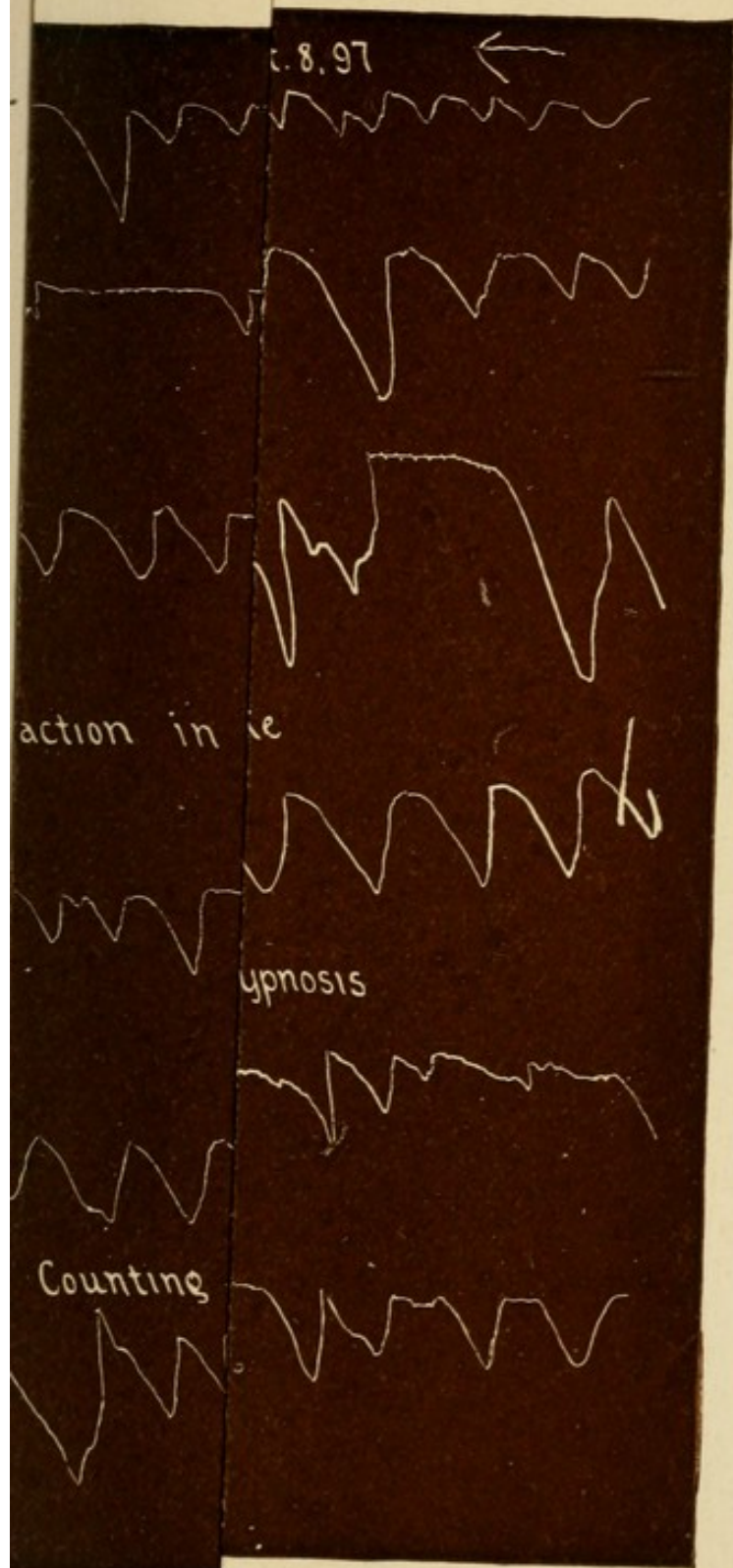
PLATE VIII



## PLATE VIII

The first tracing shows the patient still in normal sleep, with occasional fits of restlessness, the patient becoming more and more restless as she neared the waking state. The rest of the tracings show the patient both in the waking state and in hypnosis and the different reactions made during attempts at distraction which utterly failed. Rhythm is not followed; respiratory disturbances at multiples of five in counting are not present. The subconscious habit disappeared with the formed synthesis in the normal sleeping state.

PLATE VIII.





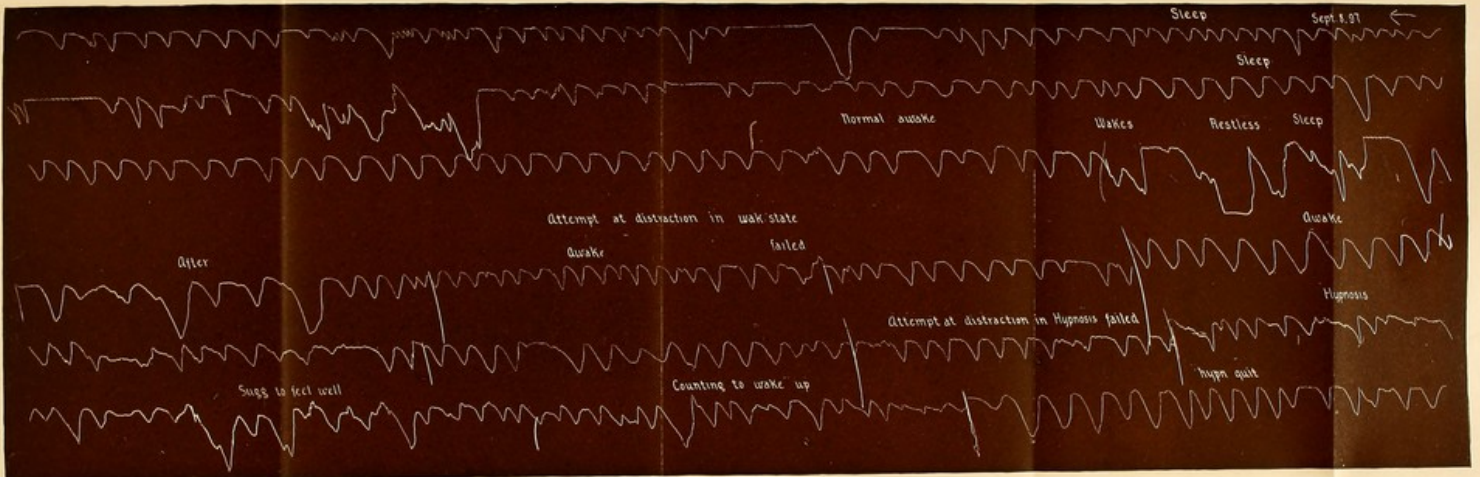


PLATE IX

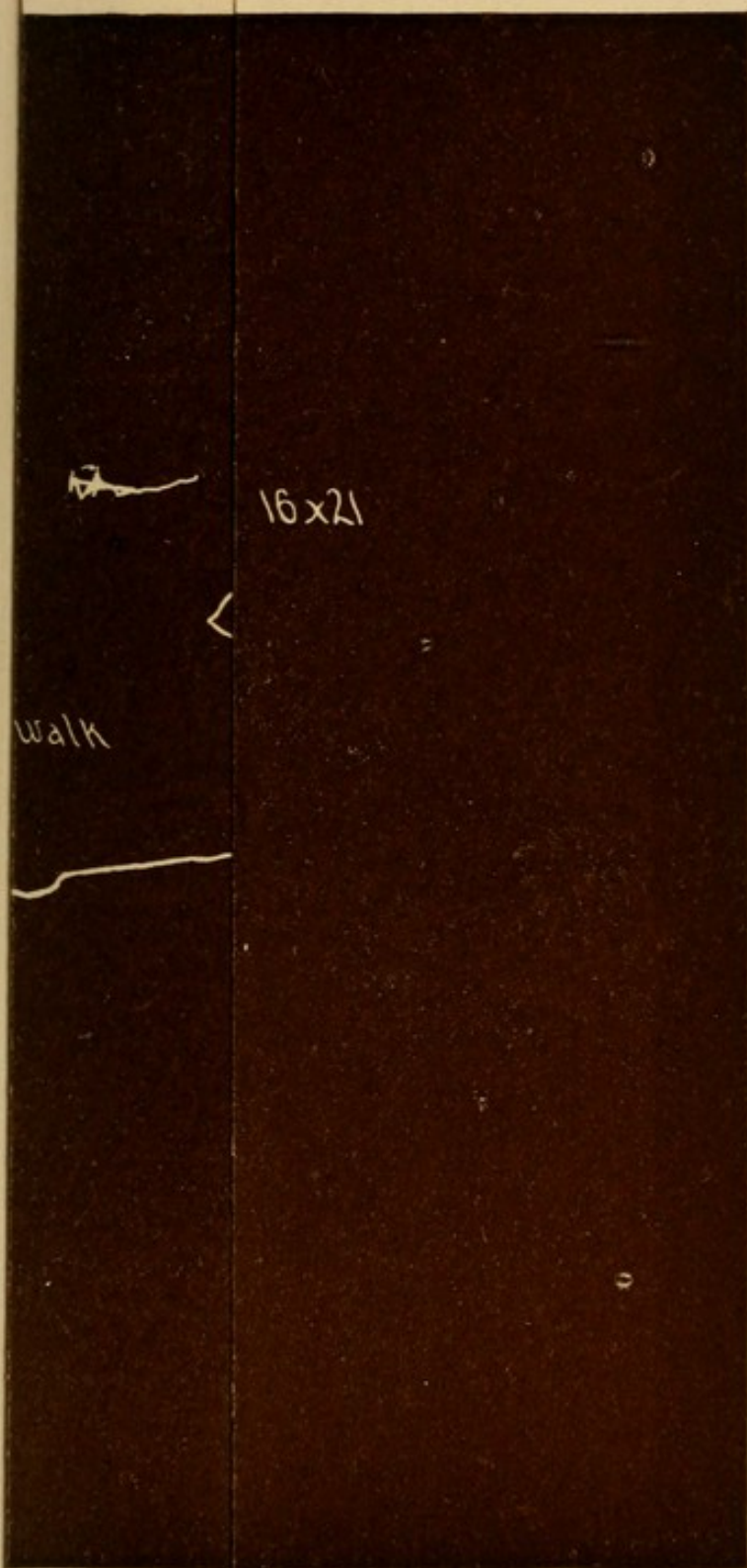


## PLATE IX

Tracings by the automatograph. The patient in the normal waking state was asked to shut her eyes and her hand was put on the automatograph and she was asked to make a mental multiplication of sixteen and twenty-one. While she was making this calculation, the hand was making movements corresponding to the ideas passing in her mind,—was writing down the stages in the process of multiplication.

For the other tracings she was put in the same position, and in one tracing a journey was described to her and in the other she described a journey; the hand automatically followed out the description.

PLATE IX.





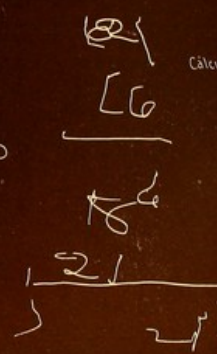
D. F.

Sept 1917

Automatic writings

Eyes shut

Walk described to pt



Calculation 16x21

PLATE X



## PLATE X

Shows automatic handwriting. The patient in the normal waking state with her eyes shut was placed at the automatograph and was asked to describe an elephant. While she was giving the description, the hand was making movements of writing corresponding to the words which she used to describe the animal. The same thing occurred when she was asked to describe the appearance of her mother. The hand kept on making writing movements of which the patient was unconscious.

PLATE X.

Description  
of  
mother



2



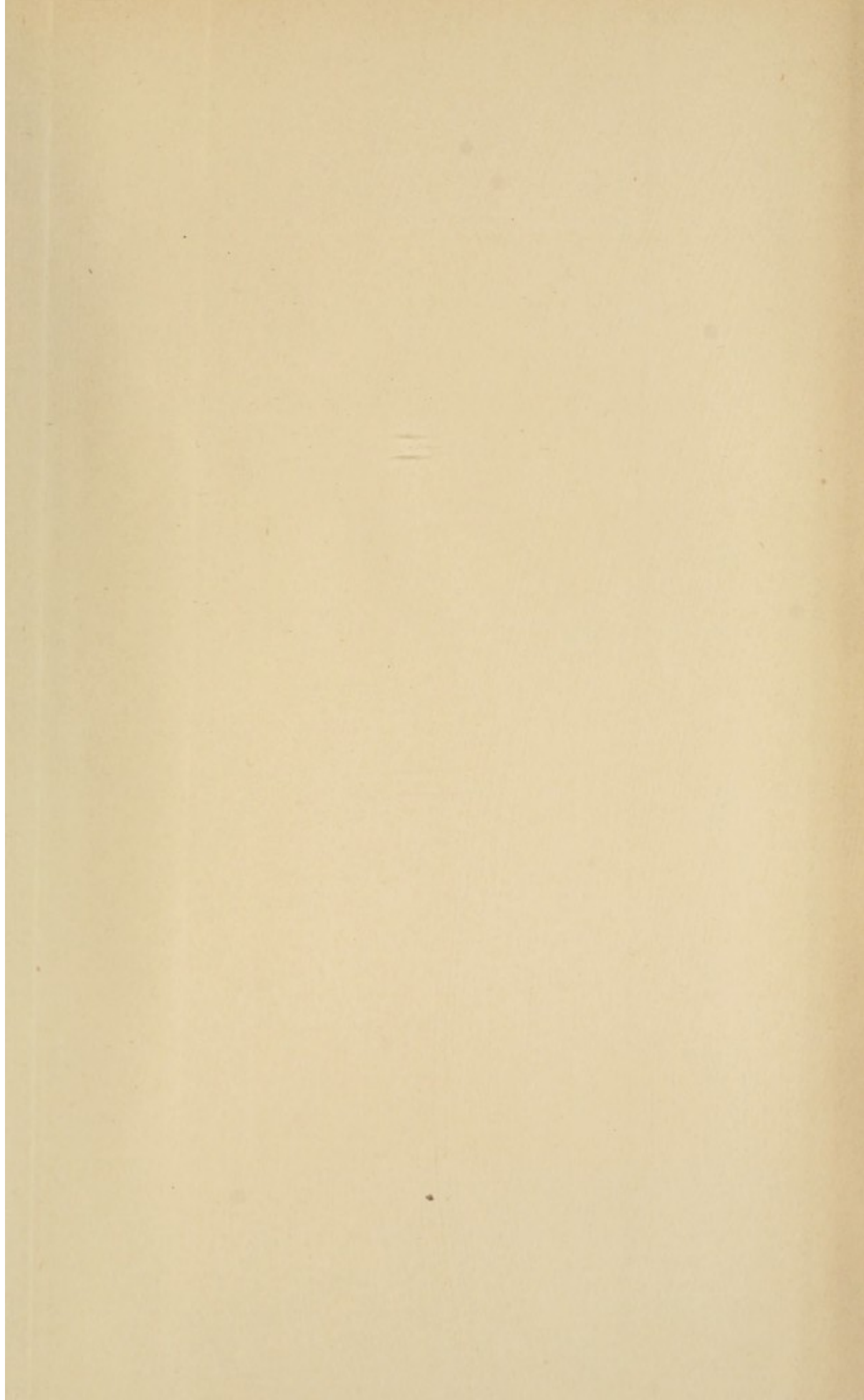
D. F. — Sept 7 97  
Automatic writing Eyes closed

Description of  
2 Elephant

Is -  
Large -  
Hurry

Description  
of  
mother

Will -  
black hair





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