Multiple Personality; An experimental investigation into the Nature of Human Individuality. By BORIS SIDIS, M.A., Ph.D. and SIMON P. GOODHART, Ph.B., M.D. (London: Sidney Appleton, 1905).

About one third of this book is occupied with the description of the remarkable case of Mr. Hanna, a case of loss of memory more complete than has ever before been recorded. The case is of the greatest possible interest to the psychologist and is important also from the point of view of the "psychical researcher." Mr. Hanna, a well-educated, intelligent, and healthy young clergyman fell head foremost to the ground from his carriage and was carried by his brother in an almost lifeless condition to a neighbouring house. He lay some two hours showing no sign of life other than feeble movements of respiration, and then "began to move, opened his eyes, looked around, moved his arm, then sat upright in bed, arose, reached toward one of the physicians and attempted to push him. Thinking the patient in a state of delirium, and fearing an attack, they seized him and attempted to push him back upon the bed. Mr. Hanna resisted vigorously and a struggle ensued." The efforts of four men were needed to overcome the struggles of the patient, who then lay still and looked curiously about him.

It then appeared not only that "he had lost the faculty of speech, . . . but he had also lost all power of recognition of objects, words

and persons. He was in a state of complete mental blindness. He was as a newly born infant opening his eyes for the first time upon the world. . . . The world was to Mr. Hanna but a chaos of sensations, not as yet elaborated and differentiated into a system of distinct percepts and concepts; neither objects, nor space, nor time, in the form as they are presented to the developed adult mind, existed for him. So totally obliterated from memory were the experiences of his past life that even the requirements of the simplest mental processes by which the appreciation of distance, form, size, magnitude is acquired, were effaced from his mind. Movement alone attracted his attention. He did not know the cause and meaning of movement, but a moving object fastened his involuntary attention and seemed to fascinate his gaze. He made as yet no discrimination between his own movements and those of other objects, and was as much interested in the movement of his own limbs as in that of external things. He did not know how to control his voluntary muscles, nor had he any idea of the possibility of such a control. From the more or less involuntary chance movements made by his arms and legs, he learned the possibility of controlling his limbs. . . . He could not co-ordinate the movements of his legs, hence he could not walk. Unable to discriminate between his own activity and that of others, the world was not yet differentiated into the objective and subjective, and he had no idea of ego activity. . . . He did not have the least conception of the flow of time,—seconds, minutes, hours were alike to him. . . . The sensation of hunger, though present in all its intensity, as we afterwards learned, could not be interpreted by him, and he certainly did not know how to appease it. When food was offered him, he did not understand the purpose of it; nor when it was placed within his mouth did he know how to masticate and swallow it. In order to feed him, fluid nourishment had to be placed far back into the pharynx, thus provoking reflex swallowing movements."

These passages contain the more important statements as to the condition of the patient on recovering consciousness. They illustrate the chief defect of the report of this most interesting case, namely, the confounding of the facts observed at the time by those surrounding the patient with the statements of the patient at a later time and with the inferences and theoretical views of the writers of the account, who, unfortunately, did not see the patient until some weeks after the accident. It is much to be regretted that in a case of so much importance to psychology, the state-

ments based upon these three sources were not rigidly separated in the report. Nevertheless it seems probable that they give a fair picture of the mental state of Mr. Hanna when he first regained consciousness after the accident.

The further course of the case is no less interesting. Mr. Hanna began rapidly to learn all that a child learns and to learn it in much the same way that a child learns, the great difference being that he learned with extreme rapidity. He rapidly acquired control of movements and learnt to walk, to grasp objects and to distinguish between those near at hand and those at a distance, although at first he had no visual perception of distance, all seen objects appearing close to his eyes. He displayed a great interest in the speech of others and acquired the use of language rapidly, learning first the names of common objects, later the use of adjectives and still later the use of pronouns and of relational and abstract terms. The most remarkable facts in his relearning of speech were that he could at once repeat a word or sentence heard though without understanding the meaning, and that a word "once heard seemed indelibly impressed upon his mind, and he never again forgot it." This rapidity of learning was displayed not only in regard to capacities previously acquired and lost at the time of the accident, but also in acquiring new capacities: *e.g.* "Having had no familiarity with the banjo before the accident, he acquired the skill of playing it in but a few hours . . . with the facility of an experienced player." No indication of any memory of his former experiences could be discovered until the fifth week after the accident, when Mr. Hanna in response to questions, described dreams of two kinds, some vague, others vivid and clear. These vivid dream images had little meaning for him, yet his description of them enabled his friends to conclude that they were reproductions of sense-impressions of his former life: *e.g.* he described a railroad and beside it a square house upon which were the letters N–E–W–B–O–S–T–O–N–J–U–N–C, which he spelled out without understanding their meaning. The next evidence of returning memory was obtained by reading to the patient a part of a Hebrew passage previously familiar to him. He then repeated the whole passage, without, however, any sense of familiarity with it and without understanding it. Attempts to hypnotise Mr. Hanna were unsuccessful, and after six weeks spent in rapid learning he was removed from his quiet home to New York in order that varied and vivid impressions might stimulate his mind.

The first evening was spent in lively company in a large restaurant. Early the following morning he awoke and to the joy of his brother, who shared his room, he displayed a normal capacity of recalling the events of his former life up to the moment of the accident, while all his experiences since that moment seemed to be wiped out from his mind. He did not recognise his physician, his room was completely strange to him, and he was with difficulty brought to admit the lapse of six weeks since the accident, six weeks which for his memory were lacking. He remained awake in this state some three quarters of an hour, then became sleepy, slept for some hours and wakened again as he was on the previous evening, *i.e.* with the command of that knowledge only which he had acquired since the accident. For several days he persisted in this state in spite of efforts to stimulate him to recognise scenes and objects formerly familiar to him. On the fourth evening he was given a dose of *cannabis indica* which produced some exaltation, followed by sleep. In the morning he awoke in his "primary" state again, remembering only his life before the accident and the events of the preceding short period of recovery. He felt weak and sluggish, nevertheless he showed himself in conversation to have full control of his stores of learning acquired at school and university. After a short time he became drowsy, and in spite of all efforts his eyes closed and he fell into a state of profound lethargy and physical prostration from which he could not be roused. This state (named by the authors the hypnoleptic state) continued for about one minute, when the patient suddenly opened his eyes and was found to be in his "secondary" state. In this state he remained until awaking on the following morning, when he was again in the primary state. And these two states then alternated several times, the primary always passing into the secondary through a brief "hypnoleptic" period, the secondary into the primary through natural sleep. Mr. Hanna was urged in every way to resist the oncoming of the drowsiness that heralded the passage into the secondary state, until one day he, while in his primary state, "fell into a condition of what appeared to be deep abstraction." He complained of a severe headache and refused to speak or allow himself to be moved; after about half-an-hour questions elicited responses of "Yes" and "No," which showed that he knew *directly* of both primary and secondary states. He remained in this dazed state about two hours and then gradually recovered. He stated that while lying on the couch he was conscious of all that had been said and done

in the room, but that he was "engaged in one of the most intense struggles he had ever experienced." The two personalities, that of the primary and that of the secondary state, "arose simultaneously and confronted each other." . . . "It was a struggle for life between two individualities formed in a single mind, each one endeavouring to gain ascendancy and to suppress, to crush the other; and still neither could be suppressed, because each was part and parcel of the other." "I was willing to take either. The struggle was not so much to choose one as to forget the other. I was trying to find which I might most easily forget. It seemed impossible to forget one; both tried to persist in consciousness. It seemed as if each memory was stronger than my will, and still I had to determine which to drive away." "Finally," he says, "I decided to take both lives as mine, because of the fear and anxiety that the struggle would be repeated again and again. . . . I have now retained both memories; I am sure both are mine. They are separate, and I cannot yet fit the two well together. . . . The secondary state is stronger and brighter, but not more stable."

From this time onwards Mr. Hanna retained the power of recalling the experiences of both states and may be said to have recovered completely from the effects of his accident.

This remarkable case differs from all others of similar character hitherto reported in several respects, notably in the completeness of the loss of all acquired facilities and knowledge, and in the eventual recovery by the fusion of the two personalities or memory-continua.

The authors interpret the case as one of complete "psycho-physiological dissociation, the dissociation and disaggregations of systems of central neural elements with their concomitant psychic systems or moments consciousness" The authors claim that this principle fully accounts for the facts, but to me, at least, much remains obscure and hard to explain, perhaps because I fail to seize the leading ideas of the authors and cannot understand what is meant by "moments consciousness," a phrase which plays a great part in all the speculative and explanatory discussions of this book. The reported facts of observation (if we accept them without reserve) seem to justify the authors' statement that although he (Mr. Hanna) was mentally reduced to a state of infancy, his intelligence remained intact. In attempting to understand the condition the most important statements to bear in mind are that "although Mr. Hanna was mentally blind and had lost all know-

ledge formerly possessed, both in relation to the external and internal world; although he was mentally reduced to a state of infancy, strange to say, his intelligence remained intact. His curiosity for acquiring knowledge was keener than ever, and the use made of his acquisitions was truly astonishing. His faculty of judgment, his power of reasoning were as sound and vigorous as ever. The content of knowledge seemed to have been lost, but the form of knowledge remained as active as before the accident and was perhaps even more precise and definite."

We may try to account for this condition in terms of changes in the nervous system, accepting some such view of the nature and evolution of mind as is given by Herbert Spencer, and remembering that the growth of the individual mind is, according to this view, due to two factors,—(1) the spontaneous development of nervous structure representing the accumulated experience of countless ancestors, a development that continues throughout the period of growth; (2) the retention of the effects of individual experience in the form of associations between brain-elements and systems of such elements brought about in the course of conscious reactions to the impressions received from the external world. If with Spencer we assume that in the adult the nervous structures of the former kind determine the forms of perception and inference, of mental activity in general, while the latter determine the content of our ideas and in part of our perceptions, and if we assume, as we may do without improbability, that the latter kind of structure is less stably organised than the former, then we may suppose that the concussion of Mr. Hanna's brain brought about some degree of dissolution of all associations between brain-elements acquired during the course of his individual experience, leaving intact all those inherited by him and representing ancestral experience. In this way we may seek to understand the fact that Mr. Hanna's mind seemed emptied of content while retaining its faculties or forms of activity unimpaired; that as regards mental content he became as a newborn babe, while as regards the forms of activity and his inherited dispositions and aptitudes, his instincts and reflex actions, he suffered no appreciable loss, and remained an adult of well-developed mental powers. But a difficulty meets us when we pursue further this line of explanation. If we could assume that all acquired associations were simply and completely dissolved, we could then explain the great facility with which he acquired and retained powers of movement and impressions and ideas of all kinds, a

facility far exceeding that of a young child, as due to the fact that his brain contained an immense number of fully formed nerve-elements ready to enter into associations, whereas in the brain of the young child these elements are for the most part imperfectly organised, and only gradually become capable of playing their part as members of the systematically organised groups of elements. But the fact that Mr. Hanna eventually recovered his memory of his former life shows that the acquired associations were not destroyed, but suffered only a temporary functional depression; hence the authors assume that the extreme rapidity of the reacquisition of the power of co-ordinated movement, of the use of language, and of ideas in general was due to the fact that associations had not to be formed *de novo*, but only to be restored by use to a condition of functional effectiveness. But the fact that Mr. Hanna acquired with equally astonishing rapidity skill in the playing of musical instruments with which he had before the accident no familiarity shows that in this case the acquisition was really a new acquisition, —not merely a reawakening of old facilities—and renders it at least possible that the same is true of all his acquisitions in the six weeks following the accident. This view seems to be borne out, too, by the fact of the formation after the accident of a completely independent memory-continuum. If the acquisition of facilities and ideas after the accident consisted merely in a restoration of structures previously formed to a condition of efficiency we should expect to have observed a gradual reawakening of the lost memories, a gradually improving recognition of previously familiar persons and objects. But nothing of this sort was observed. The lost memory-continuum was recovered suddenly and completely and the new-formed memory-continuum persisted contemporaneously with it; and the two, being discontinuous, and yet both having that character of warmth and intimacy which belongs to the reproductions of past experiences, seemed to constitute two past selves each claiming continuity with the present self.

If we could accept the view that the two cerebral hemispheres function in large part independently, and that one may be dormant and undeveloped, while the other becomes the store-house of acquisitions, then we might suppose that after the accident the former had been called into activity and had become educated and organised. That this may occur in a very partial degree is proved by certain cases of recovery of speech depending upon organisation of a speech centre in the right hemisphere after

complete destruction of Broca's area in the left hemisphere. But that the one hemisphere may normally be so latent as to afford a satisfactory explanation of this remarkable case is improbable. Perhaps we should rather look to the evidence, to which some authorities attach great importance, indicating that in most of us a large proportion of the cells of the cortex of both hemispheres remain throughout life outside the functioning systems and practically unused.

The case may be interpreted in another than the purely physiological manner. It may be held that in the remarkable separation in this case of the form and the content of mental process we have evidence that, while the content depends upon the systems of associated neural elements built up in the course of individual experience, and is therefore liable to be temporarily or permanently abolished by a physical shock to the brain substance, the forms of mental activity are not dependent upon nervous organisation but purely upon the psychical constitution of the individual, a constitution which being immaterial is not to be destroyed by an injury to the brain. We should then have to regard the difference between a new-born child and Mr. Hanna after the accident as due to the fact that the former has an insufficent mass of fully developed neural elements to permit of the rapid organisation of complex systems conditioning a mental content rapidly growing in volume and complexity and giving scope and occasion for the higher forms of mental activity, while in the brain of the latter such a supply of neural elements was present, only awaiting the incidence of sense-impressions to become organised *de novo* as the material conditions of the new memory-continuum under the guidance of the unimpaired psychical constitution. And in support of this interpretation one might put to those who would adopt the former purely physiological line of explanation, the question: "What then is that something which watched and suffered and strove to decide the issue in that strange contest for predominance between the two memory-continua and which ultimately adopted them both as its own past experience?"

This case of alternating personality is especially interesting from the point of view of psychical research in that its issue in recovery with fusion of the two personalities puts out of court the explanation by the hypothesis of possession or "spirit-control," which has been suggested in regard to some other cases, notably in that of Lurancy Vennum (see *Human Personality*, Vol. I., p. 65 and pp. 360-68), where this explanation was generally accepted by the persons who wit-

nessed the phenomena at the time. The evidence adduced for it would indeed seem strong, but for the fact that little, if any, precaution appears to have been taken to guard against the patient's acquiring by normal means knowledge of incidents in the life of the girl whom she was supposed to be personating. The case is nevertheless a remarkable one, and those who regard it as one of "spirit-control" may naturally be inclined to extend the explanation to all instances of alternating personality. So long as no instance of fusion of the two or more personalities was known this remained possible. In this case the explanation is clearly not applicable, and therefore those who adopt it for cases of the Lurancy Vennum type must recognise that not all cases can be brought into this class; they must recognise two distinct and very different kinds of alternating personality.

Of great interest to members of the S.P.R. is the statement that Mr. Hanna soon after the accident exhibited powers of clairvoyance, in that "he was able to find objects hidden from him, and was uniformly correct in guessing in which hand a small coin was held," and that "In like manner the straps with which he was bound after the accident he invariably located, in spite of the fact that his family made every effort to conceal them, since their presence agitated him." It is significant of the attitude of men of science towards the work of the S.P.R. that these statements are relegated to a footnote and that the authors do not seem to have considered them worthy of investigation, though accepting them as evidence of the sensitiveness of the secondary personality.

The rest of the book is occupied with theoretical discussions of a somewhat confusing character, illustrated by the citation of other morbid cases, some of which are of great interest. The authors claim that their successful treatment of the case of Mr. Hanna constitutes a verification of their theoretical interpretation. But though they certainly may claim credit for skilful treatment, it must remain doubtful, as so often in medical practice, to what extent the treatment played an essential part in bringing about the recovery.

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