SKIRTING THE ABYSS: A HISTORY OF EXPERIMENTAL EXPLORATIONS OF AUTOMATIC WRITING IN PSYCHOLOGY

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Automatic writing has been of interest to psychologists, clinicians and theoreticians of the mind both as a phenomenon in its own right and as a technique for exploring aspects of dissociation and normal and pathological consciousness. This paper follows the course of experimental investigations of automatic writing in psychology; beginning with the early work of Frederic Myers and Edmund Gurney and continuing with that of Alfred Binet, Pierre Janet, William James and Morton Prince, it centers on the 1896 experiments of Leon Solomons and Gertrude Stein, but also examines later laboratory studies. The conceptual and methodological challenges posed by automatic writing persist in such contemporary concerns as divided attention, implicit memory, and dissociations of awareness and intentionality.

This dissociation of the consciousness into mutually exclusive parts is evidently a phenomenon destined, when understood, to cast a light into the abysses of Psychology. — William James[1]

Automatic writing has assumed multiple identities during its many sojourns in psychology but the questions it has posed are of the enduring and deep kind that one is liable to peer into but briefly, before cautiously skirting them en route elsewhere. Seldom stated explicitly, nonetheless, behind the fledgling and more mature experimental explorations of automatic writing stir such questions as: Are mental habits acquired, and enacted, in the same way as motor habits? How much of symbolic activity — generation, production, reproduction — occurs within the purview of awareness? Wishing to construe symbolic activity as, if not exclusively, then at least prototypically, human, does it embody too much of what lies within and close to our conceptions of freedom, of the will, and the uniqueness of the individual to be readily or unequivocally denoted "automatic"? When we approach automatic writing, are we, if we cannot discount it as fraudulent or as the product of self-deception or social collusion, too inclined to construe it as a purely motor or purely mental phenomenon, avoiding any clear conception of a possible hinterland between the maximally and minimally intelligent, the maximally and minimally individual, the maximally and minimally expressive? Do we want always to connect symbolic activity to a self, to a coherent individuality, so that any version of a disaggregation of consciousness or thought is aversive?

Much more than a mere fad, and not nearly so readily discounted as the product of fraudulent or other illicit motives as many might believe, automatic writing has found a place in the clinics, laboratories and minds of many psychologists of no little merit. As a means of tapping the degree of intelligence and perception of the subconscious,

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in normal, pathological and dissociated states and as a convenient response method for exploring qualitative and quantitative changes in attention following extensive simultaneous performance of two complex tasks, automatic writing has proven to have a resilient and multi-faceted existence in psychology.

AN INTRODUCTORY DESCRIPTION OF AUTOMATIC WRITING

In the early 1900s, Morton Prince contrasted two types of automatic writers—those who, at the moment of writing, remained entirely *unaware* of what the hand was writing and those who experienced, at the time of writing, ideas corresponding to the written words, but who felt that those ideas "surge[d] apparently from nowhere without logical associative relation into the mind."[2] This classification parallels the two-pronged definition of automatic writing that I will adopt here; I will use the term to refer either to instances where writing occurs while the writer is preoccupied with something else and the fact of the automatic writing is totally outside of awareness, or to situations in which, although the individual is aware of the writing, he does not feel that he is its author.[3]

Various procedures may be used to induce automatic writing. A common procedure entails distracting the "would-be writer's" attention by asking her to read a book, engage in conversation, or to recite some well-memorized verse or other material. For example, Boris Sidis gives this description of the conditions necessary to obtain automatic writing:

> To induce the first stages of automatic writing the same conditions are requisite as those of normal suggestibility. The subject starting his first lesson in automatic writing must strongly *concentrate* his attention on some letter, figure, or word; he must *distract* his attention from what is going on in his hand; he must be in a *monotonous* environment; he must not be disturbed by a variety of incoming sense impressions; he must keep quiet, thus *limiting his voluntary movements; his field of consciousness must be contracted*; no other ideas but the requisite ones should be present in the mind; and if other ideas and images do enter his mind, they must be *inhibited*.[4]

A type of sling or small board by which the arm is suspended slightly above the writing surface, allowing the arm to move more freely, may also be used.[5] Yet another device is the planchette, which was used especially in some of the early experiments. A popular late nineteenth-century commercial version of the planchette was described as:

> a heart-shaped piece of board, mounted upon three supports. It is seven inches from the depression in the base of the heart to its apex, and seven inches measured across its widest part. Two of the supports are legs of wood or brass, terminating in pentagraph wheels or casters, usually of iron, bone, or hard rubber. The third support is a pencil thrust through a socket at the apex of the heart.[6]

Frederic Myers and Edmund Gurney, two of the founders of the London Society for Psychical Research, were among the first to take seriously the use of the planchette in nonmediumistic, quasi-experimental settings.[7] It is thus with the work of these men, conducted in the 1880s, that this history begins.

EARLY EXPLORATIONS OF AUTOMATIC WRITING BY MYERS, GURNEY, JANET, AND BINET

In the 1888 *Journal of the Society for Psychical Research*, Frederic Myers began his remarks concerning "Further Cases of Automatic Writing" with the assertion that a "few more cases of automatic writing should, perhaps, from time to time be submitted to the readers of the *Journal*, not necessarily on account of any great intrinsic importance in most of them, but rather to help in keeping alive an interest in the subject,

and a willingness to make experiments."[8] A history of automatic writing might appropriately begin with such a statement or, indeed, with any of a number of others that Myers made. Myers called repeatedly for an approach of open-minded skepticism and careful observation of, and experimentation with, automatic writing. He solicited descriptions of the phenomenon from readers of the *Journal*, described and evaluated the cases they sent, speculated as to the processes upon which they relied, and recommended directions and priorities for further research endeavors. He pointed to the power of suggestion, not only in mesmerized or hypnotized subjects, but also, in some persons, in the normal waking state; he urged that more complex problems concerning the content of the automatic messages be postponed until greater understanding had been reached of their mode of operation and of their parallels with the phenomenon of multiple personality, and he recognized the necessity for a finely modulated theoretical and classificatory approach to consciousness: "Considering all these partial, these alternating, these inter-current consciousnesses, these memories ravelled into a many-stranded rope, — we can no longer draw a marked line between the conscious and the unconscious."[9]

Although Myers did believe, in certain cases, that automatic writing provided evidence of telepathy,[10] he considered many aspects of automatic writing to be entirely explicable in terms of normal cognitive and physiological processes. For example, the frequent occurrence of mirror writing — writing produced backwards, like a mirror reflection of normal writing — in automatically produced script might, he thought, result from the use, in automatic writing, of comparatively "untrained centres in the right hemisphere of the brain,"[11] and could thus be compared with cases of organically based problems in writing, or agraphy. Similarly, instances of automatic writing that apparently evidenced some intelligence external to that of the writer could often, he thought, be explained by a tendency, more common than generally recognized, towards the creation of a "secondary chain of memories" that linked together the periods of altered consciousness induced by hypnosis, dreaming, or the ingestion of alcohol or other drugs. Myers explained:

> Could we persuade some correspondent to write us a letter each time that he was in (say) the maudlin phase of drunkenness, the series of letters would resemble a series of planchette-messages in several ways. In the first place, they would express a character differing from his normal character, but congruous with itself. In the second place, the handwriting would be larger and laxer than his ordinary script. And in the third place, our correspondent, when sober, might very probably know nothing of the contents of the epistles, and might even contest their authenticity.[12]

Edmund Gurney provides many examples of automatic writing, from simpler cases, involving memory but not independent thought, to more complex cases apparently tapping an intelligence of some form. A simpler case follows:

> I showed P__ll a planchette — he had never seen or touched one before — and got him to write his name with it. He was then hypnotised, and told that it had been as dark as night in London on the previous day, and that he would be able to write what he had heard. He was woke, and as usual was offered a sovereign to say what it was that he had been told. He was then placed with his hand on the planchette, a large screen being held in front of his face, so that it was impossible for him to see the paper or instrument. In less than a minute the writing began. The words were, *'It was a dark day in London yesterday.'*[13]

Gurney also attempted to explore the relation between the apparent secondary intelligence and the primary intelligence. Under hypnosis, "P__ll" was told to write the

names of three places beginning with the letter "S." Awakened, the subject was instilled with the delusion that his employer was standing beside him, demanding to know what he had been doing that afternoon. "P__ll" wrote, *"Sir I am verry sorry Sutton I whas out Southampton I could not help being Salsbury but I hope by the next I go to Suton Southampton Salisbury Southampton Salisbury Sutton."*[14] Here the secondary intelligence, instructed to write the three places, was evidently influenced by what was then occupying the primary intelligence—the supposed presence of his employer.

Asking whether it might be possible to bring about, in one individual, "an absolutely complete or mutually exclusive segregation of two simultaneous states or streams of consciousness,"[15] Gurney speculated that this might be accomplished by carefully adjusting the nature of the two tasks that were to be simultaneously performed to the total amount of attention which a given individual could command. In two instances, but especially one which again involved "P__ll," it seemed that a state of such segregation was approached. In this episode, while the primary intelligence was engaged in reading about Humpty Dumpty in *Through the Looking-Glass,* the secondary intelligence revealed, upon re-hypnotization, that it had been struggling to write and had, apparently, been enmeshed in an unpleasant hallucination-like state. When asked if he had been reading, this secondary intelligence quite denied it; he said something had been moving about which had disturbed him, it "Kept wandering to and fro. Horrible, awful! I thought to myself, 'I'll get into bed.' It looked so savage — quite unnerved me,"[16] and so on. The reading had been carried on, slowly, and with some omission of words, but nonetheless with evident comprehension, and enjoyment. Gurney concluded:

> Here, then, was a remarkable result. Not only was the normal self, as usual, quite alert, and its interest in Humpty Dumpty quite unalloyed by the dark fancies of its hidden fellow; and not only on re-hypnotisation was there no memory of the manner in which the normal self had been employed; but there was a distinct memory of something else. An experience which must have belonged to the secondary self (since the primary had no knowledge of it) is shown to have had a very substantive reality, and actually prevails over a decidedly vivid piece of normal life on the plane of subsequent memory. The result seems a pretty clear proof that the states were mutually exclusive in *this* instance; and renders it probable that they may be so in *any* instance where the available stock of attention (which there is no reason to believe to be increased by the segregation of states) is completely used, and where the subjects which engage the two lines of attention are themselves sufficiently distinguished.[17]

In his contribution to an American symposium on the subconscious, Pierre Janet briefly described the case of a twenty-year-old woman who often experienced psychogenic fugues lasting several days, during which she would wander far from home. Although, afterwards, she seemed to have lost all memory of the occurrences just prior to and during the fugue state, Janet reported that, through automatic writing, she, apparently quite unwittingly, revealed many of these circumstances:

> Under distraction and while she was thinking of something else, I put a pencil in her right hand and she wrote me the following letter apparently without cognizance of what she was doing. — "I left home because mamma accuses me of having a lover and it is not true. I cannot live with her any longer. I sold my jewels to pay my railroad fare. I took such and such a train," etc. In this letter she relates her entire *fugue* with precision although she continues to contend that she remembers nothing about it.[18]

Janet was quite emphatic in his rejection of the notion that such phenomena might be entirely explicable in physiological terms, or that, as Hugo Münsterberg had said,

"the subconscious is not psychical at all."[19] Janet remonstrated that such an "assimilation of the conduct of the somnambulist, of the execution of the suggestion, of a page of automatic writing, with incoördinate convulsive movements is pure childishness."[20] These varied acts are identical, he said, with those which we are accustomed to seeing in ourselves, and which we normally explain with reference to *intelligence*. He reasoned:

> In our ignorance, we simply know that certain complex facts, like an intelligent reply to a question, depend upon two things which we believe associated; superior cerebral mechanism and a phenomenon which we call an effect of consciousness. We find the same characteristics in the so-called subconscious phenomena, and we must suppose back of them the same two conditions.[21]

In *On Double Consciousness,* Alfred Binet, in 1890, reported several imaginative experiments that he undertook using automatic writing. Working with both hysterical patients and normal subjects, Binet remarked that such experiments could attempt to invoke behaviors involving such a degree of intelligence, organization, and complexity that they could not be explained simply in terms of unconscious factors. He gives the following example, conducted with an hysterical patient and selected, he notes, from among many others:

> We put a pen into the anaesthetic hand, and we make it write a word; left to itself the hand preserves its attitude, and at the expiration of a short space of time repeats the word, often five or ten times. Having arrived at this fact, we again seize the anaesthetic hand, and cause it to write some familiar word, for example, the patient's own name; but in so doing, we intentionally commit an error in spelling. In its turn the anaesthetic hand repeats the word, but oddly enough, the hand betrays a momentary hesitation when it reaches the letter at which the error in orthography was committed; if a superfluous letter happens to have been added, sometimes the hand will hesitatingly re-write the name along with the supplementary letter; again it will retrace only a part of the letter in question; and again, finally, entirely suppress it.[22]

Interpreting this experiment, Binet reached a conclusion very similar to that of Janet: the correction of the spelling error indicated, he believed, the presence of some form of guidance by *thought*. The diagnostic value of such not-entirely-blind errors was also emphasized by Binet in his assessment of another group of experiments involving vision. Here it was found that the so-called second consciousness of the hysterical patient could read print that was placed at a distance beyond the point at which the patient consciously claimed that she could read. This greater visual acuity of the second consciousness could be revealed, said Binet, through automatic writing. However, if the subject was situated too far from the print, the subject began to make errors, writing, for example, "Lucien" instead of "Louisa." This observation, thought Binet, "proves that the phenomenon wrongly bears the name of automatic writing; an automaton does not mistake; the second consciousness, on the contrary, is subject to error because it is a consciousness, because it is a thing that reasons and combines thoughts."[23]

Binet described several investigations that he undertook with five normal women, all that of whom were apparently naive to studies of this kind. He found it particularly easy to train these subjects to repeat certain passive hand movements. Having requested the subject to sit at a table and to begin reading while "leaving" their right hands to him, Binet would wait until the subject was reading attentively. Then, placing a pencil in the subject's hand, he made the hand move through some simple form, selecting one that it seemed to follow most naturally, such as curls or small dots. After suggesting

this movement for a few minutes, Binet gently freed the hand to move on its own. Initially, the hand would continue the movement briefly but, after three or four experiments, the movement became increasingly accurate and could be maintained uninterrupted for as many as eighty repetitions.

Having worked with each of his five subjects approximately six times, Binet noted that these phenomena gradually became more pronounced and he speculated that they would very likely become even more so with further practice. Only one of his subjects consistently failed to display automatic writing. Of the four other subjects two showed, according to Binet, elementary phenomena of double consciousness, and in two these phenomena were fairly developed. Binet concluded:

> My aim here was simply to show that the rudiment of those states of double consciousness which we have studied first in the hysterical, may with a little attention be found in normal subjects . . . . Automatic writing is the best known of these facts of double consciousness; but we have seen that it is not isolated. It is only one in a large class of phenomena, others being the repetition of communicated movements, suggestion by contact, insensibility by distraction, &c. All these phenomena, when brought together, throw light on one another and attest the formation of a centre of consciousness functioning independently of the common centre. My experiments appear to me to demonstrate that many normal subjects, if not all, are apt to have their psycho-motor centres thus disaggregated.[24]

THE EXPERIMENTS OF WILLIAM JAMES AND MORTON PRINCE

Directly paralleling the line of reasoning adopted by Binet, Morton Prince argued that, in automatic writing, if the subject is truly unconscious of what the automatic hand is writing, then the hand should be anaesthetic so far as the primary consciousness is concerned: "But, if this writing is not done simply as a purely reflex process but by a second conscious personality, it must be that *this hand is in sensorial connection with such a personality*, in such a way that every impression made upon the hand and every movement of it must be felt by this second personality."[25] Prince then describes an experiment he conducted with "Mrs. B.," which determined that she was indeed anaesthetic to pinpricks on her right (writing) hand while engaged in automatic writing, though later, under hypnosis, she revealed that she had nonetheless felt the pinpricks of which she had given no observable sign of discomfort. However, although these results were supportive of Prince's reasoning concerning the existence of a sensorial connection with *some* consciousness, the responses obtained seem not to have been as clear and unambiguous as those obtained previously by William James, in his 1885 experiments with William L. Smith, a twenty-one-year-old student at the Massachusetts Institute of Technology:

> The planchette began by illegible scrawling. After ten minutes I pricked the back of the right hand several times with a pin—no indication of feeling. Two pricks on the *left* hand were followed by withdrawal, and the question, "What did you do that for?"—to which I replied, "To find whether you were going to sleep." The first legible words which were written after this were, *You hurt me.*
>
>   A pencil in the right hand was then tried instead of the planchette. Here again the first legible words were, *No use* [?] *in trying to spel when you hurt me so.*[26]

Prince interpreted these, and similar experiments, as providing confirmation for the notion that automatic writing is "not a purely unconscious reflex act, but, the product of a conscious individuality."[27] He drew attention to the congruence between these

experiments and the investigations by Binet of similar phenomena found in the anaesthetic hands of certain nonhypnotized hysterics. Noting that such hands could be induced to show intelligent adaptations of various forms, though the subjects themselves remained unaware of them, Prince remarked especially upon how sometimes, despite the loss of all tactile and muscular sense, an arm or hand could be made to begin a certain movement, including the writing of a word or words, which it then might complete independently.

However, this similarity between the responses of some hysteric patients and some automatic writers, appeared to be subject to individual variability as not all automatic writing was accompanied by anaesthesia. For example, one of Gurney's subjects described sensations like "pins and needles" and "galvanic shocks" in his hand and arm — so much so that he "certainly suffered considerably, and conceived a strong aversion" to the planchette.[28] James also noted that automatic writing was "usually preceded by shooting pains along the arm-nerves and irregular contractions of the arm-muscles," and reported in his *The Principles of Psychology* that he found the hands of two automatic writers anaesthetic during the act, but for two others this was not the case.[29]

In his 1909 article, "Experiments to Determine Co-Conscious (Subconscious) Ideation,"[30] Prince again contrasted two interpretations of the purported manifestations of co-consciousness: the physiological interpretation and the psychological interpretation. His own position was clearly the latter; he construed subconscious manifestations as expressions of subconscious *ideas* that were, to a greater or lesser degree, dissociated from the personal consciousness. The physiological interpretation, on the other hand, was a position taken by such theoretical psychologists as Münsterberg; it held that all of these subconscious manifestations could be explained as the result of physiological processes, without any association with ideas.[31]

Prince had initially introduced automatic writing as a control procedure while he was conducting various experiments with Miss Beauchamp, a patient with multiple personality. One of Miss Beauchamp's personalities claimed to be co-conscious with another of her personalities, both when she was in her normal state and when she was hypnotized. Concerned that it was possible that certain calculations he demanded of the co-conscious personality were not actually performed in a state of co-consciousness, but rather in the brief transition period that occurred in alternating between personality states, Prince introduced automatic writing. Here, the required calculations, for example, determining the number of seconds between two times such as "12:11" and "1:20," could be surreptitiously introduced to the co-consciousness, and the solution written automatically by the co-conscious, while the primary personality was continuously engaged in conversation.[32]

Often Miss Beauchamp's calculations in these time subtraction experiments were incorrect: the calculated minutes would be wrong, but the multiplication into seconds would be done accurately. Yet Prince saw these errors as relatively unimportant, in part because the hand initially tried to *explain* how the solution was derived, and because the calculations were difficult to perform mentally without the benefit of seeing what was written and in the absence of an ability to visualize the numbers. Thus these experiments, together with a somewhat different experiment, in which he taught the co-conscious personality some dozen characters of a personally devised, idiosyncratic shorthand, and in which he found that, although it meant nothing to the primary personality, it was readily translated in the automatic writing, persuaded Prince that the evidence was against the physiological interpretation of the co-conscious. That, he said,

"such perceptions, interpretations, calculations and translations could have been made by pure *physiological processes without thought* is inconceivable and not substantiated by anything that we know of physiological processes."[33]

Nonetheless, Prince recognized that one must be careful in generalizing from cases such as these to automatic writing in normal subjects. He drew a clear distinction between these pathological cases of extreme dissociation in the form of multiple personality, and the evidence for subconscious processes seen in the automatic writing of normal subjects. Prince was aware of the danger of which James had cautioned, of producing apparent secondary personality by suggestion. James had remarked upon the ease with which such personalities might be created in hypnotized subjects and that one must, therefore, "be on one's guard in this matter against confounding naturally double persons and persons who are simply temporarily endowed with the belief that they must *play the part* of being double."[34] Prince pointed to the errors that may arise from the mistaken assumption that automatic writing is produced by the subconscious mind, construed as a single entity. Stressed Prince:

> There is no 'subconscious mind' or 'self' in the sense in which these terms are popularly used even by psychological writers. At least there are no facts which justify such concepts. There are subconscious processes any of which may take on autonomous activity and determine 'automatic' and other kinds of behavior (including conscious mental processes of the personal consciousness); and among these activities may be automatic writing and hallucinations. Theoretically, therefore, such script may be written by any number of different, and more or less independent, systems of integrated dispositions; *i.e.*, subconscious processes. Practically it is not uncommon to obtain script produced by two, three, four, or more such processes in the same individual.[35]

In his *Principles* chapter on "The Consciousness of Self," James suggests that we ought not to speak of a duplication of the self but instead should talk of a division of *objects*, usually combined, but now separated between two "selves." Speculating about the condition of the brain during certain hysteric states and during automatic writing, James says that we must grant that "it must be supposed capable of successively changing all its modes of action, and abandoning the use for the time being of whole sets of well-organized association-paths." For:

> In no other way can we explain the loss of memory in passing from one alternating condition to another. And not only this, but we must admit that organized systems of paths can be thrown out of gear with others, so that the processes in one system give rise to one consciousness, and those of another system to another *simultaneously* existing consciousness. Thus only can we understand the facts of automatic writing . . . . But just what sort of dissociation the phrase 'thrown out of gear' may stand for, we cannot even conjecture; only I think we ought not to talk of the doubling of the self as if it consisted in the failure to combine on the part of certain systems of *ideas* which usually do so. It is better to talk of *objects* usually combined, and which are now divided between the two 'selves,' in the hysteric and automatic cases in question. Each of the selves is due to a system of cerebral paths acting by itself. If the brain acted normally, and the dissociated systems came together again, we should get a new affection of consciousness in the form of a third 'Self' different from the other two, but knowing their objects together, as the result.[36]

Summarizing his experiments with the student Smith, James remarked that:

> in *certain persons*, at least, *the total possible consciousness may be split into parts which coexist but mutually ignore each other*, and share the objects of knowledge

between them. More remarkable still, they are *complementary*. Give an object to one of the consciousnesses, and by that fact you remove it from the other or others. Barring a certain common fund of information, like the command of language, etc., what the upper self knows the under self is ignorant of, and *vice versa*.[37]

Here it appears that, despite James's suggestion that we ought not to talk of "selves" but of divided "objects" of consciousness, this recommendation is not so readily carried over into one's language, and that even in explaining what is meant by "objects" the phrasing in terms of selves tends to re-emerge. Yet such terminology should be recognized, as it was by James, and by both Myers and Gurney, as a matter of convenience only. Thus, James said of Myers that he "would be the first to say that his phrase 'subliminal self' is only a temporary noun of designation for a certain group of facts"[38] and Gurney noted that the "word 'self' is too convenient to be dispensed with, but must not be misunderstood. In such cases as these, the 'secondary self' is a mere rudiment of a personality: it is no more than a short connected train of intelligence of whose activities and products the normal self is unaware."[39] Similarly, the position of both Prince and James concerning the concept of dissociation, despite these problems in finding an adequate terminology, is more moderate than extreme. Co-conscious states or processes in normal individuals are admitted, and deemed eminently worthy of study,[40] by automatic writing and other means, but these states or processes are not really multiple *selves*.

THE LABORATORY STUDIES OF SOLOMONS AND STEIN, AND DOWNEY AND ANDERSON

One of the earliest studies of automatic writing performed with normal subjects in an experimental setting was that published in the *Psychological Review* of 1896, by Leon M. Solomons and Gertrude Stein, under the title "Normal Motor Automatism."[41] Solomons, a graduate student at Harvard University, and Gertrude Stein, then a student at Radcliffe College, working in the psychological laboratory of Hugo Münsterberg, themselves served, in turn, as investigators and subjects. In their experiments they especially sought to determine, first, the limits of normal motor automatism, and, second, whether an explanation in terms of such limits could entirely equal less parsimonious explanations relying upon the notion of second personalities.

This latter question was, they thought, "capable of satisfactory solution by observation and experiment, and of great importance to scientific psychology." However, if their experiment was to adequately address this question, it was crucial that they should avoid anything resembling the creation of a second personality; it was imperative that "no suspicion should rest upon the complete 'normality' of the subject throughout the experiments." Thus, Solomons and Stein aimed to "reproduce rather the essential *elements* of the 'second personality,' if possible, in so far as they consist of definite motor reactions unaccompanied by consciousness."[42]

These essential elements of a second personality were considered under four groups, which also corresponded to the divisions Solomons and Stein made in the presentation of their experiments. The first set of experiments was designed to show a general tendency towards movement in the absence of a conscious motor impulse. These experiments involved the use of a planchette consisting of a glass plate mounted on metal balls, with a metal arm holding a pencil. Solomons and Stein, who state that both of them had previously attempted, "in vain to 'write planchette'" and that neither of them had "any aptitude for willing games, etc."[43] discovered that it was not very difficult to obtain initial movements.

At first the subject simply placed one hand firmly on the planchette, and then became as deeply engrossed in reading a novel as possible. Under these conditions, it was found that very slight stimuli, such as those arising when the positioning of the subject's arm began to grow uncomfortable, or a slight movement of the planchette by the "operator," were sufficient to start movements. It was also found that any movement, once started, tended to continue of itself and that it was sometimes possible to teach the arm some particular movement, such as the making of *m* strokes, which it would then, for a time, go on making of its own accord. If the story that the subject was reading was very interesting, all of this activity occurred without his knowledge. Especially noteworthy was Solomons and Stein's observation that, on some occasions, when they did become conscious of the arm movements, they appeared to be *extra personal*. "It is not he but his arm that is doing it. He cannot say whether his arm is moving spontaneously or whether it is being moved by the operator."[44]

From these experiments Solomons and Stein concluded (in essential agreement with Binet's earlier observations) that, in normal subjects, there is a general tendency towards movement based on purely sensory stimuli. This general tendency was, they said, independent of all conscious motor impulse or will, and although normally inhibited, emerges as soon as the subject's attention is fully diverted.

Their second group of experiments was designed to demonstrate a tendency of *ideas* to express themselves in involuntary and unconscious movement. In this series of experiments, the subject was given a pencil and, again, while engaged in reading a story, kept his pencil continuously moving over the paper as though writing. Solomons and Stein found that these writing movements rapidly became automatic and did not interfere with the subject's giving his full attention to his reading. They also found, under these circumstances, that there was "a very decided tendency to write down words read, especially simple words such as the, in, it, etc." Although sometimes the writing was completely unconscious, more often the subject was aware of what was happening. However, that awareness "was obtained by sensations *from the arm*. He was conscious that he just *had* written a word, not that he was about to do so." Thus, as long as

> mere scribbling went on the subject would scarcely be conscious that he was doing anything; but the writing of a word—either because of the different character of the movements, or their greater energy—seemed to attract his attention. Small words would usually be completely written before the subject knew about it, but large words would only get started.[45]

In their third group of experiments, in which they sought to explore the unconscious translation of *sensation* into motor behavior, Solomons and Stein attempted writing at dictation, again while the subject's attention was occupied as fully as possible in reading. These experiments proved to be the most difficult of any Solomons and Stein attempted, and demanded the most training. At first they found that it was virtually impossible to follow the reading and that there was an almost irresistible tendency to stop whenever a word was given, attend to its writing, and then resume reading. Nonetheless, despite the difficulties, "there were momentary lapses of consciousness right from the start," "[v]ery uncertain in character and very rare," but sufficient to encourage them to continue. With time, and when the story being read grew very interesting, "cases of pure automatism" began to appear frequently; the "word is written or half written before the subject knows anything about it, or perhaps he never knows about it."[46]

Solomons and Stein distinguished four elements in the writing of a word at dictation, including hearing the sound, forming a motor impulse, a feeling of effort, and the

sensation from the arm telling of the written word. The first of these to disappear, they said, was the feeling of effort. "We hear the word, have an idea of how it should be written, and then it is written. The writing seems perfectly voluntary, but there is no sense of difficulty, of 'something accomplished.'" Next comes the disappearance of the motor impulse, in which the "writing becomes non-voluntary. We hear the word, and we know what we have written; that is all." Finally, *real* automatism, or the "dropping out of consciousness of the other two elements, heard sound, and return sensations from the arm" was found to occur only "at intervals and for short periods at a time. But it comes *whenever the attention is sufficiently distracted.*"[47]

This study raises several intriguing questions. One question is whether, during the brief periods of true automatism, there is a state of actual unconsciousness or, rather, something like rapid alternation without memory. Solomons and Stein held that they observed and experienced in themselves both of these, but more often the latter. Thus they noted that they might be absolutely unable to recall a single word they had written, but would nevertheless feel quite certain that they had been writing, and had been conscious of every word while writing it. They stated:

> The consciousness without memory seems to *approach as its limit,* simply a condition in which the subject has not the faintest inkling of what he has written, but feels quite sure that he has been writing. It shows no tendency to pass beyond this into real unconsciousness. It seems to depend on the lack of associations between the different words — one word going out of consciousness before another has come in to be associated with it. It is facilitated by slow dictation. And conversely real unconsciousness appears not as a final stage of a gradually decreasing memory, but quite suddenly. It may break into a period of consciousness without memory, and be followed by such again, but it is equally likely to break into a period of complete memory. In either case it comes entirely unheralded by any transition form, and departs as suddenly and silently. It does not seem to depend upon association elements at all — is entirely independent of the speed of dictation up to the limit of writing speed.[48]

From this experience of something so entirely consistent with the alternation-without-memory hypothesis, "yet so strikingly different from the well known phenomenon of unconsciousness," Solomons and Stein concluded that there was "little room for reasonable doubt as to the correctness of the common sense view of the unconscious — the view, that is, that it really is unconscious."[49]

Solomons and Stein also make several interesting observations about the passages produced by their attempts at *spontaneous* writing. For example, in these passages there was a marked tendency to repetition; a particular phrase would tend to emerge in the writing and then reappear, repeating itself from one day to the next. Further characteristics of the writing were its grammaticality — the "stuff written was grammatical, and the words and phrases fitted together all right, but there was not much connected thought" — and the alternation of unconsciousness with flashes of consciousness, leading them to remark that they could not be sure that the slight element of connected thought which occasionally appeared in the writing was not due to these moments of consciousness. Yet the ability to write things that sounded acceptable, even without such consciousness, was clear. For example, they wrote, "Hence there is no possible way of avoiding what I have spoken of, and if this is not believed by the people of whom you have spoken, then it is not possible to prevent the people of whom you have spoken so glibly . . . ." and, in a passage that is described as "a bit more poetical than intelligible," they rendered, "When he could not be the longest and thus to be, and thus to be, the strongest."[50]

These descriptions of the automatic writing, its being "more poetical than intelligible," the emphasis on repetition, and the intermittent emergence into awareness, all were emphasized by B. F. Skinner in an article he wrote for the *Atlantic Monthly*,[51] in 1934, in which he explored the connections between Stein's early experiments in automatic writing and some of her literary work, particularly her 1914 book *Tender Buttons*. Skinner's response to the question, "Has Gertrude Stein a Secret?"—the title of his article—is careful, and provocative. He holds, for example, that the inferential author of *Tender Buttons* has a "superficial character" analogous to that of the unorganized elements of personality that Stein and Solomons showed in their experiments. However, discussion of the credibility of the theory of the automatic authorship of this book would take us rather too far afield[52] and we turn, instead, to a final observation of Solomons and Stein which was subsequently taken up and disputed by June Downey and John Anderson,[53] in a series of experiments conducted at the University of Wyoming, and published in 1915.

This latter observation concerned the question of the relative speed of the writing which occurs under automatism. Solomons and Stein remarked that in "all automatism the tendency toward increased speed is marked," and that "[w]riting tends towards a pace that very quickly tires."[54] Downey and Anderson who, like Solomons and Stein, acted both as subjects and experimenters (though in designating the former they use the term "reagents"), point to the lack of reported data by which the earlier claim might be evaluated. They observe that in their own experiments, they "failed to attain, except in rare instances, an approximation of the normal possible speed" and that this failure was particularly true in the case of one of their experiments, a dictation experiment, which was very similar to that of Solomons and Stein.[55] Downey and Anderson acknowledge that, subjectively, they often experienced their writing as speeding beyond normal limits but objective measures revealed, overall, speed *retardation* of some form.[56]

Several of Downey and Anderson's experiments involved a slightly different method from that used by earlier investigators in that the material that was written while reading was a perfectly memorized verse, which would be written repeatedly in a given session. Their experiments also included such variations as having the subject read aloud, or continuously add columns of figures, while writing memorized verse. Most importantly, as evident from their results reported above, they included measurements of the rate of reading and writing and attempted to determine the "normals" or baselines for these activities. For example, in the condition of simultaneous writing and adding, Anderson's writing speed was found to be retarded by at least six seconds, and the adding speed by three or more seconds. This retardation in adding was, rather suggestively, said to be "just about that required for *thinking* the verse."[57]

When engaged in silent reading and writing memorized verse, Downey reported that the reading became increasingly easy to maintain and the writing "more automatic"; sometimes there "was an actual doubling of consciousness."[58] Anderson reported experiences similar to those observed by Solomons and Stein concerning the temporal ordering of the cues to what was written, such that the cue seemed to come, not before but rather *after* the word was written. In reading aloud and taking dictation, despite generally good memory for the contents read, there were "times of curious lapse of memory of details," with both experimenters feeling that the details were "on the tip of the tongue" before losing them.[59] Downey in particular lost, or never made, connections between words; this likely contributed to the notable finding that the number of words she could recall after one minute was close to the number that she could recall after

three or more minutes. Downey reported that once or twice words were written automatically; consciousness of her hand was also lost once or twice. Both Downey and Anderson found that sometimes a word was simply heard and written, without any intervening cues or kinaesthetic report and Anderson found that some "very easy words seem[ed] to be written unconsciously."[60]

However, in reflecting on the distinction that Solomons and Stein had drawn between lapses of awareness due to memory failure and lapses due to "real unconsciousness," Downey and Anderson concluded they were unable to affirm any such distinction. They explained:

> We found that sensory control could be reduced to a minimum both in writing a memorized verse and in taking dictation. Moreover, there were instances where the reagents reported a lapse of awareness covering perhaps several words but they were never confident that at the time of writing there had been no consciousness. As the experiment progressed we came to realize more and more the extent to which a reported lapse of awareness might be a lapse of memory instead. Throughout, there was evidence of progressive restriction of memory, failures to make associative connections, dependent very obviously upon practise. Thus in the dictation experiment breaks occurred, first, in sentence connections, then in phrasal connections, — each word became detached. At the close of even a short interval the reagents were able to recall little of what they had written although confident that at the time of writing they had been aware of it.[61]

These observations, together with several further observations lead Downey and Anderson to conclude that all of the lapses they reported were *memory* lapses that "approached as a limit a completely dissociated mental bit," and, more broadly, that "possibly, consciousness itself should be phrased wholly in terms of connection."[62]

AUTOMATIC WRITING IN THE LABORATORY—TO THE PRESENT

There are two prominent, often intersecting and merging, routes that one could trace from these early automatic writing experiments to subsequent and more recent theoretical and empirical developments. One path that might be followed would trace the not-always-level course taken by the concept of dissociation; the other, perhaps equally uneven, path focuses more specifically on the notion of automaticity.

The concepts of automaticity and dissociation often are difficult to distinguish because each has been defined by reference to several non-mutually exclusive factors or dimensions. For example, although the notion of automatic processing has itself been formulated and reformulated in a number of ways, it has generally been contrasted with non-automatic or "controlled" processing on the following three dimensions, identified by Odmar Neumann as common to his own theory of automaticity and to the views of Michael Posner and Charles Snyder, as well as those of Richard Shiffrin and Walter Schneider:[63]

1. A mode of operation: Automatic processes operate without capacity and they thus neither suffer nor cause interference;
2. A mode of control: Automatic processes are under the control of stimulation rather than under the control of the intentions (strategies, expectancies, plans) of the person;
3. A mode of representation: Automatic processes do not necessarily give rise to conscious awareness.[64]

Because Janet's initial delineation of dissociation, both in relation to automatic writing and more generally, was often understood as requiring a complete functional

independence of the primary consciousness from a separated, or dissociated, group of ideas, it became operationalized as requiring the absolute non-interference of tasks that were performed simultaneously by the primary and the secondary consciousness. Thus it was thought that a secondary task such as posthypnotically suggested automatic writing should in no way impede or retard performance on a task on which the primary consciousness was focused, such as oral reading.[65] Given that dissociation also frequently involves some diminishment or restriction on the degree of conscious awareness of one subsystem with another, the potential for both legitimate and mistaken identifications of automatic processes with dissociated processes is apparent.

The use of writing as one of two tasks in dual-or divided-attention experiments provides the clearest example of what might accurately be called "automatic" writing in the sense outlined above, as opposed to "dissociated" writing, where dissociated is interpreted less narrowly than in the initial attempts to operationalize Janet's theory. From this perspective, the experiments by Solomons and Stein may be viewed as an early demonstration of the emergence of automaticity following extensive practice on dual tasks, and are assimilated with William James's idea of the "liberation of attention"[66] that comes with mastery of an activity through habit or repetition.

Two papers, published in 1976 and 1980 by Elizabeth Spelke, William Hirst, Ulric Neisser and two other Cornell University researchers,[67] best embody this approach. Attempting to extend the work of Solomons and Stein, these researchers sought to avoid a problem that had already emerged in the comparison of results of that earlier investigation with those of Downey and Anderson, namely, the inconclusive nature of *introspective* reports of awareness. Whereas Solomons and Stein had claimed to experience two forms of diminished awareness—rapid alternation without memory and true unconsciousness—Downey and Anderson were unable to confirm in themselves the existence of the latter; they could only be sure of the presence of memory lapses, approaching it is true, "a completely dissociated mental bit" but not unconsciousness itself.

Concentrating on Solomon's and Stein's experiments using simultaneous reading and writing at dictation, Spelke and her colleagues introduced a surreptitious manipulation of the nature of the material dictated to subjects, together with direct and indirect measures of the effect that those manipulations had on the subjects' writing and other performance. For example, in their 1976 experiment, subjects initially trained (over several months) to take random lists of words at dictation while simultaneously reading, were, without forewarning, given sublists of words on successive days that denoted types of furniture or types of vehicles, series of words all of which were adjectives or plural nouns, and sublists of words that actually comprised sentences.

The subjects responded—or rather, failed to respond—to these relations in much the same way that June Downey had, when John Anderson unexpectedly dictated to her the familiar line "My country 'tis of thee."[68] Downey, who, much more than Anderson, said she either lost or failed to make connections between the words as they were dictated, reported that she quite failed to recognize this line. Likewise, the subjects of Spelke and her colleagues, asked to report any "general properties" of the lists, noted nothing unusual. Even after being shown the sublists for those days, they found it difficult to believe that the category and sentence relationships had actually been present in the words they had written.

Still more indirect tests of subjects' awareness of the dictated material were devised by first training subjects to read while simultaneously taking not individual words, but

three or five word sentences, from dictation. Several measures strongly suggested that the subjects were, on some level, processing and accessing the meaning of the sentences: although reading at a speed and with a degree of comprehension equivalent to that on the control trials, on the trials with sentences, the subjects' copying accuracy increased as did their overall level of recall for the dictated material. There was also evidence that subjects were integrating meaning *across* sentences: subjects not only judged previously dictated sentences as more familiar than non-dictated sentences but also judged previously implied (but not dictated) sentences as more familiar than non-dictated unrelated sentences.

These results relate to the notion of automaticity at two levels. First, there is the level, already noted, at which these findings may constitute an example of lack of awareness, not simply for a component process of an action, but for an action as a whole.[69] Thus, compared with control subjects, the subjects in these experiments judged most of the sentences to be relatively unfamiliar and they seldom expressed much confidence in their judgments. At another, less global level, however, the findings of Spelke and her colleagues illustrate the presence of certain facilitative and inferential processes that can occur, at least partially outside of awareness, and without the need for attention, in the semantic processing of language. That is, often one does not need to explicitly direct or guide oneself in drawing inferences from a series of statements; one simply "has" — and uses — the inferences.[70]

However, neither of these two elements of "automaticity" captures, I think, what is meant by "automatic writing" in a *dissociative* sense. Both cognitive processing and habitual acts accompanied by minimal levels of awareness are too ubiquitous, too commonplace, to alone provide sufficient limits on the extension of the concept of "dissociative automatic writing." The additional restriction, and the major point of divergence between the concept of automaticity and that of dissociation, concerns the *mode of control*. It appears that "dissociative automatic writing" must entail not just a lack of awareness, and not just a degree of autonomy such as that possessed by a well-ingrained habit or a highly practiced task, but also that aspect which Gurney and others repeatedly emphasized, namely, some form of intelligence, where by "intelligence" we mean something that involves a creative, or at least complex, adaptation or response to a situation. Where an automaticity construal of automatic writing involves control of writing outside of awareness by the *stimulus*, a dissociative construal posits control by an internal but isolated subprocess or component of the individual's own mind. The automaticity construal results only in what has been termed skilled or automatic transcription of a provided stimulus;[71] the dissociative construal, one imagines, really does entail "automatic writing."[72]

Yet this distinction between control that is provided by the stimulus and control that is provided by some subprocess of the individual's mind may become considerably more difficult to discern once one recognizes, first, that control by the individual need not necessarily be *experienced* as such, and second, that control exists within a temporal dimension, where both stimulus properties and intentions may be encoded and interact in memory but, again, not necessarily reach the individual's awareness. Both of these points are especially emphasized by Ernest Hilgard in his "neodissociationist" account of hypnosis. According to Hilgard, although there may be an alteration in the quality of consciousness in hypnosis, this is not as significant as the change in the relation of some activated subsystems of the individual's mind to the control systems as they operate under normal circumstances:

The movement response itself, represented by the complex balance of muscular movement and proprioceptive feedbacks, may be essentially unchanged from normal when it occurs in hypnosis; *what characterizes it as hypnotic is the change in voluntariness from the point of view of the subject. The less it is felt to be under the subject's control the more it has been dissociated from the normal executive functions,* regardless of how it is represented in consciousness as a movement. Once memory has been distorted, as when a movement has been made as a consequence of a posthypnotic suggestion for which the subject is amnesic, the dissociation of the act from its normal controls is more evident. This follows because to the subject the central control of what he does is obscure, referred by him neither to himself nor to the hypnotist, hence assigned a spurious reason through rationalization.[73]

Similarly, Kenneth Bowers and Heather Brenneman have explicitly pointed to a form of dissociation which "accounts for the sense of effortlessness and involuntariness that distinguishes a suggested from a merely compliant response," where the individual's responsiveness is "dissociated from the sense of initiative, effort, and control that ordinarily accompanies overt, voluntary movement."[74] Significantly, they stress that this experience of effortlessness is only apparent — "the effort and control involved in various hypnotic and hypnoticlike responses is not absent, but hidden, that is, dissociated from consciousness" — and thus provide a further ground for distinguishing "dissociatively based automaticity" from automaticity based on extensive practice or overlearning.[75]

This and similar notions allowing that there may be dissociation of an individual's experience of effortfulness and initiative from conscious experience or awareness may be relevant to gaining an understanding of the veritable host of cases of presumed "spirit-writing" and mediumship that was reported during the late 1800s and the early 1900s, as well as to more recent varieties of so-called "channeling."[76] Given that this is a history of automatic writing in experimental psychology, I have not reviewed these types of cases in this paper,[77] but they do, nonetheless, constitute a good proportion of such writing, which as William James remarked, comprises "a department of human activity as vast as it is enigmatic." James remarked particularly upon how readily anyone who embarked upon it sought to impersonate someone else; our subconscious seems, as a rule, he said, "to be dominated either by a crazy 'will to make-believe,' or by some curious external force impelling us to personation."[78] Might these attributions to spirits, these personations and impersonations, become rather less mysterious from a perspective such as that suggested here? And might we not be inclined to cast a somewhat more charitable eye upon some of these cases when once we recognize that these same individuals may have been subjected to their subconscious in yet another respect, in that they were often expressing memories that they never "remembered, remembering" — generating implicit memories which they genuinely felt were entirely foreign to themselves[79] under precisely the conditions of divided attention that made it least likely that successful recollection could occur?[80] In this light, the claims of some automatic writers that their writing derived from a source outside of themselves appear less inexplicable, less like what James called "pure bosh," and more interesting psychologically.

CONCLUSION

A history of the experimental investigation of automatic writing yields, like all histories, unasked for benefits. Reading the reports of Solomons and Stein and Downey and Anderson, one can sense the different community of research endeavor that was present when students served as both subjects and experimenters. And the use of introspective reports by a few individuals who were studied intensively links writing to

psychology in an unusual way: the Solomons and Stein paper embodies a distinctive kind of richness of phenomenological description, a richness that can be quite welcome when one encounters assertions, such as those that I recently met with in George Herbert Mead, that "consciousness accompanies only the sensory process and not the motor process"[81] and that "only the sensory and not the motor phase of the physiological process of experience has a psychic correlate."[82] Familiar with Solomons and Stein's reactions to automatic writing, I was led to ask whether this was really so, and, especially, to ask whether a "psychic correlate" could be said to be present or absent only on the basis of its direct availability to attention. What if the "psychic correlate" of a motor impulse manifests itself best when it is suddenly *not* there, as seemed, to Solomons and Stein, to be the case with automatic writing, when the disappearance of the motor impulse was accompanied by consciousness of the writing but also the feeling that it was non-voluntary and extra-personal?

With time, automatic writing was subjected to increasingly stringent controls, as seen, for example, in the change from examining automatic writing as spontaneously generated material to the speeded writing of strictly memorized verse. Attempts to devise less fallible and more sensitive measures of the degree of subjects' awareness of automatically written material were also made. Such alterations of the conditions for the production of automatic writing, and the determination of its nature have, it seems, nudged it ever inward from the periphery of psychology (and parapsychology) into the center of experimental psychology. A gradual "demystification" of automatic writing has taken place, initially through demonstrations of its occurrence in normal subjects, and later, through a recognition of its connections and similarity to such independently verified phenomena as automatic semantic activation, implicit memory, and, especially, divided controls and dissociations of awareness and intentionality. Nonetheless, it appears that automatic writing continues to challenge more specific assumptions we have about the relation of writing to personality, consciousness, and volition.

The phenomenon of automatic writing poses many questions and points to many abysses. However answered, however skirted, it appears that an offhand dismissal of the phenomenon of automatic writing may not only be non-intellectual, but poor science as well. Skepticism, although almost always healthy, reaches its most astringent but fecund vitality when grounded in a careful, close consideration of the data that serious investigation has produced.

NOTES

1. William James, "Notes on Automatic Writing," *Proceedings of the American Society for Psychical Research* 1 (1885–1889): 551.

2. Morton Prince, "A Symposium on the Subconscious," *Journal of Abnormal Psychology* 2 (1907–1908): 73.

3. These criteria correspond to those recently outlined by Ernest R. Hilgard, in *Divided Consciousness: Multiple Controls in Human Thought and Action*, expanded edition (New York: John Wiley, 1986), p. 131. Hilgard notes that automatisms "have an uncertain relationship to awareness" and may assume various intermediate forms; the doodling that occasionally occurs when an individual is otherwise occupied in listening to a lecture or speaking on the telephone may be such an intermediate form, with the processes being only partially outside of awareness or "only mildly dissociated." So-called free writing may be another type of such partial dissociation. See Robert Boice and Patricia E. Meyers, "Two Parallel Traditions: Automatic Writing and Free Writing," *Written Communication* 3 (1986): 471–490.

4. Boris Sidis, *The Psychology of Suggestion: A Research into the Subconscious Nature of Man and Society* (New York: D. Appleton and Company, 1898), p. 142.

5. Gertrude Stein, in her 1898 experiments, had subjects rest their forearm on a board that was suspended from the ceiling. See Gertrude Stein, "Cultivated Motor Automatism; A Study of Character in its Relation

to Attention," *Psychological Review* 5 (1898): 295–306. George Patrick recommended the "delicate planchette" used by Stein in these experiments over the automatograph devised by Joseph Jastrow. See George T. W. Patrick, "Some Peculiarities of the Secondary Personality," *Psychological Review* 5 (1898): 564, and Joseph Jastrow, *Wish and Wisdom: Episodes in Vagaries of Belief* (New York: D. Appleton-Century, 1935), p. 137. Anita M. Mühl often used a sling in her work with patients. See "Automatic Writing and Hypnosis," in *Experimental Hypnosis*, ed. Leslie M. LeCron (New York: Citadel Press, 1965), p. 429.

6.   "What is Planchette?" *Scientific American*, 8 July 1868, p. 17. Epes Sargent points to the great popularity of this version of the planchette, stating that "the year 1868 witnessed the appearance of the planchette in great numbers, in the booksellers' shops of the United States." See E[pes] S[argent], *Planchette; or, The Despair of Science* (Boston: Roberts Brothers, 1869), p. 1; Kate Field, *Planchette's Diary* (New York: J. S. Redfield, 1868); Hilgard, *Divided Consciousness*, p. 134.

7.   Hilgard, *Divided Consciousness*, p. 134.

8.   Frederic Myers, "Further Cases of Automatic Writing," *Journal of the Society for Psychical Research* 3 (1887–1888): 230. See also Frederic Myers, "Remarkable Instances of Automatic Messages [General Meeting]," *Journal of the Society for Psychical Research* 3 (1887–1888): 214–216; Frederic Myers, "Automatic Writing: Some Physiological and Pathological Analogies [Report of General Meeting]," *Journal of the Society for Psychical Research* 3 (1887–1888): 68–69; Frederic Myers, "[Reply to] Planchette Writing," *Journal of the Society for Psychical Research* 2 (1885–1886): 192–194.

9.   Myers, "Physiological and Pathological Analogies," p. 69.

10.   Frederic Myers, "Automatic Writing—II," *Proceedings of the Society for Psychical Research* 3 (1885): 27. One case that Myers believed must involve telepathy was that of Mr. and Mrs. Newnham, which he reported at some length here. However, Thomas Barkworth, in "Some Recent Experiments in Automatic Writing," *Proceedings of the Society for Psychical Research* 7 (1891–1892): 28, offered an alternative explanation for at least *some* of Mrs. Newnham's answers. See also the first of Myers's series of articles published in the *Proceedings*: Frederic Myers, "On a Telepathic Explanation of Some So-Called Spiritualistic Phenomena," *Proceedings of the Society for Psychical Research* 2 (1884): 217–237, and Frederic Myers, *Human Personality and its Survival of Bodily Death* 2 vols. (London: Longmans, Green, and Co., 1903), esp. ch. 8.

11.   Myers, "Automatic Writing—II," p. 39. For more on the relation between automatic writing and brain duality see Anne Harrington, *Medicine, Mind, and the Double Brain* (Princeton, Princeton University Press, 1987), esp. pp. 137–142. Myers also noted the possible relation between automatic writing and epilepsy. See Myers, "Automatic Writing—II," pp. 30–31. For more recent treatments of this possible connection see Anthony B. Joseph, "A Hypergraphic Syndrome of Automatic Writing, Affective Disorder, and Temporal Lobe Epilepsy in Two Patients," *Journal of Clinical Psychiatry* 47 (1986): 255–257; Stephen G. Waxman and Norman Geschwind, "Hypergraphia in Temporal Lobe Epilepsy," *Neurology* 24 (1974): 629–636.

12.   Frederic Myers, "Automatic Writing—III," *Proceedings of the Society for Psychical Research* 4 (1886–1887): 227–228.

13.   Edmund Gurney, "Peculiarities of Certain Post-Hypnotic States," *Proceedings of the Society for Psychical Research* 4 (1886–1887): 293–294.

14.   Gurney, "Peculiarities," p. 318.

15.   Ibid.

16.   Ibid., p. 319.

17.   Ibid., p. 320.

18.   Pierre Janet, "A Symposium on the Subconscious," *Journal of Abnormal Psychology* 2 (1907–1908): 62.

19.   Hugo Münsterberg, "A Symposium on the Subconscious," *Journal of Abnormal Psychology* 2 (1907–1908): 27. It reads "subsconcious" in the original.

20.   Janet, "A Symposium," pp. 63–64.

21.   Ibid., p. 64.

22.   Alfred Binet, *On Double Consciousness* (Chicago: Open Court, 1890), pp. 20–21.

23.   Ibid., p. 38.

24.   Ibid., p. 87.

25.   Morton Prince, "Some of the Revelations of Hypnotism: Post-Hypnotic Suggestion, Automatic Writing, and Double Personality," *Boston Medical and Surgical Journal* 122 (1890): 465.

26.   James, "Notes on Automatic Writing," pp. 549–550. (The question mark is supplied by James.) Ernest Hilgard and Josephine Hilgard, in *Hypnosis in the Relief of Pain*, rev. ed. (Los Altos, CA: William Kaufman, 1983), p. 177, relate two similar cases, one reported by Estabrooks and the other by Kaplan, where the writing hand sensibly protested at the infliction of such pinpricks. Alfred Binet described a subtle variant of these experiments in which the "insensible hand" of an hysterical patient was pricked with either a single point or, simultaneously, with both points of a pair of compasses. In the former case, the automatic writing, said Binet, "will trace a single point" whereas, in the latter, the automatic writing, "after a little practice,

will be able to tell us whether the points have been distinguished or confounded; their distance apart, in millimeters, will give us the respective degree of sensibility." Alfred Binet, *On Double Consciousness*, p. 29.

27. Prince, "Revelations of Hypnotism," p. 465.

28. Gurney, "Peculiarities," p. 296.

29. William James, *The Principles of Psychology* (New York: Henry Holt, 1890), vol. 1, p. 399. James also specifically pointed to the great degree of individual variability in this regard in hysteric cases, noting that whereas, "Some patients cannot move the anaesthetic part *at all* when the eyes are closed" others could "move it perfectly well, and can even write continuous sentences with the anaesthetic hand." Binet's explanation that "in those who can move [the anaesthetic hand] skilfully the anaesthesia is only a pseudo-insensibility and that the limb is in reality governed by a dissociated or secondary consciousness," was, said James, "certainly correct." James, *Principles*, vol. 2, p. 491, note. Elsewhere, again denying the notion that these cases constituted evidence for a feeling of outward innervation in motor impulses, he wrote: "The truth seems to be, as M. Binet supposes . . . that these cases are not arguments for the feeling of innervation. They are pathological curiosities; and the patients are not really anaesthetic, but are victims of that curious dissociation or splitting-off of one part of their consciousness from the rest which we are just begin[ning] to understand, thanks to Messrs. Janet, Binet, and Gurney, and in which the split-off part (in this case the kinaesthetic sensations) may nevertheless remain to produce its usual effects." James, *Principles*, vol. 2, p. 521, note.

30. Morton Prince, "Experiments to Determine Co-Conscious (Subconscious) Ideation," *Journal of Abnormal Psychology* 3 (1909): 33–42.

31. Prince, "Co-Conscious Ideation," p. 33.

32. Ibid., pp. 39–40.

33. Ibid., p. 41.

34. William James's comments as reported in Prince, "Revelations of Hypnotism," p. 475. Emphasis added. George Patrick similarly stressed the importance of suggestion and the observer's questioning in the inception of secondary personalities. Like Barkworth (see Note 10 above), Patrick also emphasized the adherence to normal limitations on human memory in the vast majority of automatic utterances. See Patrick, "Secondary Personality."

35. Morton Prince, "Automatic Writing Combined with 'Crystal Gazing,'" *Journal of Abnormal and Social Psychology* 20 (1925): 37.

36. James, *Principles*, vol. 1, p. 399.

37. James, *Principles*, vol. 1, p. 206. For more on James's views of automatism and automatic writing see Eugene Taylor, *William James on Exceptional Mental States: The 1896 Lowell Lectures* (New York: Charles Scribner's Sons, 1983).

38. William James, "Subliminal Consciousness, Etc.," *Psychological Review* 3 (1896): 684. In "The Subliminal Consciousness," *Proceedings of the Society for Psychical Research*, 7 (1891–1892): 327, Myers explained that by using the terms "subliminal consciousness" and even "subliminal *self*" he meant to "protest against the undue extension of such phrases as 'unconscious cerebration,' and to insist that we have as good ground for attributing consciousness to some at least of these subliminal operations in ourselves as we have for attributing consciousness to the intellectual performances of our neighbours. Only the 'solipsist'—that inflexible logician who refuses to ascribe consciousness to any man in the world except himself—only he can consistently deny consciousness to operations *within* himself which, however removed from his ordinary ken, do yet equal or transcend in complexity the operations with which he identifies his intellectual being."

39. Gurney, "Peculiarities," p. 295.

40. A series of investigations by Charles Burnett, Ramona Messerschmidt, William Cass, James Stevenson, and Philip Harriman, spanning the fifty year period from the mid-1920s to the mid-1970s, used automatic writing to explore various aspects of dissociation. Burnett's 1927 monograph is particularly notable for, first, the care with which the actual hypnotic (and non-hypnotic) protocols he used were stated and, second, his specification and application of six tests which he believed must be met in order to show the presence of dissociation. The work of Messerschmidt, Cass, and Stevenson especially focused on the question of whether hypnotic dissociation could reduce the amount of interference that occurred when two tasks were conducted simultaneously. For example, Stevenson, following up on Cass's 1942 Master's thesis, instructed his subjects, while under hypnosis, that they would perform subconscious arithmetic tasks which their hand would write automatically. He found that, although subconscious performance of an easier counting task did not result in a significant increase in interference with a conscious color identification task, subconscious performance of a more demanding addition task did. He concluded that hypnotic dissociation might "itself be interpreted as a task of attention diversion in which substantial cognitive effort is involved when the task is at all difficult." See Charles T. Burnett, "Splitting the Mind: An Experimental Study of Normal Men," *Psychological Monographs* 34 (1925); Ramona Messerschmidt, "A Quantitative Investigation of the Alleged Independent Operation of Conscious and Subconscious Processes," *Journal of Abnormal and Social Psychology* 22 (1927): 325–340; William A. Cass, Jr., "An Experimental Investigation of the Dissociation Hypothesis, Utilizing a

Post-Hypnotic Technique," (M.S. Thesis, University of Oregon, 1942); James H. Stevenson, "Effect of Post-hypnotic Dissociation on the Performance of Interfering Tasks," *Journal of Abnormal Psychology* 85 (1976): 398–407. Also see Herbert Barry, Jr., Donald W. MacKinnon, and Henry A. Murray, Jr., "Studies in Personality. A. Hypnotizability as a Personality Trait and its Typological Relations," *Human Biology* 3 (1931): 1–36. For contemporary work in a similar tradition, see Walter Schneider and Mark Detweiler, "The Role of Practice in Dual-Task Performance: Toward Workload Modeling in a Connectionist/Control Architecture," *Human Factors* 30 (1988): 540.

Finally, Philip Harriman used hypnotic and waking suggestion, to show students in his course on abnormal psychology that one could thereby obtain cryptic automatic writing. See Philip L. Harriman, "The Experimental Production of Some Phenomena Related to the Multiple Personality," *Journal of Abnormal and Social Psychology* 37 (1942): 244–255. See also Note 65 below.

41.   Leon M. Solomons and Gertrude Stein, "Studies from the Psychological Laboratory of Harvard University. II. Normal Motor Automatism," *Psychological Review* 3 (1896): 492–512. William R. Newbold's earlier "Experimental Induction of Automatic Processes," *Psychological Review* 2 (1895): 348–362, described only one apparent case of automatic writing and, in it, the writing first emerged in a mediumistic setting.

42.   Solomons and Stein, "Motor Automatism," p. 493.

43.   Ibid., p. 494.

44.   Ibid.

45.   Ibid., p. 496.

46.   Ibid., pp. 497–498.

47.   Ibid., pp. 498–499.

48.   Ibid., pp. 501–502.

49.   Ibid., p. 502.

50.   Ibid., p. 506.

51.   B. F. Skinner, "Has Gertrude Stein A Secret?" *Atlantic Monthly*, January 1934, pp. 50–57.

52.   Skinner claimed that he could not find anything in *The Autobiography of Alice B. Toklas* or the other works by Stein that he had read that would stand against this interpretation. "On the contrary," he said, "there are many bits of evidence, none of which would be very convincing in itself, that support it." Thus, he said: "(1) *Tender Buttons* was written on scraps of paper, and no scrap was ever thrown away; (2) Miss Stein likes to write in the presence of distracting noises; (3) her handwriting is often more legible to Miss Toklas than to herself (that is, her writing is 'cold' as soon as it is produced); and (4) she is 'fond of writing the letter *m*,' with which, the reader will recall, the automatic procedure often began." (p. 54)

Of course, I cannot here explore in any depth these connections between Gertrude Stein the psychology student and Gertrude Stein the writer. Although it is no doubt true that, as Skinner said, the two Gertrude Steins "are not kept apart by the covers of books," it is also true that the Gertrude Stein "enthusiast" is liable to feel that Skinner was being, as he himself suggested, "cruelly unjust in this estimate" and such enthusiasts are likely to feel this way despite Skinner's frank admission that there are passages in *Tender Buttons* that "elude" his automatic writing analysis.

In response to Skinner's article, Sherwood Anderson pithily came to Stein's defense: "This nonsense about automatic writing. All good writing is, in a sense, automatic. It is and it isn't," leading Stein to hope, "Well anyway Sherwood they won't say any more about automatism. You have settled all that completely. And wonderfully," *Sherwood Anderson/Gertrude Stein: Correspondence and Personal Essays*, ed. Ray Lewis White (Chapel Hill: University of North Carolina Press, 1972), p. 82 and p. 85; Anderson's defense was first published in April 1934 in *The American Spectator*.

53.   June E. Downey and John E. Anderson, "Automatic Writing," *American Journal of Psychology* 26 (1915): 161–195. June Downey received her Ph.D. from the University of Chicago in 1907 under James Rowland Angell. She was Professor of English and Philosophy at the University of Wyoming and, in the same year that the experiments reported here were published, became Professor of Philosophy and Psychology, and Head of the Department. Downey published extensively on aspects of handwriting, handedness, and graphic functions as well as on such topics as literary self-projection, synesthesia, figures of speech, and personality. See *The Psychological Register*, vol 3, ed. Carl Murchison (Worcester, MA: Clark University Press, 1932), s.v. "Downey, June Etta"; Edwin G. Boring, *A History of Experimental Psychology*, 2d ed. (Englewood Cliffs, NJ: Prentice-Hall, 1957), p. 558.

John Anderson conducted these experiments while a student at the University of Wyoming, receiving his A.M. in 1914. After completing his Ph.D. at Harvard University in 1917, Anderson taught at Yale University for seven years, and then moved to the University of Minnesota's Institute of Child Welfare. See *The Psychological Register*, vol. 3, s.v. "Anderson, John Edward."

54.   Solomons and Stein, "Motor Automatism," p. 507.

55.   Downey and Anderson, "Automatic Writing," p. 192.

56.   Ibid.

57. Ibid., p. 189, emphasis added.

58. Ibid., p. 169.

59. Ibid., p. 181.

60. Ibid., p. 183.

61. Ibid., p. 193.

62. Ibid., pp. 194–195. Downey and Anderson's postulated limit of "a completely dissociated mental bit" bears a marked similarity to George A. Miller's suggestion that "Automatic writing may be the result of shortening the range of statistical dependencies [of word associations] and so may give a glimpse of the verbal processes almost completely stripped of their normal contextual determiners." George A. Miller, "Speech and Language," in *Handbook of Experimental Psychology,* ed. S. S. Stevens (New York: John Wiley, 1951), p. 802.

Solomons and Stein each published follow-up papers to their 1896 work, although only Stein's actually involved automatic writing. See Gertrude Stein, "Cultivated Motor Automatism" and Leon M. Solomons, "Communications from the Psychological Laboratory of Harvard University: Automatic Reactions," *Psychological Review* 6 (1899): 376–394. Solomons obtained his doctorate in 1898 and died two years later, "as the result of an infection contracted in the laboratory." Donald Gallup, ed., *The Flowers of Friendship: Letters Written to Gertrude Stein* (1953: reprint, New York: Octagon Books, 1979), p. 19.

Downey and Anderson also conducted a follow-up study to their 1915 paper. See June Downey and John Anderson, "Retention of Skill After Lapse of Practice: Simultaneous Reading and Writing," *American Journal of Psychology* 28 (1917): 396–408.

63. Odmar Neumann, "Automatic Processing: A Review of Recent Findings and a Plea for an Old Theory," in *Cognition and Motor Processes,* eds. W. Prinz and A. F. Sanders (Berlin: Springer-Verlag, 1984), pp. 255–293; Michael I. Posner and Charles R. R. Snyder, "Attention and Cognitive Control," in *Information Processing and Cognition: The Loyola Symposium,* ed. Robert L. Solso (Potomac, MD: Erlbaum, 1975), pp. 55–85; Walter Schneider and Richard M. Shiffrin, "Controlled and Automatic Human Information Processing: I. Detection, Search, and Attention," *Psychological Review* 84 (1977): 1–66; Richard M. Shiffrin and Walter Schneider, "Controlled and Automatic Human Information Processing: II. Perceptual Learning, Automatic Attending, and a General Theory," *Psychological Review* 84 (1977): 127–190. Also see Richard M. Shiffrin, Susan T. Dumais, and Walter Schneider, "Characteristics of Automatism," in *Attention and Performance* 9, eds., John Long and Alan Baddeley (Hillsdale, NJ: Lawrence Erlbaum, 1981), pp. 223–238; John Jonides, Moshe Naveh-Benjamin, and John Palmer, "Assessing Automaticity," *Acta Psychologica* 60 (1985): 157–171.

64. Neumann, "Automatic Processing," pp. 257–258.

65. Experiments undertaken by Ramona Messerschmidt, in 1927, and William Cass, in 1942, yielded results generally contrary to those expected under this version of the dissociation theory. Additional work by Jane Knox, Lila Crutchfield and Ernest Hilgard in 1975, James Stevenson in 1976, and Kenneth Bowers and Heather Brenneman in 1981 confirmed this finding, and offered support for the further hypothesis that the level of interference was dependent on the degree of difficulty of the secondary task. See Messerschmidt, "Quantitative Investigation;" Cass, "Experimental Investigation;" V. Jane Knox, Lila Crutchfield, and Ernest R. Hilgard, "The Nature of Task Interference in Hypnotic Dissociation: An Investigation of Hypnotic Behavior," *International Journal of Clinical and Experimental Hypnosis* 23 (1975): 305–323; Stevenson, "Posthypnotic Dissociation;" Kenneth S. Bowers and Heather A. Brenneman, "Hypnotic Dissociation, Dichotic Listening, and Active Versus Passive Modes of Attention," *Journal of Abnormal Psychology* 90 (1981): 55–67. See also Robert W. White and Benjamin J. Shevach, "Hypnosis and the Concept of Dissociation," *Journal of Abnormal and Social Psychology* 37 (1942): 309–328.

66. Cited in Tracy L. Brown and Thomas H. Carr, "Automaticity in Skill Acquisition: Mechanisms for Reducing Interference in Concurrent Performance, *Journal of Experimental Psychology: Human Perception and Performance* 15 (1989): 686.

67. Elizabeth Spelke, William Hirst, and Ulric Neisser, "Skills of Divided Attention," *Cognition* 4 (1976): 215–230; William Hirst, Elizabeth Spelke, Celia Reaves, George Caharack, and Ulric Neisser, "Dividing Attention Without Alternation or Automaticity," *Journal of Experimental Psychology: General* 109 (1980): 98–117. See also Ulric Neisser, "The Limits of Cognition," in *The Nature of Thought: Essays in Honor of D. O. Hebb,* eds. Peter W. Jusczyk and Raymond M. Klein (Hillsdale, NJ: Lawrence Erlbaum, 1980), pp. 115–132. Compare with Margery Lucas and Daniel Bub, "Can Practice Result in the Ability to Divide Attention Between Two Complex Language Tasks? Comment on Hirst et. al.," *Journal of Experimental Psychology: General* 110 (1981): 495–498.

68. Downey and Anderson, "Automatic Writing," p. 182.

69. Neumann, "Automatic Processing," p. 278. The finding that subjects, following extensive training, could "comprehend" both the material that they were reading and what they were writing at dictation, while also maintaining normal reading speed, was interpreted by Spelke and her colleagues as evidence *against* current conceptions of automaticity that depend on a limited capacity view of human mental processing. They interpreted their subjects' success as providing evidence contrary to a view of human cognitive processing as constrained by a fixed attentional capacity or by limited resources, and held that the subjects were actually

able to divide or allocate their attention "without alternation or automaticity" – hence the title of their 1980 article.

70.   Daniel Kahneman and Anne Treisman note that, although the effects of semantic processing of unattended material are typically small, the evidence "suffices to reject the null hypothesis that stimuli on an unattended channel are never processed semantically." See Daniel Kahneman and Anne Treisman, "Changing Views of Attention and Automaticity," in *Varieties of Attention*, eds. Raja Parasuraman and D. R. Davies (Orlando, FL: Academic Press, 1984), pp. 35–36.

71.   The notion of skilled transcription is D. A. Allport's but is specifically applied by Neumann to automatic writing. See Neumann, "Automatic Processing," p. 261.

72.   Might this or a similar distinction have been what Gertrude Stein had in mind when, in a letter to the *Atlantic Monthly* editor, Ellery Sedgwick, she thanked Sedgwick for sending a copy of B. F. Skinner's article but remarked: "No it is not so automatic as he thinks. If there is anything secret it is the other way to. I think I achieve by [e]xtra consciousness, [e]xcess." Cited in James R. Mellow, *Charmed Circle: Gertrude Stein & Company* (New York: Praeger Publishers, 1974), p. 404. Brackets as in Mellow.

73.   Hilgard, *Divided Consciousness*, p. 228, emphasis added. Compare with the following remarks by André Weitzenhoffer, "Hypnotism and Altered States of Consciousness," in *Expanding Dimensions of Consciousness*, eds. A. Arthur Sugerman and Ralph E. Tarter (New York: Springer Publishing, 1978), p. 220: "a great many of the individuals we see hypnotized today, particularly outside of the laboratory situation, probably are individuals who develop those not-quite-somnambulistic conditions. These are individuals in whom complex automatisms can be detached from the control of their executive apparatus and externally controlled. With these individuals, the issue of identity becomes an intriguing matter because, frequently, although they retain a sense of identity, this identity does not include the elicited automatisms. Their occurrences may be part of the content of their consciousness, but only as something external to their selves. Characteristically, such a subject will comment, "I know it must be me doing it . . . but it just doesn't seem it's me!" Ellipsis in original.

74.   Bowers and Brenneman, "Hypnotic Dissociation," p. 65. Nicholas Spanos has viewed hypnotic test suggestions as providing subjects with a two-component strategy that permits them to simultaneously comply with the suggestion and construe their behavior as nonvolitional. First, subjects are encouraged to alter their usual, everyday, or "natural attitude" frame of reference to a perspective of fantasy or imagination. Once having assumed this attitude, they are asked to construct an imaginary situation such that, if it were to occur in the objective world, then the subject would expect it to result in the behavior required by the test suggestion and would allow them to construe their enactment as nonvolitional. See Nicholas P. Spanos, "Goal-Directed Fantasy and the Performance of Hypnotic Test Suggestions," *Psychiatry* 34 (1971): 94.

75.   Bowers and Brenneman, "Hypnotic Dissociation," pp. 65–66.

76.   See Rodger Anderson, "Channeling," *Parapsychology Review* 19 September-October 1988, pp. 6–9.

77.   I also have not considered the use of automatic writing in psychotherapeutic settings. See, for example: Brian V. Earle and Frederick W. Theye, "Automatic Writing as a Psychiatric Problem," *Psychiatric Quarterly, Supplement* 42 (1968): 218–222; Milton H. Erickson, "The Experimental Demonstration of Unconscious Mentation by Automatic Writing," *Psychoanalytic Quarterly* 6 (1937): 513–529; Milton H. Erickson and Lawrence S. Kubie, "The Use of Automatic Drawing in the Interpretation and Relief of a State of Acute Obsessional Depression," *Psychoanalytic Quarterly* 7 (1938): 443–466; Milton H. Erickson and Lawrence S. Kubie, "The Permanent Relief of an Obsessional Phobia by Means of Communications with an Unsuspected Dual Personality," *Psychoanalytic Quarterly* 8 (1939): 471–509; Milton H. Erickson and Lawrence S. Kubie, "The Translation of the Cryptic Automatic Writing of One Hypnotic Subject by Another in a Trance-like Dissociated State," *Psychoanalytic Quarterly* 9 (1940): 51–63; Ainslie Meares, *A System of Medical Hypnosis* (Philadelphia: W. B. Saunders, 1960); Anita Mühl, "Automatic Writing as an Indication of the Fundamental Factors Underlying the Personality," *Journal of Abnormal Psychology and Social Psychology* 18 (1922): 162–183; Anita Mühl, "The Use of Automatic Writing in Determining Conflicts and Early Childhood Impressions," *Journal of Abnormal Psychology and Social Psychology* 19 (1923): 1–32; Anita Mühl, "Automatic Writing Combined with Crystal Gazing as a Means of Recalling Forgotten Incidents," *Journal of Abnormal Psychology and Social Psychology* 19 (1924): 264–273; Anita Mühl, *Automatic Writing* (Leipzig: Theodor Steinkopff, 1930); J. Kenelm Reid, "Automatic Writing in its Relation to Psychotherapy and Philosophy," *Psyche: A Quarterly Review of Psychology* 3 (1922): 49–55; Raphael H. Rhodes, *Hypnosis: Theory, Practice and Application* (New York: Gramercy, 1950); Sarah Ritter, "Automatic Writing by a Blind Subject," *Journal of Abnormal and Social Psychology* 23 (1928–1929): 383–392; Jerome M. Schneck, "Automatic Writing During Hypnoanalysis," *Journal of General Psychology* 46 (1952): 233–241; Jerome M. Schneck, "Automatic Writing and the Hypnotic Transference," *Journal of General Psychology* 48 (1953): 91–94; Lewis R. Wolberg, *Hypnoanalysis* (New York: Grune and Stratton, 1945); A. G. Yanovski, "Hypnosis as a Research Tool in Cardiology," in *Hypnosis: Current Problems*, ed. G. H. Estabrooks (New York: Harper and Row, 1962); Michael D. Yapko, *Trancework: An Introduction to the Practice of Clinical Hypnosis*, 2d ed. (New York: Brunner/Mazel, 1990). For a developmental perspective, see Anna Wyczolkowska: "The Automatic Writing of Children from Two

to Six Years, Indicative of Organic Derivation of Writing in General," *Psychological Review* 21 (1914): 457–472.

78. William James, "The Confidences of a 'Psychical Researcher,'" *The American Magazine,* October 1909, p. 588. See also James H. Hyslop, "Apparent Subconscious Fabrication," *Journal of Abnormal Psychology* 1 (1906–1907): 213, who states "Suggestion and impersonation are masters which we cannot ignore."

79. Daniel Schacter suggests that "a good case can be made that 19th-century psychical researchers were the first to document implicit memory phenomena on the basis of controlled empirical observation." In automatic writing (as well as crystal gazing) the requirement that the participant report whatever entered his or her mind often elicited partial or fragmented representations of prior experiences, "devoid of any familiarity or autobiographical reference." Daniel L. Schacter, "Implicit Memory: History and Current Status," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 13 (1987): 503. See also Gordon D. Logan, "Automaticity, Resources, and Memory: Theoretical Controversies and Practical Implications," *Human Factors* 30 (1988): 583–598.

80. See Larry L. Jacoby, "A Process Dissociation Framework: Separating Automatic from Intentional Uses of Memory," *Journal of Memory and Language* 30 (1991): 513–541. Interestingly, Pierre Janet pointed to the difficulty of obtaining memories from subjects through automatic writing because "as soon as the subject pays attention to his writing, all stops, and he is no longer able to obtain the manifestation of the remembrance. Conscious attention, far from facilitating automatic writing, as would happen to a simulator, absolutely suppresses it. Remembrance, in a word, manifests itself only unconsciously to the person; it disappears when he tries to speak or write in his own name." Pierre Janet, *The Mental State of Hystericals: A Study of Mental Stigmata and Mental Accidents,* trans. Caroline Rollin Corson (New York: G. P. Putnam's Sons, 1901), p. 105.

81. *George Herbert Mead on Social Psychology: Selected papers,* ed. Anselm Strauss (Chicago: University of Chicago Press, 1977), p. 173.

82. Ibid., p. 154, n. 22. My response to Mead essentially parallels that related by William James, in *The Varieties of Religious Experience: A Study in Human Nature* (New York: Longmans, Green, 1902), pp. 478–479, concerning a friend of his, whom he said, was "a subject of graphic automatism." James wrote that his friend, "tells me that the appearance of independent actuation in the movements of his arm, when he writes automatically, is so distinct that it obliges him to abandon a psychophysical theory which he had previously believed in, the theory, namely, that we have no feeling of the discharge downwards of our voluntary motor-centres. We must normally have such a feeling, he thinks, or the *sense of an absence* would not be so striking as it is in these experiences."