SCIENCE

NEW YORK, JUNE 12, 1891.

RECENT EXPERIMENTS IN AUTOMATIC WRITING.[1]

IT is well to state, at the outset of this paper, that it will not be found to contain anything new or startling. Nor does it seem to me that these characteristics are necessary to its usefulness. For though such features have a value of their own in stimulating inquiry, and in forming matter for assimilation by future investigators who shall have ascertained the principles or laws which, in our present state of knowledge, we are only groping after, they at present rather confound than assist our reason. On the other hand, the more we gain in experimental acquaintance with the psychical side of existence in the living subject, the more likely of fruition, because the more easy of classification, will be those rare and sporadic phenomena which may be gleaned from the world of phantasm and of second sight.

While, therefore, facts of all kinds are valuable to us, the most hopeful method of psychical research appears to me to proceed from the known to the unknown, and from the simple to the complex, and thus, by studying the grammar of research, to find gradually the meaning of fact after fact which at present convey no more significance to us than so many undeciphered hieroglyphics.

To no person are we more indebted for showing us this path to the knowledge which we seek than to Edmund Gurney, whose experiments in hypnotism have thrown a new light upon the constitution of human personality in the living man, and my desire, in the kind of experiments I am about to record, is to follow humbly in his footsteps.

In comparing hypnotic experiment with automatic writing, we find both advantage and disadvantage. The advantages of hypnotism are, the opportunities for studying physiological as well as psychical phenomena, the absolute control which it gives us over the subject, unchecked by his self-consciousness, fear of ridicule, and the like, and the greater security from conscious reception or prejudiced ideas which it assures us of as long as hypnosis lasts. On the other hand, granting the good faith of the automatic writer, we can obtain nearly as full results on the psychical side, without risk, or the imputation of risk, to the moral or physical well-being of the operator, and can pursue the inquiry at any spare moment and with no further appliances than a pencil and a sheet of paper.

One thing, however, is essential, and that is an unprejudiced mind. In automatic writing we are confronted at once with a mysterious intelligent agency, operating without the conscious will or mental participation of the writer, but subject, as I am inclined to think, to suggestion in the highest degree. Let it be impressed upon the mind of the writer that this seemingly extraneous intelligence is extramundane also, and it will respond to his ideas with the utmost fidelity. Let him believe that he is holding intercourse with Satan, and it will hasten to assure him of the fact, and back up the assertion with profane language; or let him believe himself in communication with some other spirit, celestial or terrestrial, and to the utmost of his own knowledge, possessed or forgotten, will he be humored to the top of his bent. In all this we see just what might be expected from our knowledge, already acquired, of the workings of the passive consciousness. Like clay in the hands of the potter (this simile is appropriate in this particular connection, but it would be far otherwise in a general description of the passive personality), the passive consciousness of the hypnotized subject accepts the part assigned him, and he is equally ready to believe himself a brooding hen or a water pump, and to spread his arms for wings or work them up and down for handles. In relating the few facts which I am about to describe, my principal object is, however, not to sustain or assail any theories, but to stimulate inquiry. My hope is that many persons may be induced to make experiments who at present hold aloof from fear of meddling with what is forbidden, or uncanny, or too serious for what they would deem trifling. In the journal for July I appealed for assistance in these experiments, and from all those whom it reaches I only got replies from two gentlemen, neither of whom, unfortunately, could use the planchette. Is there no one, then, among our seven hundred members and associates who has the gift, and can spare fifteen minutes now and then to make experiments and record results?

The operator in the following experiments is a young lady, aged fifteen, an inmate of my household, and companion in study with my own daughter. We have, therefore, the best means of estimating her character and her *bona fides*, which, let me say at once, are, we consider, beyond a doubt. She had not previously heard of planchette, and Spiritualism was, to her, a mere name. I took care from the first that no ideas of this kind should be instilled, and she thus approached the subject without any foregone conclusion. Most of the experiments were made with the aid of a planchette. But latterly a pencil was used, held vertically between the points of the fingers and thumbs of both hands, and once or twice the pencil was held in the ordinary way. These changes, however, did not seem to affect the result. The first experiments were attempted by this girl, whom I will call C., in conjunction with her companion, but it soon became evident that the latter was merely a passenger, so to speak, and that C. was the real operator. She was therefore left to write by herself. Unfortunately she looked upon the whole thing as a great bore, and, as I was unwilling to press her, the experiments have only been few and far between. She never knew what she had written till it was looked at, and there was often some slight difficulty in deciphering it.

Thus the first question, Who are you that write? produced what at first I took to be mere scrawling, and C. shortly after left the room. After she had done so I took another look at this scrawl, and then at once perceived that it was legible, and that the name written in answer to the question was "Henry Morton." I at once followed C. upstairs, and asked her if she had ever heard the name, and she replied that it was that of a character in a Christmas play she had acted in, more than a year previously. Had the name, as

[1] Abstract of a paper by Thomas Barkworth in the Proceedings of the Society for Psychical Research, April, 1891.

it easily might have, been that of some deceased friend, it is obvious what inference would have been drawn. I give the next three questions just in the order they followed on the next evening. (2) Why do you write? — A. Because I must. (3) What compels you to write? — A. I do not know. (4) Henry Morton, do you know you are a part of me? — A. Yes, I know.

The last question, being asked in a tone of conviction, amounted to a suggestion, and was adopted accordingly. This docility was illustrated in other ways. For instance, the planchette, having taken to running straight off the paper after completing an answer, was told not to do so again, and at once complied. I should here say that all the questions and instructions to the planchette were first dictated by me and then repeated aloud by the operator.

Some spelling tests followed. C. is not good at spelling, and feels great uncertainty with difficult words. Her voluntary spelling of such is very hesitating, and does not therefore give any suggestion to the passive consciousness. The two personalities acted, therefore, independently of one another, with some curious results. I will give one instance. (7) Spell psychical.

A voluntary attempt was first made. Result: "Sicickle." C. was not told whether this was right or wrong, but was told to try planchette. Result: "Cicicle."

Some questions in mental arithmetic were put, the planchette being instructed to write the answers only, without any calculation. I am informed by her governess that C. has but little arithmetical capability, and is backward for her age in this subject. Bearing this in mind, I think the results were noteworthy. Directly the question was put the instrument began to write the answer. (28) Divide 264 by 16.

First of all an attempt was made to work the sum voluntarily, and, with some delay, the answer given was "17 odd," which was wrong, but on planchette being appealed to it at once wrote "16 and 8 over," which was correct. As we had many instances of the passive intelligence thus excelling the primary activities of the mind, I may take this opportunity of saying that it is quite in accordance with what I had expected, and have elsewhere spoken of, but whether this superiority is essential or accidental, whether, that is, it be due to greater power or to greater concentration, cannot at present be determined, at all events evidentially. (12) Divide 187,981 by 13. — Answer, 14,463.

This is wrong by three only, and, considering the normal powers of the operator above-mentioned, I think it a some what remarkable answer.

I now come to a class of questions designed to test the memory of the passive consciousness. "What happened on the 1st of June?" This question was asked in the last week of July. I chose the date at hazard, and neither C. nor I had any recollection of it. But planchette answered "Went to church," and we then got an almanac and found that the 1st of June was a Sunday. This kind of question was often tried with inconclusive results, but never with incorrect ones, except on one occasion. Being asked in October what happened on the 13th of July, the answer was "Monday lessons." If planchette thought the day was Monday, it is rather curious that it should not have said simply "lessons." In reality, however, the day was a Sunday, and it would be not impossible that C. had during that Sunday been worrying herself about the following day's work. The manner in which the word "lessons" was written was a curiosity. After writing "Monday," the tail of the *y* was brought back with elaborate flourishes, and the first *s* in "lessons" was written; then the *e* and the *l* were written backwards; then the pencil was carried forward with more flourishes and gyrations to the second *s*, followed by the other letters in their order. So florid was all this scroll work that it took much care to find afterwards what route the pencil had taken, though the word was entirely legible.

(14) "Who conquered Peru?" The answer to this was written "Spires," and such an answer being unintelligible, planchette was made to repeat it, with the same result. It then occurred to C.'s governess to fetch the volume of Collier's History which C. had been reading three months previously. At the head of one of the chapters was a table of dates which she had (at the time) learnt by heart, among which were the following consecutively: Reformers called Protestants at Spires, 1529; League of Smalcald, 1530; Pizarro conquers Peru, 1533. The name of Pizarro, which C. had forgotten, is placed in print exactly below the word "Spires," and in this way the two words fell together under C.'s eye, and became indelibly associated in what I have elsewhere ventured to call the pictorial memory of the passive consciousness. The next experiments I shall describe exhibit memory in another aspect. (11) Tell me something I don't know. — A. You have a shot in your eye.

On examination, I found a small blood-speck on the margin of the iris of one eye. This C. assured me she had no idea existed. It is probable, however, that she had at some time seen it in her looking-glass when her mind was occupied with other matters.

(17) Tell me something more. — No answer but scrawling. (18) You must write (peremptorily). — A. Frank Headley ill. (I have altered the name.) In answer to inquiries, C. said this was the name of a boy she had met at the seaside two years before, but she knew no more about him, not even where he lived. Accordingly, the next question was, (19) What is Frank Headley's address? — A. Lord Mayor's-walk.

C., who lived near York, thought there was a street of this name there, but was not sure. It was not till she went home for the holidays that she ascertained, through mutual friends, that Frank Headley went to school in Lord Mayor's-walk, so that planchette was found to have answered correctly. The explanation suggested is, that, when he met her two years previously, he had mentioned this and she had forgotten it. Planchette, however, was unable to give the number in Lord Mayor's-walk, which perhaps he had never told her, and when asked what he was ill with, replied "Cold in head."

Some experiments were made with the right and left hands consecutively; thus, (27) Give the name of one of the principal Elizabethan statesmen. (Right hand answer)—Walpole. (Left had answer)—Walsingham.

The last group of questions asked referred to subjects which it was certain C. did not know and never had known. For instance, "What is the price of Egyptian Unified?" "What is the second Christian name of So-and-so?" etc. Invariably these questions produced no reply; the instrument only made scrawls. It may be possible, however, that had an answer been insisted on, one would have been written (as in the case of Frank Headley's alleged cold in the head), and necessarily an incorrect one, because of the writer's ignorance of the facts, combined with the effects of suggestion compelling an answer of some kind. This I am inclined to think may be the explanation of Mrs. Newnham's answers under her husband's cross-examination (Proceedings, III., 7–23;

"Phantasms of the Living," I., 63–71) — answers which he says were foreign to the conscious intelligence of either of them, and which contained an attempt at deliberate invention rather than plead guilty to total ignorance. If, under suggestion, a hypnotic subject were told to jump over a house, he would not be able to do it, but he would jump as high as he could.

Among miscellaneous questions one only is worth recording. It was, "Are you the spirit of my grandmother?" This was the only time the idea of spirits was introduced, and as it was obviously put jestingly, it did not convey any real suggestion of their agency. The answer accordingly was, "No, I was in ———"; and here followed a remarkably well-executed outline map of Africa, such as few persons, and certainly not C., could have drawn from memory; every important bay and promontory being — as we found on comparison with the atlas — correctly shown, and in due proportion. At one point only was it in error.

The explanation was not that C. was guided by some defunct geographer or Africander, but that she had been getting up the geography of Africa that morning with the aid of the map; and thus had the pictorial memory of the passive personality, unconsciously to herself, recorded, and reproduced this complicated observation, which she had made without effort, and which was merely incidental to her task.

Such are the few and slight experiments which I have ventured to lay before the society. I have done so mainly for two reasons; first, the hope that sufficient interest may be aroused in those who hear of them to induce other and more important essays in this interesting method of investigation; and, second, to indicate the lines on which it may, I think, be most profitably pursued. It would seem that nothing is ever really forgotten, though the bygone memories evoked by pencil, or crystal, may appear so new and strange that we fail to recognize them as ever having been included in our experience.

EXTENSION OF UNIVERSITY TEACHING.

THE American Society for the Extension of University Teaching was founded in response to a deeply felt want for a national association which might assist in promoting the work of university extension.

The friends of popular education feel that the time has come for a better utilization of the facilities for instruction which are to be found in our existing educational institutions.

Our common schools, academies, high schools, colleges, and universities offer good opportunities for an education to those who are able to attend them for twelve or fifteen consecutive years. But the persons able to do this in our communities form a very small fraction of the population. The average child can attend school only four, or at most five, full years, — a period barely sufficient to make a beginning in the rudiments of an education. This is a significant fact, and it justifies the statement that the great mass of the community are in large part cut off from any direct participation in the higher branches of science, for the cultivation of which our advanced institutions of learning are organized.

The credit of recognizing this fact in all its significance, and of determining to change it, if possible, is due to the English universities. In order to test whether it were not practicable to utilize the magnificent facilities of the old English centres of learning for the purposes of popular instruction, a movement was organized to which the name of "University Extension" was given, and which involved sending out lecturers and professors from the universities to give courses of instruction at various places throughout the country. The effort was crowned with success, and has attracted universal attention.

Among the first communities to recognize the possibility for such work in the United States was the city of Philadelphia. For the purpose of testing whether there was a general demand for university extension, a call was issued for a meeting of those citizens interested in the movement. As a result, a local society was organized in order to make an experiment in and around Philadelphia. Having assured itself of the co-operation of the professors of the colleges and universities in or near the city, including the University of Pennsylvania, Princeton University, Bryn Mawr, Haverford, Rutgers, and Swarthmore, the society sent its secretary to England to study the movement there and make a report, and submit plans of organization.

The services of Mr. Richard G. Moulton of Cambridge, England, were secured, and, aided by professors from the above institutions, systematic instruction was undertaken at several different points in November, 1890. The success far exceeded all anticipations. Over forty courses of instruction, embracing two hundred and fifty lectures, were given, with an aggregate attendance of over 50,000, thus surpassing all English records. The demand for courses from a distance was so great that it could not be met.

As a consequence of this experience it was determined to establish a national society to aid in the inauguration and prosecution of this great work, and to do, as far as possible, for the country at large, what the local society has done for Philadelphia. The co-operation of a large number of representative institutions was assured from the outset, and the number of institutions committed to the movement is rapidly increasing.

The American society proposes to collect information as to the experiments now going on in this work in the various parts of the world, and make it accessible to all who are interested in this movement. It will, as far as possible, form branch societies to take up and push the work in and around their localities. It will try to secure a staff of persons trained by actual experience in organizing and lecturing, who may be placed at the disposal of the local societies to assist them in organizing and prosecuting the work. It will strive to make every college and university in the country a centre of university extension.

It is confidently believed that university extension will not only aid greatly the progress of popular education by affording vastly increased facilities for study, but will also benefit the colleges and universities by exciting a wide-spread interest in the work.

The association proposes to publish a journal, to be called *University Extension*, which will serve as a medium of communication between the national society and the local branches, and will give full information as to the progress of the work in all parts of the country.

To do this work efficiently will require large funds. The only sources of income at present are the fees of members ($5 annual fee, $50 life-membership fee) and the voluntary contributions of friends of the movement. The membership fee and all other contributions may be sent, payable to the order of Frederick B. Miles, Treasurer of the American Society for the Extension of University Teaching, 1602 Chestnut Street, Philadelphia. All other communications should be sent to the General Secretary, George Henderson, 1602 Chestnut Street.

NOTES AND NEWS.

BEGINNING with the class entering in September, 1892, the regular course necessary to obtain the degree of M.D. at the Harvard Medical School will be four years. A similar change in the course of medical study is proposed at the University of Pennsylvania.

— Mr. James E. Keeler has been appointed director of the Allegheny Observatory, succeeding Mr. S. P. Langley, secretary of the Smithsonian Institution, who recently resigned the directorship of the observatory.

— The Kenwood Physical Observatory, Forty-sixth Street and Drexel Boulevard, Chicago, will be dedicated on Monday evening, June 15, at eight o'clock. Addresses will be delivered by Professor C. A. Young of Princeton, Professor G. W. Hough, and others.

— A special inquiry was made in the census of last year as to the vital statistics of the Jews in this country. Returns were received from 10,618 Jewish families, representing 60,630 persons.