

# THE PSYCHOLOGY OF SUGGESTION

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## CHAPTER XI

### THE SUBCONSCIOUS SELF AND UNCONSCIOUS CEREBRATION

THE facts of post-hypnotic negative hallucinations or of systematized anæsthesia still further reveal the presence of a subconscious self below the upper waking consciousness. The following interesting experiments made by Bernheim and M. Liegeois, and quoted by Binet in his remarkable book, *The Alternations of Personality*, may serve as good illustrations:

"Elise B., eighteen years old, a servant, suffering from sciatica. She was a respectable young girl, steady, of average intelligence, and, with the exception of her sciatica, presenting no neuropathic manifestations, symptoms, nor hereditary tendencies.

"It was very easy, after her first sitting, to bring on somnambulism coupled with a state in which she was sensitive to hallucinations both hypnotic and post-hypnotic, and to amnesia on awaking. I easily developed negative hallucinations with her. During her sleep I said to her, 'When you wake you will no longer see me: I shall have gone.' When she awoke she looked about for

me, and did not seem to see me. I talked to her in vain, shouted in her ear, stuck a pin in her skin, her nostrils, under the nails, and thrust the point of the pin in the mucous membrane of the eye. She did not move a muscle. As far as she was concerned, I had ceased to exist, and all the acoustic, visual, tactile, and other impressions emanating from myself did not make the slightest impression upon her; she ignored them all. As soon, however, as another person, unknown to her, touched her with the pin, she perceived it quickly, and drew back the member that had been pricked.

"I may add, in passing, that this experiment is not equally successful with all somnambulists. Many patients do not realize negative sensorial suggestions, and others only partially. Some, for example, when I declare that they shall not see me on awaking, do not see me, indeed, but they do hear my voice and feel my touch. Some are astonished to hear me and feel the pricks without seeing me, others do not attempt to understand it, and, finally, others believe that the voice and the sensation come from another person who is present. Sometimes the negative hallucination is made complete for *all their sensations* when the suggestion is given in this way: 'When you wake, if I touch you and prick you you will not feel it; if I speak to you you will not hear me. Moreover, you will not see me: I shall have gone.' Some subjects' sensations are quite neutralized after this detailed suggestion; with others, only the visual sensation is neutralized, all the other negative sensorial suggestions remaining ill effectual.

"The somnambulist of whom I speak realized everything to perfection. Logical in her delusive conception, she apparently did not perceive me with any of her senses. It was useless to tell her that I was there and that I was talking to her. She was convinced that

they were simply making fun at her expense. I gazed at her obstinately, and said: 'You see me well enough, but you act as if you did not see me. You are a humbug; you are playing a part.' She did not stir, and continued to talk to other people. I added with a confident manner: However, I know all about it. You can not deceive me. It is only two years since you had a child, and you made away with it. Is that true? I have been told so.' She did not move; her face remained peaceful. Wishing to see, on account of its medico-legal bearing, whether a serious offence might committed under cover of a negative hallucination, I roughly raised her dress and skirt. Although naturally very modest, she allowed this without a blush. I pinched the calf of her leg and thigh. She made absolutely no sign whatever. I am convinced that she might have been assaulted in this state without the slightest resistance.

"That established, I asked the head of the clinic to put her to sleep again and suggest to her that I should again be there when she awoke. This she realized. She saw me again, and remembered nothing that had happened in the interval. I said to her: 'You have just seen me. I talked with you.' She was astonished, and said, 'Why, no, you were not there.' 'I was there, and I did talk with you. Ask these gentlemen if I didn't.' 'I saw these gentlemen very well. M. P. tried to persuade me that you were there. But that was only a joke. You were not there.' 'Very well,' I said, 'but you remember everything that happened while I was not there—all that I said and did to you.' 'But how could you say and do anything to me when you were not there?' I insisted. Speaking seriously, and looking her in the face, I laid stress on every word: 'It is true, I was not there, but you remember just the same.' I put my hand on her forehead and declared, 'You remember everything, absolutely everything. There—speak out: what did I say to you?' After a moment's

concentrated thought, she blushed, and said, 'Oh, no, it is impossible; I must have dreamed it.' 'Very well; what did I say to you in this dream?' She was ashamed, and did not want to say. I insisted. At last she said, 'You said that I had had a child.' 'And what did I do to you?' 'You pricked me with a pin.' 'And then?' After a few minutes she said, 'Oh, no, I would not have allowed you to do it; it is a dream.' 'What did you dream?' 'That you exposed me,' etc.

"In this way I was able to call up the memory of all that had been said and done by me while she supposed that she did not see me. Therefore, in reality she both saw and heard me, notwithstanding her apparent obtuseness—she neither saw nor heard me. She saw me with her bodily (subconscious) eyes, but she did not see me with the eyes of the mind (upper consciousness). She was smitten with blindness, deafness, and psychical anæsthesia as far as I was concerned. All sensorial impressions emanating from me were distinctly perceived, but remained unconscious for her (upper consciousness).

"Similar experiments were performed by M. Liegeois. 'I no longer existed,' writes M. Liegeois, 'as far as Madame M. was concerned, to whom M. Liébault had, at my request, suggested that when she woke she would no longer see or hear me. I spoke to her: she did not reply. I stood before her: she did not see me. I pricked her with a pin: she felt no pain. She was asked where I was: she said she did not know—that I had undoubtedly gone, etc.

"I then conceived the idea of making some suggestions in loud tones to this person, for whom I had seemed to become an entire stranger; and, what was very singular, she obeyed these suggestions.

"I told her to rise: she rose. To sit down: she seated herself. To

make her hands revolve round one another: she did so. I suggested a toothache to her, and she had a toothache; sneezing, and she sneezed. I said that she was cold, and she shivered; that she ought to go to the stove—in which there was no fire—and there she went; until I told her that she was warm, and then she was all right. During all this time she was, as far as all the assistants were concerned, as fully awake as they were. When questioned by them, she replied that I was absent, she did not know why; perhaps I would soon come back, etc. Questioned by me with the use of the first personal pronoun, all my questions remained unanswered. She only realized the ideas I expressed impersonally, if I may use such an expression, and as if she drew from her own thought. It is her unconscious (subconscious) ego that causes her to act, and the conscious ego has not the slightest idea of the impulse that she receives from without.

"The experiment seemed to me sufficiently interesting to bear repeating on another subject, Camille S., and here is a concise resume of the proofs and verifications secured some days later from this girl:

"Camille S, is eighteen years old, and a very good somnambulist. M. Liébault and I have known her for nearly four years. We have often put her to sleep. We always found her to be perfectly sincere, and we came to have entire confidence in her. This statement is necessary, as we shall see, to give weight to the singular results obtained which confirmed absolutely the first observation made on Madame M.

"M. Liébault put Camille to sleep, and at my request suggested to her that she would no longer see or hear me; then he left me to experiment in my own way. When she awoke the subject was in

communication with everybody, except that I no longer existed for her. Yet, as I am about to show, that is not quite accurate. It was as if there were two personalities within her—one that saw me when the other did not see me, and that heard me when the other paid no attention to what I was saying.

"In the first place, I assured myself of the state of her sensibility. And it was very curious that this existed for all the assistants, but did not exist for anything emanating from me. If anyone else pricked her she quickly drew her arm back. If I pricked her she did not feel it. I stuck pins in her that remained hanging from her arms and cheek. She complained of no sensation, not feeling them at all. This fact of anæsthesia, not real, but in a measure personal, is certainly very singular. It is quite new, if I am not mistaken. In the same way, if I held a bottle of ammonia under her nose she did not push it away, but she turned away from it when it was presented to her by a strange hand.

"While she was in this condition, neither seeing nor hearing me—apparently, at least—almost all the suggestions are carried out that may be made in the waking state. I sum them up in the order in which they follow, from my notes taken at the time, June 14th, 1888.

"I need not repeat that if I speak directly to Camille S.—if I ask her, for example, how she is, how long it is since she stopped growing, etc.—her countenance remains impassive. She neither sees nor hears me—at least she is not conscious of so doing.

"I then proceed, as I said above, impersonally, talking not in my own name, but as if an internal voice of her own was speaking, and expressing such ideas as the subject would be likely to get from

her own private thought. Then somnambulistic automatism shows itself in this new and unexpected guise as complete as any of the other forms already known.

"I said aloud, 'Camille is thirsty; she is going to the kitchen for a glass of water, that she will bring back and set on this table.' She did not seem to have heard me, and yet in a few minutes she acted as I had said, and carried out the suggestion with that brisk and impetuous manner which has already been frequently noticed in somnambulists. She was asked why she brought the glass that she put on the table. She did not know what was meant. She had not moved. There was no glass there.

"I said, 'Camille sees the glass, but there is no water in it, as they are trying to make her believe; it is wine, and very good wine, too; she is going to drink it, and it will do her good.' She promptly performed the order thus given to her, then immediately forgot all about it.

"I made her say some words in succession that were scarcely proper. 'Devil take it!' 'Confound it!' 'Con——' and she repeated all that I suggested to her, but instantly losing the memory of what she had just said.

"A certain M. F., astonished at this, upbraided her for using these unseemly expressions. She said: 'I did not say those vulgar words. 'What do you take me for ? You are dreaming; you must have gone mad.'

"She saw me without seeing me, as this shows. I said, 'Camille is going to sit on M. L.'s knee.' She immediately jumped violently on my knee, and, on being questioned, declared that she had not

moved from the bench where she was seated a moment before.

"M. Liébault spoke to me. As she neither saw nor heard me consciously, she was astonished, and then began a conversation with him in which I placed the part of a prompter who dwelt in her own brain. I suggested all the following words to her, and she uttered them, thinking that she was expressing her own thought:

"M. Liébault, aren't you talking to the wall? I must put you to sleep to cure you. We will change rôles, etc.

"M. F., how is your bronchitis?"

"M. F. asked her how and why she said all this. She replied, after I had whispered to her: 'How do you think it comes to me? Just as it comes to every one. How do your own thoughts come?' and she continued to enlarge upon the theme given her by me.

"She seemed to be in a perfectly normal state, and held her own with all the assistants with great presence of mind. Only in the midst of her conversation she inserted the phrases that I created in her mind, unconsciously making them her own.

"Thus, while she was arguing with M. F., whom she told that she would take to Mareville,<sup>1</sup> her interlocutor having objected, 'I am not insane,' she replied: 'All insane people say that they are not insane. You say that you are not insane, therefore you must be insane.' She was very proud of her syllogism, and never suspected that she had just got it from me.

"Wishing to make sure, once more, that she saw me without being conscious of it, I said: 'Camille is going to take a bottle of cologne out of M. L.'s vest pocket; she will uncork it and enjoy its

delightful odour.' She rose, came directly to me, looked first in the left, then in the right pocket; took out a bottle of ammonia, uncorked it, and inhaled it with pleasure. I was obliged to take it away from her. Then, still under the influence of suggestion, she took off my right shoe. M. F. said to her: 'What are you doing there? You are taking off one of M. L.'s shoes!' She was offended. 'What are you talking about? M. L. is not here, so it is not possible for me to take off his shoe. You are still more insane than you were just now!' And when M. F. raised both arms while he was talking to me, Camille cried: 'Absolutely, I must take you to Mareville. It is too bad! Poor M. F.!' He did not seem to be cast down by her remark. 'But what shoe is that that you are holding? What is it?' I came to my subject's assistance, and said: 'It is a shoe that Camille must try on; she was not able to do it this morning at home, because the shoemaker did not keep his appointment. He was drunk, and he has only just brought it. She is going to try it on right here.'

"All that was accepted, repeated exactly, and promptly performed as if by spontaneous inspiration. For propriety's sake she turned toward the wall to try on my shoe. She found it a little large, and returned it to me, because I said she ought to return it to me.

"Finally, at my suggestion, she took the glass back to the kitchen. When she returned, questioned by M. F., she declared that she had not left the room, that she had not drunk anything, and that she had not had a glass in her hands. It was of no use to show her the wet ring that the bottom of the glass had left on the table. She did not see any ring; there was none; they were trying to fool her. And then, in order to prove what she said, she passed her hand over the table several times, making the leaves fly on which I took my notes, and which shared in my privilege of being invisible, without

seeing them. If there had been an inkstand there, it too would undoubtedly have been thrown to the floor.

"In order to bring this series of tests to an end, I said aloud: 'Camille, you are going to see and hear me. I will open your eyes. You are now all right.' I was three metres from her, but the suggestion operated. Camille passed without any apparent transition stage from the state of negative hallucination into which M. Liébault had thrown her into the normal state, which in her case was, as usual, accompanied by complete amnesia. She had no idea of all that had just happened—the numerous experiments, varied in every conceivable way, the hallucinations, the words, the actions in which she played the principal part—all this was forgotten; it was all, as far as she was concerned, as if it had not been."

I can not do better than to bring M Liegeois's own interpretation of his experiments, an interpretation with which I fully agree:

"During the negative hallucinations," says M. Liegeois, "the subject sees what he does not seem to see, and hears what he does not seem to hear. Two personalities (selves) exist within him—an unconscious (subconscious) ego that sees and hears, and a conscious ego that does not see nor hear." And I may add that not only do the two egos exist within the state of negative hallucination, but also within the normal state.

The facts of hypnotic memory alone strongly indicate the intelligent nature of the subconscious. Can the theory of unconscious cerebration<sup>2</sup> explain, for instance, the fact of suggested amnesia during hypnosis? I hypnotize Mr. V. F., and make him pass through many lively scenes and actions. I give him hypnotic and

post-hypnotic suggestions. The subject is awakened and hypnotized time and again. At last he is put into a hypnotic state, and is suggested that on awaking he shall not remember anything of what had happened in the state of hypnosis. The subject, on emerging from his trance, remembers nothing of what he has passed through. I then put my hand on Ili's forehead and tell him in a commanding voice, "You remember now everything!" As if touched by the wand of a magician, the suppressed memories become endowed with life and movement and invade the consciousness of the subject. Everything is now clearly remembered, and the subject is able to relate the tale of his adventures without the omission of the least incident. So detailed is the account that one can not help wondering at the extraordinary memory displayed by the subject. How is the theory of unconscious cerebration to account for this strange fact? Prof. Ziehen, in his *Physiological Psychology*, tells us that "it is still a matter of doubt whether, despite their complicateness, all the facts of the hypnotized individual are not motions accomplished without any concomitant psychical processes," and that "even the recollection of the hypnotic psychical processes do not necessarily argue in favor of their existence during hypnotic trance." This extreme view is certainly wrong; for the subject during hypnosis not only acts, moves, but he also speaks, answers questions intelligently, reasons, discusses; and if such an individual may still be regarded as a mere machine, on the same grounds we may as well consider any rational man as a mere unconscious automaton.<sup>3</sup>

The advocates of unconscious cerebration must admit at least this much, that hypnosis is a conscious state. Now, on the theory of unconscious cerebration it is truly inconceivable how psychical states can be suppressed, the accompanying unconscious physiological processes alone being left, and all that done by a mere

word of the experimenter. The restoration of memory is still more incomprehensible than even the suggested amnesia. A command by the experimenter, "Now you can remember!" brings into consciousness a flood of ideas and images. It is not that the experimenter gives the subject a clew which starts trains of particular images and ideas, but the mere general, abstract suggestion, "You can remember!" is sufficient to restore memories which to all appearances have completely vanished from the mind of the subject. Are the unconscious physiological nervous modifications so intelligent as to understand suggestions and follow them? Does unconscious cerebration understand the command of the experimenter, and does it oblige him to become conscious? On closer examination, we find the term unconscious cerebration to be of so loose a nature that under its head are often recorded facts that clearly indicate the working of an intelligence. Thus Mr. Charles M. Child brings the following fact as a specimen of unconscious cerebration:<sup>4</sup>

"I had earnestly been trying," a gentleman writes to Mr. Child, "to make a trial balance, and at last left off working, the summary of the *Dr.* and *Cr.* sides of the account showing a difference of £2 10s., the *Dr.* side being so much smaller. The error I had not found on Saturday night when I left the countinghouse. On this same Saturday night I retired feeling nervous, and angry with myself. Some time in the night I dreamed thus: I was seated at my desk in the countinghouse and in a good light; everything was orderly and natural, the ledger lying before me. I was looking over the balance of the accounts and comparing them with the sums in the trial-balance sheet. Soon I came to a debit balance of £2 10s. I looked at it, called myself sundry names, spoke to myself in a deprecating manner of my own eyes, and at last put the £2 10s. to its proper side

of the trial-balance sheet and went home. I arose at the usual Sunday time, dressed carefully, breakfasted, went to call on some . . . friends to go to church. Suddenly the dream flashed on my memory. I went for the keys, opened the office, also the safe, got the ledger, and turned to the folio my dream had indicated. There was the account whose balance was the sum wanted which I had omitted to put in the balance sheet, where it was put now, and my year's posting proved correct."

The adherents of unconscious cerebration tacitly include under this term not only unconscious physiological processes, or nerve modifications, but also psychical states. Keeping clearly in mind the real meaning of unconscious cerebration as referring to physiological processes or nerve modifications with no psychical accompaniment, the difficulties of unconscious cerebration to account for the phenomena of hypnotic memory become truly insurmountable. For if the physiological processes subsumed under the category of unconscious cerebration are completely lacking any psychical element whatever, how can a general abstract negative phrase suppress particular psychical states, and how can a similar positive phrase bring the forgotten memories back to consciousness? It is simply incomprehensible.

Furthermore, while the subject is in a hypnotic condition we can suggest to him that on awaking he shall not remember anything, but that when put to the automatic recorder he shall be able to write everything that has taken place in the state of hypnosis. The subject is then awakened; he remembers nothing at all of what he had passed through while in the state of hypnotic trance. As soon, however, as he is put to the automatic recorder the hand gives a full, rational account of all the events. If now you ask the subject what it

is he has written, he stares at you in confusion; he knows nothing at all of the writing. How shall we account for this fact on the theory of unconscious cerebration? Can unconscious physiological processes write rational discourses? It is simply wonderful, incomprehensible.

These, however, are not the only difficulties which the theory of unconscious cerebration has to encounter. Take the following experiment: I gave Mr. V. F. the suggestion that on awaking he should put my coat, on three times, take it off, and put it on again; that he should do it when he should hear a signal which should be a knock; amnesia was suggested, and also the possibility of writing the suggestion. The subject was then roused from his trance. There was not the slightest recollection of what had been suggested, but when he was put to the automatic recorder the hand at once proceeded to write in full everything. In the middle of the writing, "When a signal will be given. . ." I stopped the subject's hand and asked him what he was writing about. "I do not know," he answered. "How is it," I asked again, "you write, and you do not know what you write?" "I do not know; I think it was something about a coat." "What was it you were writing about a coat?" "I do not know; maybe about the make of a coat." Then when the signal came he rose and put on the coat three times. To take another experiment of the same kind: I give the subject the suggestion that he should bow to the gas whenever the door should be opened; again amnesia is suggested, with the possibility of writing. The subject is stopped when he finished his account. "What was it you wrote?" I ask. The subject looks surprised. I repeat my question. "I do not know; I think something about a door?" "What was it about a door?" "I do not know." I have made many similar experiments, and all of them with the same results. It is evident that the writing is not

an unconscious automatic process, for the subject possesses a general knowledge of what he has written, or even of what he is going to write. Now, on the theory of unconscious cerebration this general knowledge ought to be entirely lacking, since the physiological processes of the suppressed memory have no psychical accompaniment. It would not do to say that the subject knows each word as he writes it, but becomes unconscious of it, forgets it, as soon as it is written down; because the subject is able to tell the central idea—that is, he has a general knowledge of it; and, what is more, he is able to tell us this general central idea even before he finishes the writing—in fact, he can do it when stopped in the middle of the phrase. On the theory of secondary consciousness, however, the experiments could not possibly give other results. The secondary consciousness understands the suggestions given by the experimenter, accepts them, obeys the commands, keeps the suppressed memories, and sends up a general knowledge of them to the upper consciousness,<sup>5</sup> and, if commanded, communicates the suppressed particular suggestions in all their details.

The advocates of unconscious cerebration assume too much: they assume that normal memory, or recollection in the normal state, can be fully accounted for by unconscious physiological processes, and the only thing required is to apply this theory to the phenomena of hypnotic memory. It would be well to examine this theory and see how strong its claims are in the case of normal memory.

Many a modern psycho-physiologist no doubt smiles at the crude, ancient psycho-physiological theory of perception. Images or copies of objects emanate from objects, get deposited in the mind; hence perception, cognition, memory. The modern psycho-

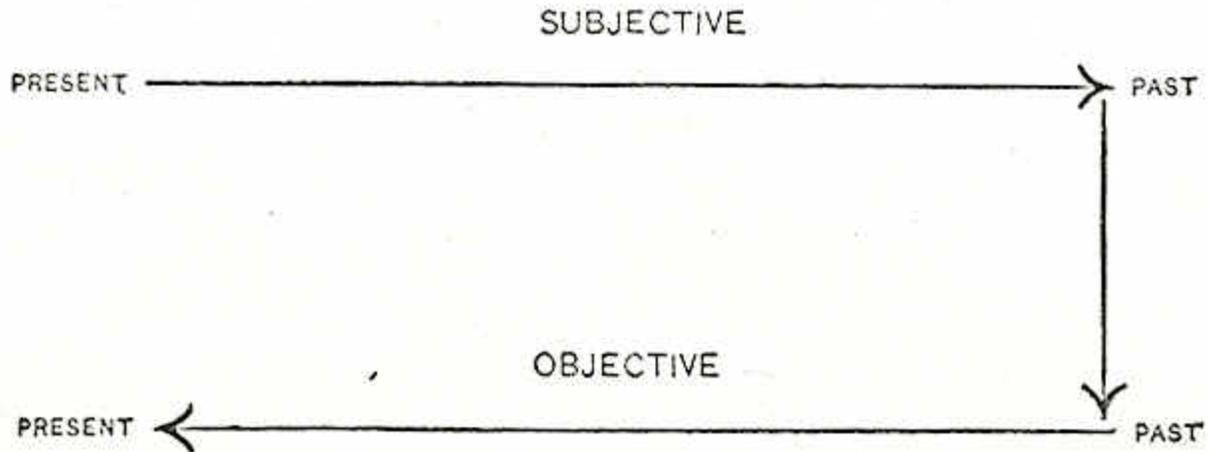
physiological speculations, however—the speculations of Maudsley, Carpenter, Ziehen, Ribot, etc.—are no less crude. Thus Ziehen, for instance, conceives that each sensation deposits a copy of itself—an image, an idea—in some one of the memory ganglion cells, and memory consists in the reproduction of this copy—the hen lays an egg from which another hen may come out. Maudsley expresses the same thing in slightly different terms; instead of "deposits of images in memory ganglion cells," he uses "modifications of nerve elements." "It may be supposed," says Maudsley, "that the first activity did leave behind it, when it subsided, some after-effect, some modification of the nerve element, whereby the nerve circuit was disposed to fall again readily into the same action, such disposition (unconscious) appearing in consciousness as recognition or memory." Ribot and many other psychologists, with slight variations in minor points, follow the same beaten track. All of them agree that it is the nerve modifications produced by the physiological processes of sensations, emotions, etc., that constitute the basis, nay, the very essence, of memory itself. It does not require a close examination to find the deficiencies of this theory. A mere modification left behind as a trace can not possibly explain memory, recollection, the fact of referring a particular bit of experience to an experience felt before. The retention of a trace or of a nervous modification, and the reproduction of that trace or modification, can not in the least account for the fact that a series of sensations, ideas, images, emotions, felt at different times, should become combined, brought into a unity, felt like being similar, like being one and the same, like being repetitions, copies of one original experience. It is not retention or reproduction, but it is the recognition element that constitutes the essence of memory. The rose of to-day reminds me of the rose seen yesterday, of the same rose seen the day before

yesterday. Now, the image of the rose may be retained, may even be reproduced, but if it is not recognised as having happened in my past, there can be no recollection; in short, without recognition there is no memory. As Prof. James strongly puts it, "the gutter is worn deeper by each successive shower, but not for that reason brought into contact with previous showers." Does the theory of unconscious physiological processes, of material brain traces, of nerve modifications—does this theory take into account this element of recognition? Can the theory of unconscious cerebration offer the faintest suggestion as to how that element of recognition is brought about? What is that something added to the unconscious physiological trace or nerve modification that effects a conscious recognition?

Furthermore, first impressions can be localized in the past, but so can also each subsequent revival. How shall we explain, on the theory of unconscious physiological nerve registration, that the original, the primitive sense experience, as well as each subsequent revival, can be referred to as distinct psychical facts? For if the structural nerve elements are slightly modified with every revival, how shall we account for this psychical distinction of the original sense experience as well as of the modified revivals? The remembered experience leaves its own individual trace, then a trace of its being a copy of a former original impression, and also a trace of its being a member in a series of similar traces, each trace being both a copy of one another and a copy of the original impression. How this is done is a mystery.

The difficulties of the unconscious registration theory increase still more if we consider that the account of memory as usually given by psychologists is rather inadequate. Memory is the

recurrence or reproduction in consciousness of a former experience. We saw a certain object yesterday, and to-day, when we happen to think of that object, we say that the image or idea is the reproduction and recognition in memory of the previous perception. This, however, is but a partial account of what actually takes place in the process of recollection. Psychologically speaking, when we remember something we have not a reproduction of some past experience, but an actual present experience with the quality of *pastness* about it. I remember the rose I saw and smelled the day before; what I have here is simply a present experience in the moment content of consciousness, and this experience is projected into the past of my subjective time. The image of the rose I have now turns out to be a rose of yesterday, and the yesterday itself is a part in the content of the present moment consciousness; in other words, my present experience is projected into my present subjective yesterday. The present image is the primary fact, and the projection of it into the past is but a secondary effect; but, then, the process is reversed—the present experience is regarded as secondary, and the secondary as primary. Subjectively considered, *memory is the reproduction of the present into the past*. It is only if regarded from an objective standpoint that memory becomes the reproduction of the past into the present. In short, in memory there is a double process going on: the projection of the subjective present into the subjective past, and then, again, the projection of the objective past into the objective present. This process may be graphically represented as follows:



Does the physiological registration theory account for this double process? It certainly does not. If now the theory of unconscious physiological traces or nerve modifications is found inadequate to explain the most elementary act of conscious memory, can we rely upon it, when offered to us in the garb of unconscious cerebration, to account for such complex psychical phenomena as hypnotic memory?

Unconscious cerebration failing, we must fall back on the psychical interpretation of hypnosis in general, and of hypnotic memory in particular. *The subconsciousness is not an unconscious physiological automaton; it is a secondary consciousness, a secondary self.*

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1. Lunatic asylum near Nancy.
  2. On unconscious cerebration, see Carpenter's *Mental Physiology*; Ireland, *The Blot upon the Brain*; Laycock, *Unconscious Cerebration*, *Journal of Mental Science*, January and April, 1876; Pierce and Podmore, *Subliminal Self or Unconscious Cerebration*, *Proc. Soc. for Psych. Res.*, vii, 1875.
  3. Besides, post-hypnotic amnesia is rarely spontaneous; as a rule, it is induced by suggestion.

4. Unconscious Cerebration, American Journal of Psychology, November, 1892.
5. I am rather disposed to think that the answer in these cases is given not by the upper but by the lower consciousness of the subject.