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Prof. H. Bennett
with the Author's best copy
July

ELECTRO-BIOLOGICAL PHENOMENA

(7)

CONSIDERED

PHYSIOLOGICALLY AND PSYCHOLOGICALLY.

BY

JAMES BRAID, M.R.C.S.E., M.W.S., ETC. ETC.

EDINBURGH:

SUTHERLAND AND KNOX, GEORGE STREET.

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M D C C C L I.

ELECTRO-BIOLOGICAL PHENOMENA.

(Lecture delivered at the Royal Institution, Manchester, March 26, 1851.)

In the following essay, I shall endeavour to submit to your consideration, in the most simple and comprehensible manner, the results of my experience, whilst investigating one of the most recondite and interesting departments of philosophy and science,—namely, the re-

[FROM THE MONTHLY JOURNAL OF MEDICAL SCIENCE, FOR JUNE 1851.]

Most of you have no doubt seen or heard of the experiments in what has been designated "Animal Electricity," or the Electrical Science of Life," which were lately exhibited in Manchester, Liverpool, and the surrounding towns, and which are now being exhibited in London, by an American gentleman named Mr. Stone. The following announcement is contained in one of his hand-bills of the 12th inst., as to what he professes to exhibit in London, at the Marylebone Literary and Scientific Institution:—

"Persons in a perfectly wakeful state, of well known character and standing in society, who come forward voluntarily from among the audience, will be experimented upon. They will be deprived of the power of speech, hearing, sight. Their voluntary motions will be completely controlled, so that they can neither rise up nor sit down, except at the will of the operator; their memory will be taken away, so that they will forget their own name and that of their most intimate friends; they will be made to stammer, and to feel pain in any part of their body at the option of the operator—a walking stick will be made to appear a snake, the taste of water will be changed to vinegar, honey, coffee, milk, brandy, wormwood, lemonade, &c. &c. These extraordinary experiments are really and truly performed without the aid of trick, collusion, or deception, in the slightest possible degree."

These may no doubt be considered as startling announcements; nevertheless, I know as a fact, that such phenomena, and the very reverse effects, may be realised in certain individuals; but I account for them in a very different manner from the so-styled Electro-Biologists.

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A similar class of phenomena have also lately been exhibited in Edinburgh, Glasgow, and various parts of Scotland, by another American named Dr Darling. These exhibitions have excited great interest at Edinburgh and Glasgow, and have enlisted in the discussion the pens of Sir David Brewster, Professor Gregory, Professor J. Hughes Bennett, Mr Robert Chambers, and other gentlemen of the highest character and scientific attainments. Amongst the contributions which have been published on the subject, I have been quite charmed by an article which appeared in the Number of "Chambers' Edinburgh Journal" for the 8th of last month, entitled "Experiments on Electro-Biology." The analysis therein given of the nature, causes, and tendencies of scepticism in mankind generally, and in certain coteries in particular, in reference to probationary sciences, is an admirable picture by a first-rate artist, which merits the candid study of the whole human family. The writer of the article alluded to had been a decided sceptic, and had accompanied a gentleman of his acquaintance, who was equally sceptical as himself, to a *seance* in a private family, where most of the company assembled consisted of persons in the upper ranks of society. The said friend offered to submit to the trial on himself, for the purpose of proving the fallacy of such pretensions; however, the result was very different from his anticipations, for the proud sceptic and derider was converted into a complete victim. Two ladies of the party, also well known to the writer of the article, were likewise proved to be equally susceptible. Collusion and fraud being out of the question in all these cases, the writer was constrained, through the force of such unexceptionable evidence, to renounce his scepticism. From what has been stated by Professor J. Hughes Bennett, it appears that several members of the Medical Society of Edinburgh, who were most sturdy sceptics, were also victimised upon submitting to such trials. In short, there is now abundance of evidence of the fact that such phenomena may be produced in perfectly good faith in some subjects, in the waking condition, and consequently the chief point remaining to be determined is the *cause* of these remarkable phenomena.

The ingenuous and manly confession of the learned author regarding the scepticism of himself and his friend, and the interesting narrative of the immediate cause of their conviction as to the reality of certain phenomena manifested at the *seance* depicted by him, is just a transcript of my own feelings and experience in this department of science. I beg, therefore, to submit the following remarks for your consideration, with the hope that they may tend to the elucidation of truth, and the overthrow of that unreasoning, uninquiring, dogmatic scepticism which Chambers' correspondent has so ably combated.

Nine years ago I entered upon the experimental investigation of mesmerism, believing, from what I had read and heard of it, that the whole was a system of collusion or illusion. I very soon discovered, however, that there was a reality in some of the phenomena, notwithstanding I had reason to differ from the mesmerists regard-

ing the cause. My experiments proved that similar phenomena, of abnormal sleep and peculiar condition of mind and body, might be self-induced, by the patient's maintaining a steady fixed gaze at any inanimate object, the mental attention being concentrated on the act. This at once proved the *subjective or personal* nature of the influence, and that it did not arise from the transmission of any magnetic or occult influence passing from the operator into the patient, which the mesmerists contended for. The potency of this method was proved by me at a public lecture in Manchester, before an audience of about eight hundred individuals. After explaining my views or theory, and exhibiting the phenomena on patients who had previously been subjected to such operations, I requested strangers, who had never been operated upon, to come forward and try the effect of my process. Fourteen male adults came forward, all of whom were entirely strangers to me. Some of them were desired to keep a steady fixed gaze upon the end of a cork, bound on the head, so as to project from the middle of the forehead, each to look at the cork bound upon his own head, and to fix his undivided attention on the act. Some of the others were desired to fix their sight and thoughts upon a part of the gas apparatus in the room. All commenced the process at the same time, and ten of the fourteen went into the sleep, and that whilst I never touched any one of them, until after their eyelids closed involuntarily. None of them seemed able to open their eyes, although they remained conscious; some became cataleptic; others were insensible to the prick of a pin, and one or two forgot all which had occurred. One, who remembered nothing of what had happened during his sleep, was a powerful mechanic, who was sent down, bribed by a medical man, to resist me, and this he tried by not complying with my conditions; but, nevertheless, when I at length signified that I observed he was acting falsely, he set about it with a look of grim defiance, when he was speedily caught, and became one of the best examples of the power of my process that evening. Another, a most intelligent gentleman, was so sceptical, that before coming down he said, "*seeing was not believing*" *with him*, but that he must *feel* it before he would believe it,—he became a beautiful example, and after being released, described his feelings to the audience. During these proceedings three more of the company sent themselves into the condition, by fixing their gaze and thoughts upon points in the room, according to what I had indicated in my lecture as sufficient to produce the sleep. I knew nothing of their acts or intentions until called upon by their friends to unlock them from the profound sleep into which they had fallen, and from which they could not succeed in arousing them. I was equally successful in operating upon a number of strangers together at a private conversazione, given to the profession in London, in March 1842, sixteen out of eighteen having passed into the sleep, simply by maintaining a steady fixed stare and fixed act of attention, whilst gazing at the root of a chandelier. Most of these

had never been so tried before. I never touched any one of them until their eyelids closed. Mr Herbert Mayo, the eminent physiologist and surgeon, tested them, and ran a needle from the back to the palm of the hand of one patient without his (the patient) evincing the slightest consciousness of pain, or remembrance of it after awaking. Entrancing a fowl, by holding its bill to the floor or a table, so as to cause it to gaze at a chalk line or stripe of coloured paper placed before it, is also a familiar example in point. From these facts, and innumerable others which have occurred to myself and to those who have adopted my views and mode of operating; and also from the practices of the Fakirs of India, who, for religious purposes, have been accustomed for the last 2,400 years to throw themselves into the state of ecstatic trance by similar processes,—viz., by each looking stedfastly at the point of his nose, or some other part of his own body, or at some inanimate or ideal object, as one of their gods, and fixing their undivided attention on the act,—I say, inasmuch as similar results arise from *all* these *personal acts*, there can be no reason to doubt that the influence is essentially *subjective* or *personal*, and that the subsequent results are merely modified or intensified by others, by suggestions or impressions conveyed to the subjects through words spoken within their hearing, and other physical impressions acting on their organs of special sense. The condition is essentially one of mental abstraction or concentration of attention, in which the powers of the mind are engrossed, if not entirely absorbed, with a single idea or train of thought, and concurrently rendered unconscious of, or indifferently conscious to, all other ideas or impressions. In this condition the imagination becomes so vivid as to invest with present reality whatever idea arises spontaneously in the mind, or is suggested to it by another person on whom their attention has become specially fixed; and the oftener these phenomena are excited, the more easily may they be reproduced through the laws of association and habit. Moreover, patients who are naturally highly susceptible of such impressions may at length become so impressible as to be liable to lapse into the condition entirely through the force of imagination and fixed belief that some process is going forward elsewhere, which is competent to throw them into the state; and this may happen without any process whatever being in operation at the time. This is, no doubt, a grand source of fallacy with those who allege, through occasional coincidences of trials and results, that they possess the power of influencing patients at a distance, through mere volition or secret passes.

It is an undoubted fact, that there is great difference in the susceptibility to the mesmeric impression, some becoming rapidly and intensely affected, others slowly and feebly so. This want of uniformity in the results has been seized upon by sceptics as a warranty for their suspecting the whole phenomena manifested to be a tissue of collusion or illusion,—whereas, when viewed in the light in which I advocate the science, as the result of a *subjective* or *personal* in-

fluence, we ought naturally to expect as great difference in the results as there are differences in the mental and physical constitutions of the patients subjected to the processes. Upon this principle, therefore, I contend that the *variety* manifested by *different individuals* is the strongest proof of the *genuineness* of the phenomena.

In the ordinary mesmeric state, where the eyes are closed and the patient passes into that condition called the double-conscious state,—that is, a state in which the patient forgets, when aroused from the sleep, all which had occurred during that condition, but of which he recovers a perfect recollection when he passes into the sleep again,—it is generally found that the mind of the subject is very much in the same condition as in ordinary dreaming, every idea arising in the mind spontaneously, or suggested to it by words spoken in his hearing, or by other impressions made upon his organs of special sense, being instantly accepted by him as truths, and invested by him with all the force of present reality. In this state the imagination seems to assume a supremacy over the reason, will, and natural functions of the organs of special sense, and the concentrated state of mind enables them readily to be imposed upon, and induced to act out their dreams, excited by such suggestions, precisely in the manner referred to by Dr Abercrombie, in the case of the officer whom his companions could converse with in his sleep, and convince of anything; and whom they even conducted through the whole process of a duel, till the firing of the pistol awakened him by its report. On another occasion, being asleep on the locker of the cabin, he was made to believe that he had fallen overboard, and was told to save himself by swimming. He imitated the act of swimming, when they told him to dive for his life, as a shark was pursuing him, which he attempted so energetically that he threw himself from the locker, by which he bruised himself severely.

The sense in action may through suggestion be rendered inordinately active, or its natural function may be temporarily suspended, by mental impressions strongly imprinted on the minds of the subjects by repeated and appropriate suggestions. In short, in this condition the mind seems ready to accept as truth the first suggestion; and, from its abstractive tendency, becomes so absorbed with that as to be dead, or comparatively indifferent, to all else during the dominance of that idea or train of thought. We see an analogous condition in individuals noted for absence of mind; indeed, in a less degree, it must have been observed by most people in their own persons, as they may have been so engaged in a train of thought as not to observe a passing friend, or have had any distinct apprehension of conversation going on around them.

With most patients, so long as they remain in that condition in which they can remember on awaking what had been said and done during the sleep, there remains a degree of reason and volition sufficient to enable them to distinguish true from false and merely suggested ideas, and to enable them, moreover, to resist complying with

whatever they do not approve of. There are some subjects, however, who, *even in this stage*, are so imaginative and abstractive, possessed of such easy credulity and passive obedience to the will of others, that they can be subjugated and controlled as those last referred to when in the *deeper* state; and indeed not a few of them can be so influenced and controlled by suggestions of others, whilst wide awake and remaining perfectly conscious. These were the subjects which used to manifest what were called by the mesmerists the "vigilant or waking phenomena," and were precisely similar to what have been exhibited by Dr Darling in Edinburgh, and lately in this quarter by his countryman and friend, Mr Stone, under the new designation of "Electro-Biology."

It will be observed, that the processes resorted to by these Americans is merely a variety of my old process for inducing what I called the hypnotic or mesmeric state. The zinc and copper are merely visible and tangible objects for aiding the patients in fixing their attention, and inducing that state of mental abstraction which is the real origin and essence of all that follows. I know, from experience, that any other object would be equally efficient, provided the patients were impressed with that conviction. All in which their processes differ, therefore, from what I had been accustomed to do for more than nine years past is, in beginning, to make mental and physical impressions on the patients *before* the subjects close their eyes and pass into a state of sleep; and it will be shown presently that I had investigated the subject in *this* mode also, and published narratives of cases, in July 1846, precisely similar to those of Dr Darling and Mr Stone. I explained the phenomena differently, however, and when my *mental* theory has been propounded, shall leave it to others to decide which theory is preferable, the *mental* or the *electric*. The auricular or audible suggestions and other impressions resorted to by these experimentalists (for they speak aloud, within the hearing of the patient, the idea or act which they wish and intend to be manifested, or give some visible signal, or a tangible impression, to excite ideas or actions in their subjects) are merely modes of influencing the minds of their patients, and of reflecting the habit of concentrated attention, superinduced by the first process, from one idea or purpose and fixing it on another; and the expression, by the experimentalist, of "all right," or a nod of his head, or other manœuvre for dissipating the existing delusion, are merely different modes of breaking down the previously existing ideas, just as a tap upon the shoulder will restore to consciousness of all around the individual who was so wrapt in mental contemplation as to have passed his friend without recognition, or been insensible to what was being said or done in his presence previously. Now, the repetition of these audible, visible, and tangible suggestions being requisite to insure the result, is a clear proof that the influence is *psychical* or *mental* in its nature, and that it is not a *physical* or *electric* influence, as they allege. Were it *electric*, there ought to be no more need for

their auricular suggestions and manœuvres to produce the results on their patients than there would be for such to insure the one side of a Leyden jar being charged negatively with electricity when the other is being charged positively, or for the attendant to speak aloud to the electric telegraph the message which he wishes it to convey. The few *occasional* examples adduced by them in which they allege that they can convey their behests to subjects *silently and unseen*, through *pure sympathy* and power of their will, I consider inadequate to sustain their hypothesis. At best they are but exceptional cases; and where I have had opportunities of testing such patients, I have soon been able to demonstrate the sources of fallacy which had misled the operators.

It is a well established physiological fact, that the moment the trunk of a nerve is divided, all sense and voluntary motion is abolished in parts supplied by such nerve beyond the point of section. Now, are we to believe that it could be possible that such a degree of sympathy could exist between different individuals as to enable one, by the exercise of his volition, or other silent and unseen manœuvres, to force his own nervo-vital influence beyond his own organism, so as to control the acts of the other at a distance, even when miles apart, when he could not propel it a fraction of a line beyond the section of the nerve in his own limb (the divided ends of the nerve being in close apposition), so as to produce a voluntary movement of his own member?

In July 1846, I published a little brochure, entitled "The Power of the Mind over the Body." The object of that work was to point out what appeared to me an important source of fallacy, which had been overlooked, or not sufficiently attended to, by Baron Reichenbach when instituting experiments to prove the existence of a new imponderable, which he has designated the Od, or Odyle force. I most readily admit that Baron Reichenbach's experiments were carefully conducted, and well contrived for determining *merely physical* facts; but there seemed to have been a want of due consideration given to the very important part which the *mind* of the *patient* plays in such experiments, in producing or modifying results, quite irrespectively of external influences. The only test or proof of this alleged new force was certain effects produced on the human nerves of some highly nervous subjects. Now, my experiments went to prove that precisely similar phenomena might be realised in such highly sensitive subjects as the Baron succeeded with as the mere result of sustained mental attention of the patient alone, changing the physical action of the part so regarded, especially when done with the expectation of something being about to happen. These effects might be increased in intensity by the subject seeing or feeling anything drawn over a part, from the visible or tangible object aiding the subject in concentrating his mental attention, without the transmission of any occult or external influence,

proceeding from the object or operator to the subject. Of this there can be no doubt, as the results of my experiments, which I shall now quote from the above work, will prove.

“With nearly all the patients I have tried, many of whom had never been hypnotised or mesmerised, when drawing the magnet or other object slowly from the wrist to the points of the fingers, various effects were realised, such as a change of temperature, tingling, creeping, pricking, spasmodic twitching of muscles, catalepsy of the fingers, or arm, or both; and reversing the motion was generally followed by a change of symptoms, from the altered current of ideas thereby suggested. Moreover, if any idea of what might be expected existed in the mind previously, or was suggested orally, during the process, it was generally very speedily realised. The above patients being now requested to look aside, or a screen having been interposed, so as to prevent their seeing what was being done, and they were requested to describe their sensations during the repetition of the processes, similar phenomena were stated to be realised, even when there was nothing whatever done, beyond watching them, and noting their responses. They believed the processes were being repeated, and had their minds directed to the part, and thus the physical action was excited, so as actually to lead them to believe and describe their feelings as arising from *external* impressions.”

Immediately after my little work on “The Power of the Mind over the Body” was published, Dr Henry Holland,—a very competent authority in such matters,—wrote to me to say, that my experiments and comments were so satisfactory to his mind, that he considered no farther refutation of Baron Reichenbach’s speculations about the Od force was necessary. I certainly had been enabled clearly to prove that the *mind* of the patient *alone* was adequate to produce the effects attributed to odyle; and I had also been enabled to prove that, with such subjects, ideas *audibly suggested* by a second party could speedily produce the like results; but I have never yet seen any specific influence from *silent* willing, either when near or at a distance, *when all sources of fallacy were duly guarded against*. It is now nearly five years since that little work was published, and I am not aware that my objections to the validity of Reichenbach’s alleged discovery have ever yet been satisfactorily answered. Dr Mayo’s odylometer, instead of opposing, actually furnishes additional proof in support of, my theory.

Again I quote from the above work:—“A lady, upwards of fifty-six years of age, in youth a somnambulist, but now in perfect health, and wide awake, having been taken into a dark closet, and desired to look at the poles of the powerful horse-shoe magnet of nine elements, and describe what she saw, declared, after looking a considerable time, that she saw nothing. However, after I told her to look attentively, and she would see fire come out of it, she speedily saw sparks, and presently it seemed to her to burst forth, as she had witnessed an artificial representation of the volcano of Mount Vesuvius

at some public gardens. Without her knowledge, I closed down the lid of the trunk which contained the magnet, *but still the same appearances were described as visible.* By putting leading questions, and asking her to describe what she saw from *another* part of the closet (where there was nothing but bare walls), she went on describing various shades of most brilliant corruscations and flame, according to the leading questions I had put for the purpose of changing the fundamental ideas. On repeating the experiments, similar results were repeatedly realised by this patient. On taking this lady into the said closet, after the magnet had been removed to another part of the house, she still perceived the same visible appearances of light and flame, when there was nothing but the bare walls to produce them; and, two weeks after the magnet was removed, when she went into the closet by herself, the mere association of ideas was sufficient to cause her to realise a visible representation of the same light and flames. Indeed, such had been the case with her on entering the closet ever since the few first times she saw the light and flames. In like manner, when she was made to touch the poles of the magnet when wide awake, no manifestations of attraction took place between her hand and the magnet; but the moment the idea was suggested that she would be held fast by its powerful attraction, so that she would be utterly unable to separate her hands from it, such result was realised; and on separating it, by the suggestion of a new idea, and causing her to touch the *other* pole in like manner, predicating that *it would exert no attractive power* for the fingers or hand, such negative effects were at once manifested. I know this lady was incapable of trying to deceive myself, or others present; but she was self-deceived and spell-bound by the predominance of a pre-conceived idea, and was not less surprised at the varying powers of the instrument than others who witnessed the results."—Pp. 19-23.

After detailing a number of experiments on patients in the waking condition, I adduced the following:—"In like manner, several other patients whom I took into the dark closet could see nothing until told to look steadily at a certain point, and they would see flame and light of various colours proceeding from it, which predictions were speedily realised, whilst they were wide awake, and nothing but bare walls towards which to direct their eyes. Not only so, but I have moreover ascertained that, even in broad daylight, a strong mental impression is adequate to produce such delusions with certain individuals of a highly imaginative and concentrative turn of mind. This fact was beautifully illustrated in the case of a gentleman, twenty-four years of age, who had suffered severely from epilepsy for eleven years. When taken into the above closet, and tested as the latter, he likewise saw nothing till I suggested that he would see flame and light, after which prediction he very speedily saw it accordingly, not merely where the magnet was, but also from other parts of the room. Now this patient, and the last two referred to, when taken into the

closet *after* the magnet had been a long time removed to a distant part of the house, still saw the flames and changing colours as before,—a clear proof that the whole was a mental delusion, arising from an excited imagination on the point under consideration, changing physical action. The same gentleman, being made to look at the point of a piece of brass wire, could be made to imagine that he saw any sort of flame or colour indicated issuing from it, *even in broad daylight*; and when made to touch it with a finger, and being then told that he would find it impossible to draw it away, the mere idea was sufficient to paralyse his volition, the whole muscles became rigid, and he looked with astonishment at his condition; but the moment I said, *Now the attraction is gone, and his hand will separate*, such results followed. Moreover, now that his finger was a little withdrawn, by simply saying confidently that it would *now* be found that he could not touch the wire, as it would repel him, the idea once more paralysed his volition, and he again manifested his incapacity, and in spite of his anxious but misdirected efforts, there he remained fixed as a statue. On hinting that *now* the influence was suspended, the hand and arm became limber, when I told another person watching the experiment, that *now* he would find the hand irresistibly drawn to the wire, and such result was presently manifested. No one had touched this wire for hours. It was merely a piece of bent brass wire, which was lying loosely and projecting from the chimney piece. This power seems to have been understood by Virgil, when he said,—

‘Possunt, quia posse videntur.’

In like manner, having intimated to a friend the remarkable vividness of this patient's imagination, implicit belief, and credulity, which rendered him liable to believe that he had an ocular perception of an external change, according to whatever idea might be suggested to him by others, I requested this friend, when he went into the room, to look at the end of the above wire at the same time with the patient, and that the former should pretend to me, when asked what coloured flame he saw emanating from it, to give a new idea at each inquiry. By this mode the patient caught the ideas suggested, having no notion that he was deluded in the manner indicated. He left with the full conviction of the physical reality of all he had seen and described; and he has manifested like phenomena as frequently as he has been so tested.

“I have detailed the above case so much at length, because it is a very good type of a class of patients to be met with, who readily become the dupes of suggested ideas, in the manner presently to be explained, without the least desire to deceive others, or the most distant idea that they are themselves deceived. I have proved all I have advanced by so many concurrent examples, with individuals of the utmost probity and competency to describe their feelings, that there can be no doubt of the facts.

"But not only may patients in the waking state be made to believe that they see various forms and colours, and perceive variable and sensible impressions, and irresistible powers, drawing, repelling, or paralysing them, from a strong mental impression changing the physical action of the organ, or part usually engaged in the normal manifestation of such functions; but I have, moreover, ascertained that the same influence may be realised in respect to sound, smell, taste, heat, and cold,—so that suggested ideas and concentration of inward consciousness, are competent, with some individuals, to excite ideas not merely of hearing vague sounds, but particular tunes, the smell of particular odours, and to discriminate particular tastes, and feel heat or cold. All this, I have proved, may be realised with some excitable subjects when they were wide awake, and when there was neither actual sound, nor odour, nor taste in the situations or substances to which they referred; and by merely asking what tune, what odour, what animal, or what substance they perceived *now* (a mode of interrogation which naturally suggests the idea of change), I clearly proved that ideas may be thus excited in the minds of subjects totally different from those existing in my own at the time. The subjects with whom I made these experiments were worthy of implicit credit as to their integrity in describing their feelings and belief; and the whole results, therefore, are attributable to the remarkable reciprocal action of the mind and body upon each other, to which I have so often referred. Indeed, one of the most beautiful examples I have had of these 'vigilant phenomena,' in respect to *all* the senses, occurred in the case of a gentleman of high classical and mathematical attainments, as well as in general science. He had seen no experiments of the sort before I tested him. On finishing my round of experiments with him, he begged of me to explain the *rationale* of what had occurred. I requested him to read what I had written on the subject, which he perused with great attention, after which he expressed himself perfectly satisfied that I had hit upon the true solution of the problem. Indeed, he was so kind as to authorise me to refer any one to him for a confirmation of the *rationale* I had given of the phenomena, as experienced by him in his own person, when wide awake, and in the bright light of day."—Pp. 21-24.

I may here observe, that when he was in Manchester, Mr Stone requested a mutual friend to introduce him to me. At our interview I read to him the foregoing extract from my work, when he expressed his surprise that he had not before been aware of experiments so entirely similar to his own having been made and published in this country. He admitted that my explanation was quite satisfactory where audible suggestions were required, but still wished to hold to the electric theory, as the only mode of explaining their alleged power of conveying their behests and feelings to patients silently and unseen, through pure sympathy or silent willing at a distance,—phenomena, the actual existence of which I very much doubt.

Again,—“The true cause of these ‘vigilant phenomena’ is not a physical influence from without, but a mental delusion from within, which paralyses their reason and independent volition; so that, for the time being, they are mere puppets in the hands of another person, by whom they are irresistibly controlled, so that they can only see, or hear, or taste, or feel, or act, in accordance with his will and direction. They have their whole attention fixed on what may be said or signified by this alleged superior power, and consequently perceive impressions through the excited state of the organs of sense called into operation, which they could not perceive in their ordinary condition. It may have been interesting enough to have demonstrated that the human mind could be so subjugated and controlled; but I do not consider the *continual repetition* of such experiments in the waking condition as at all proper, or free from the danger of throwing the faculties of the minds of such patients into a permanently morbid condition.”—*Power of the Mind over the Body*, pp. 33, 34.¹

The processes, however, when prudently and skilfully conducted, are perfectly harmless, and are, moreover, capable of being turned to the happiest results in the relief and cure of several affections which are most intractable, or altogether incurable, by the ordinary modes of treatment, by the exhibition of medicine. In this manner we can excite or depress the state of sensation and circulation locally or generally, and consequently the function of any organ or part, in a most remarkable degree, according to the mode of procedure and mental suggestion resorted to in each individual case,—so that, in this way, morbid delusions and diseases may not only be excited but

¹ Since this lecture was delivered, which was on the 26th March 1851, I have been much gratified by the perusal of two admirable lectures on the subject, by Professor J. Hughes Bennett of Edinburgh. In these lectures, that acute physiologist and accomplished physician advocates essentially similar views to those which I have so long contended for. Like a true philosopher, Dr B. interrogated nature by experimental observation; and, in reference to the doctrine of *external influence* as the *cause* of the phenomena, he says,—“I know of no series of well-ascertained facts capable of supporting such a doctrine.” Regarding the ascertained facts, the Professor adds, that they “are highly important, and demand the careful consideration of the physiologist and medical practitioner.” To the same effect are the following observations of Dr Henry Holland of London, in a letter, bearing date April 26, 1851, addressed to me by that highly accomplished physician and able writer. After acknowledging receipt of a copy of a synopsis of this lecture, he says,—“You take the true course in regard to both mesmerists and biologists in keeping ever before you the main question, Is there any unknown influence, *communicated from A to B*, by which the latter attains a state and powers not otherwise attainable?”

“This is the gist of the whole question; and I doubt not you are right in your conclusion, that there is no mesmeric phenomenon (well verified, and free from all charge of *accident, mistake, or imposture*) which is not explicable by causes, normal or abnormal, within the mesmerised individual himself.

“Your experiments,” Dr H. adds, “have done much, and by new methods, to elucidate and justify this conclusion; and they apply very explicitly also to this *biological branch of mesmerism*.”

cured in many instances, not merely as regards the faculties of the mind, but also as regards the functions of the body. Whatever function can be paralysed or perverted by a given mode of procedure, and suggestion, and manipulation, may be invigorated and corrected by an opposite mode of management. This is still more remarkably verified in patients who pass into the sleep.

I am as well aware as any sceptic can be, that many of the phenomena manifested by such subjects, both when asleep and in the waking condition, are capable of being feigned. Indeed, like the correspondent in "Chambers' Journal," I set about the experimental investigation of the subject with the full conviction that there was imposture, and with the determination, moreover, if possible, to discover and expose the *trick*. With such evidence as presented itself before me, however, of the genuineness of the phenomena, as exhibited in parties known to me to be possessed of the strictest probity, and honour, and christian principles, it became impossible for me, with a proper regard for candour and honour, to persist longer in a course of dogmatic scepticism. I therefore confessed that my former notions had been erroneous, and set about the further investigation of the subject with the honest desire to arrive at truth. It is important to remark, however, that these vigilant phenomena prove that a strong fixed idea of determined scepticism may so possess the mind of an inquirer as to render him a totally unfit person to be a valid witness of what are matters of plain fact and observation to those who are not so enslaved by prejudice. His imagination and fixed conceit may be so powerful and engrossing that unconsciously he is forced to interpret the *ideas* of his own *mind* as the *facts*, instead of what is actually presented before him. This view of the subject throws important light upon the nature and value of evidence in cases where parties point-blank contradict each other when describing occurrences of which they have both been eye-witnesses. A strong mental impression or prejudice may have deceived one or more witnesses, without the slightest intention to misrepresent facts.

Chambers' correspondent has, to a certain extent, hit upon the true solution of the cause of these vigilant phenomena,—viz., that it is a play upon the *will* of the patient, and the influence of sympathy and imitation upon certain individuals. This theory readily accounts for all the phenomena in which muscular motion is concerned; but it does not at all account for a much larger and more surprising class of phenomena,—viz., suspending, intensifying, or perverting impressions addressed to any or all of the organs of special sense. These results are to be accounted for only by an appeal to the power of an over-excited and vivid imagination, and fixed idea changing physical action. Those who suppose that the power of the imagination and sustained mental attention directed to any part of the body is a mere *mental* condition, without being accompanied by any change in the physical organism, labour under a grave mistake. Sustained mental attention directed to any part changes both the sensation and

circulation of the part so regarded, and in a more marked degree, according to the imagination and belief of the patient. From this cause the most grave and fatal diseases may be engendered, and by withdrawing the attention, and fixing the train of thought on some new object or pursuit, relief and cures may be effected in cases which would utterly fail without such management of the mind. In support of this doctrine, I beg to refer to Dr Holland's "Medical Notes and Reflections," where he treats of "the effects of mental attention on the bodily organs" with his usual ability.

Voluntary motion arises from a mandate of the *will* giving a special direction to the nervo-vital influence, so as to excite into action the class of muscles which naturally produce such motion, whilst their antagonists remain passive.

In these electro-biological experiments or vigilant phenomena, however, the suggestion of the operator excites a greater flow of nervous force into the class of muscles which produce the action *suggested*, than the patient is able to throw into the opposite class. *Both* classes of muscles, therefore, are called strongly into action, but the *suggested* idea being the *stronger*, there is no efficient voluntary motion, notwithstanding a great amount of nervous influence may be expended by the patient, as evinced by his rapid exhaustion. In this manner I lately caused a patient's hands to become involuntarily closed on a walking-stick, so that he could not relax his hold of the stick; and then, by saying aloud in his hearing, "I will now make it so heavy that it will be impossible for him to support its weight," the idea excited by this simple auricular suggestion was more than a match for his energetic but misdirected muscular efforts, for there he struggled, until at last he fell upon the floor, quite exhausted by his efforts to support his imaginary load. The patient assured us, after the experiment was over, that he firmly believed he saw a fifty-six pound weight put upon each end of the stick at points indicated, and that he felt the weight increase at each addition, and that its weight at last became quite overpowering. It was obvious, from the condition of the patient, that he was quite as much exhausted by his efforts to support the imaginary weight as he could have been had it been real. Most people must have experienced a similar feeling and result from an attack of nightmare, during common sleep. The struggle and exhaustion are in both cases analogous. On the other hand, if the suggested idea and strongly fixed belief go along with the will of the patient, his volition may thereby be so much intensified as to enable him to lift a weight which he would be quite incapable of doing in his ordinary state. The history of cases of panic in an army from slight causes, and deeds of daring and achievements almost superhuman, during fits of enthusiasm, are examples in point on a large scale.

Neither a play upon the will, nor sympathy, nor imitation, can account for patients feeling insufferable heat or cold, or for having the organs of sight, hearing, smell, and taste, paralysed or perverted

so that the patient should be made to perceive impressions at variance with the ordinary effects of the exciting cause, according to the suggestions of the experimentalist. A strongly fixed idea and vivid imagination, however, are well known to be quite adequate to do so, as witnessed in monomania, delirium tremens, intoxication, and narcotism from opium, the hachisch, and other drugs, as well as in various other morbid conditions. In all these states, it is a well ascertained fact, that ideas may become so vivid as to assume all the force of reality, and that whilst the individual so affected retains a certain amount of consciousness of all around, still he cannot emancipate himself from the erroneous impression, or that he may be so engrossed with the one idea as to be dead or indifferent for the nonce to all other impressions.

Before concluding this paper, I shall state my views regarding the nature and effects of what have been called mesmeric passes. The passes have been divided into *contact* passes, in which the fingers of the operator are drawn gently over the part intended to be affected, and into *non-contact* passes, which consist in passing the hand over the part, near to, but not touching it, the fingers being extended and held apart, with a tremulous motion, so as to cause a slight agitation of the air in contact with the part operated upon. The mesmerists alleged, that the effects realised arose from some occult or magnetic influence, or the odyle force of Baron Reichenbach, affecting the part in a particular manner. My researches, however, have led me to attribute it to the power which the mind of the patient possesses to change the physical action of the part to which it is strongly drawn and fixed by sensible impressions of an external nature, or by a steady fixed state of mental attention, by an effort of the patient's own will, especially if done with the expectation and confident belief of some change being about to happen. If, at the proper stage of the sleep, the impressions are directed to the organs of special sense, ideas will be excited in the mind of the patient in accordance with the special function of the organ to which the mind has been so directed; if to a part where there are muscles subjacent, it will excite the muscles into action, and probably such ideas also as usually occasion or precede such physical actions.

One of the most puzzling classes of phenomena which I had occasion to observe was the *reverse* results which seemed to arise from the *same sensible* impressions. Thus, contact passes, or agitating the air along the course of an arm or leg, would call the muscles into action and elevate the limb. This the mesmerists called "*mesmerising passes*"; and wafting the air across the extremity caused it to descend, and this they called "*demesmerising passes*"; or agitating the air over one side of the head would cause the head to follow the hand of the operator first to the one side and then to the other; or darting a hand over the hand of a patient and suddenly withdrawing it, and repeating the operation, would cause the hand to rise and be-

come cataleptic. This was set down by the mesmerist as indubitable proof that there was an attraction between the hand of the operator and the patient's hand, which attracted it as the magnet does iron. I very soon perceived that, on first going into the sleep, patients had sufficient mobility to be affected by certain impressions, and that they would approach to or recede from impressions, according as they were agreeable or disagreeable in quality or intensity. Thus, soft music they would be delighted with, and approach to, whilst they would be painfully affected, and run from, loud or harsh music; and the same of odours, and impressions of heat and cold. I ascertained that titillating the skin, or agitating the air over the skin, would call into action the subjacent muscles, and thus you might flex the hand, and raise the arm; and by acting in a similar manner with the *opposite* class of muscles, the hand and fingers would become extended, and the arm fall. This seemed simple and comprehensible enough. But at length I ascertained that a class of muscles having been called into action by such impressions, and allowed to remain a short time in the position assumed, the repetition of the like sensible impression on the same points through which it had produced the action, would now reduce it, thus producing, from the *same apparently exciting cause*, the very *reverse effects*, whether that had been a contact pass or a simple agitation of the air. I found, moreover, that my *will* had nothing to do with these results, as precisely the usual result would be realised whilst I was willing the reverse. These opposite effects from the same exciting cause puzzled and perplexed me vastly; but at last I arrived at a very simple solution of the apparent mystery. When the patient got into the proper stage of the sleep for manifesting these phenomena, I recalled to mind that consciousness and the will are so much adumbrated that the movements are instinctive or automatic, and hence the impression merely gives a tendency to motion, the direction and character of the motion being the *most natural motion under the circumstances which exist at the time*. Hence, if a muscle is passive, it will become active, and if active, it will become passive, from the same exciting cause. Thus, when an impression is made on the hand or arm when reposing on the lap, as it cannot descend it will rise, and become rigid; but by making a like impression on it after remaining in that condition for a little while, it will give a tendency to perform the most natural motion, which, in *this* instance, is to descend. If any obstacle be interposed to its rising or descending, and the impression be repeated, it will move laterally. This same mode of exciting action by sensible impressions, and reversing results in the way described, may be confined to individual muscles, or classes of muscles, and in this way we may act on the muscles of expression, so as to awaken any passion or emotion in the mind; the action of the muscles, which constitute the "Anatomy of Expression," suggesting the feeling to the mind of the entranced subject, as the idea, in the waking state, naturally calls such anatomy of expression

into play. It is, therefore, a mere inversion of the sequence which ordinarily obtains between mental emotion and physical manifestations of such emotions. That there is nothing occult or specific in the pass with the hand, is manifest from this, that a similar agitation of the air by the blast from a pair of bellows will produce precisely similar results as the like current of air from the wafting of the human hand, as I have proved to the entire satisfaction of hundreds of intelligent individuals.

A pass, therefore, as a visible or sensible impression, aids the patient in concentrating his mental attention to a given organ or part, and thus influences the function, through giving a special direction to a power residing within the patient's own frame; but it no more imparts a virtue of an occult nature from the operator to the patient, than the lens *produces* the light and heat which it makes visible and perceptible to the senses, through concentrating the luminous and calorific rays of the sun, and drawing them to a focus. Both the pass and the lens aid in concentrating and manifesting the respective influences; but neither the operator nor the lens is the source or origin of the power or influence so manifested.

The above is an explanation of what may be realised naturally in subjects without any previous training or auricular suggestions whatever. It is quite possible, however, to subvert the whole of these natural phenomena by a system of training, as follows:—Supposing that, with each touch or agitation of the air, the operator speaks aloud and predicts what should happen, the auricular suggestion may be so strong as to cause the *predicted* manifestation to be realised instead of what otherwise would have been the case; and thus, from this time forward, through the double conscious memory, the like impression on that part or organ of sense, will recall the previously associated idea and manifestation. We may, therefore, have an *artificial* as well as *natural* set of phenomena manifested, according to the mode of operating and intention of the operator.

It also merits notice that there are some subjects who, during the sleep, see through their partially closed eyelids. In the case of such subjects, if the operator gazes stedfastly at any part of their bodies, such as a leg or arm, the patient will immediately catch the suggestion, and imagine that a movement of the member looked at is wished to be made, and his docility will instantly incline him to obey the suggestion, as if it had been excited by a contact-pass, or any other stimulus applied directly to the part—*i. e.*, if the member is down it will rise, or if up it will descend, or will move laterally if a mechanical obstacle is interposed to prevent it moving upwards or downwards. In like manner the remarkable tendency to sympathy and imitation in such patients, will induce them to observe and imitate every physical act of the operator, or other person to whom he has specially directed the patient's attention. Interpose a screen, however, and then make movements of the body or extremities, and they will rely upon *hearing*, instead of sight, under the circumstances,

and will only be *occasionally* correct now in their imitation of physical acts ; which is a clear proof that, in the other instances, they were directed by sight—viz., seeing through the partially closed eyelids.

All these phenomena may be realised without the patient intending to play off any deception on others, or having any remembrance of the facts on coming out of the sleep.

I have never yet seen any phenomena during either the hypnotic or mesmeric sleep, or during the state for manifesting vigilant phenomena, which were not in accordance with generally admitted physiological and psychological principles. The senses and mental powers may be torpified or quickened in an extraordinary degree ; but I have never seen anything to warrant a belief that individuals could thereby become gifted with the power of reading through decidedly opaque bodies ; acquire the faculty of knowing the meaning of language which they had never learned ; and other transcendental phenomena, called by the mesmerists the *higher* phenomena. The power of a strongly fixed attention, vivid imagination, and self-confidence, however, enables them to perform some extraordinary feats of phonic imitation, and writing and drawing by touch, without the use of their eyes ; discovering parties who own certain articles worn by them, through the quickened sense of smell ; overhearing conversation in a distant apartment, which they could not do in the waking condition ; of recalling to mind things long forgotten when awake ; and also of deducing conclusions, manifesting uncommon shrewdness, from premises suggested to them, or arising in their minds spontaneously from recollection of past events, to which they have directed their concentrated attention. These latter feats are precisely analogous to those manifested by the Celtic Seers, or Second-sight men, in the Highlands of Scotland. Their attention was so fixed, and their spirits so rapt in the subject of their deep contemplation, that they stood with staring eyes,—“the eyes being open, but the sense shut,”—similar to some somnambulists, and the shrewdness of some of their deductions was looked upon as the result of a sort of inspiration peculiar to that class of men.

Several important inferences may be drawn from what has been adduced regarding the power of the imagination, belief, and fixed act of attention, in changing and controlling physical action, and of the state of the body thus superinduced re-acting on the mind. It not only enables us to comprehend, upon scientific principles, the cause and cure of many diseases, where there has been no specific and adequate external physical agency to account for the results ; but it also explains many phenomena which used to be attributed to demonology, witchcraft, ghost-seeing, being spell-bound, the power of the Obi women, who could cause their credulous victims to wither and die under their assumed malign power and maledictions ; the power of charms, spells, and amulets, of Perkins' metallic tractors, the efficacy of galvanic rings, bread pills, and such like. It also ex-

plains the alleged clairvoyance of the Egyptian boys after looking stedfastly at an inky globule held in their hands, narratives of which are published by Lord Prudhoe and Mr Lane. The revelations of Kelly, recorded daily for Dr Dee, Warden of Manchester in the reign of Queen Elizabeth, and which were alleged to be revealed to him by a spirit whilst gazing into Dr Dee's celebrated show-stone; the fortune-tellers, who exercise a similar mode of looking into futurity, by gazing into a glass egg; and the late revelations of the same sort, published at the end of Zadkiel's Almanac for this year, as to the revelations of the Angel in Lady Blessington's magic crystal, all come under the same category, being merely figments of fancy, excited by questions or otherwise, set down for visions seen, and answers audibly uttered, or written in visible characters before them by the said Angels. Whatever greatly excites and changes the existing train of thought and feeling, especially if done with faith and expectation, and fixed mental attention, will assuredly be followed by a change in the previously existing mental and physical condition of the subject.

We also thus acquire this salutary lesson, that, in order to have a healthy state of mind and body, it is requisite that *all* our faculties should be duly cultivated, and that the attention should not be devoted too long and exclusively to any *one* object or pursuit, as the latter course has a tendency to engender a morbid state of mind as well as of body. Hence the advantage of relaxation and amusements of various kinds, so long as they are pursued in reason and with moderation. We are also taught this important fact, that dogmatic scepticism, or prejudice, not only beclouds the reason, but also destroys or perverts the perceptive faculties. This truth seems to have been clearly perceived by Dugald Stewart, when he penned the following notable paragraph:—"Unlimited scepticism is equally the child of imbecility, as implicit credulity."

I shall conclude this essay by a very simple mode of illustration, as respects the different points of view in which the mesmerists, the electro-biologists, and myself, stand toward each other in *theory*, by referring to the two theories of light contended for at the present time. Some believe in a positive emission from the sun of a subtile material, or imponderable influence, as the cause of light; whilst others deny this emission theory, and contend that light is produced by simple vibration excited by the sun, without any positive emission from that luminary. I may, therefore, be said to have adopted the *vibratory* theory, whilst the mesmerists and electro-biologists contend for the *emission* theory. But my experiments have proved that the ordinary phenomena of mesmerism may be realised through the subjective or personal mental and physical acts of the *patient alone*; whereas the proximity, acts, or influence of a *second* party, would be *indispensably* requisite for their production, if the theory of the mesmerists were true. Moreover, my experiments have proved that audible, visible, or tangible suggestions of another person, whom

the subject believes to possess such power over him, is requisite for the production of the *waking* phenomena; whereas no audible, visible, or tangible suggestion from a *second* party ought to be required to produce these phenomena, if the theory of the electro-biologists were true.

There is, therefore, both positive and negative proof in favour of my *mental* and *suggestive* theory, and in opposition to the magnetic, occult, or electric theories of the mesmerists and electro-biologists. My theory, moreover, has this additional recommendation, that it is level to our comprehension, and adequate to account for all which is demonstrably true, without offering any violence to reason and common sense, or being at variance with generally admitted physiological and psychological principles. Under these circumstances, therefore, I trust that you will consider me entitled to your verdict in favour of my MENTAL THEORY.

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APPENDIX.

I CANNOT deny myself the gratification of appending a few extracts from most lucid and ably-written article on Animal Magnetism, which appeared in the "North British Review" for last month. The article evinces indubitable proof of being the production of a master-mind, deeply versed in scientific and literary lore, and therefore well qualified for grappling successfully with such an intricate subject. There is also a generosity of purpose, and ease and elegance of diction, evinced by the author, which must charm and delight every honourable-minded and candid inquirer. No one who feels interested in this inquiry should fail to peruse the *whole* of the said admirable article.

As the author has contrasted my views, as set forth in my little brochure on "The Power of the Mind over the Body," with Baron Reichenbach's speculations on Odyle, I shall furnish the reader with what he says regarding my views, chiefly in his own words. After referring to the sensations of heat and cold experienced by sensitive subjects, whilst Baron Reichenbach drew magnets and crystals, &c., over parts of their bodies, the author says:—"This animal-magnetic coolness or warmth is not real in one sense of the word; that is to say, it is the image of no object. It corresponds with no phenomenon of temperature. It is not a sensation-proper; it is a mere quasi-sensation. It is a sensuous illusion. The magnet or the crystal appears to act upon the nerve of the subject in some yet occult way, and one of the effects of that action is the perception of a pseudo-sensation of heat or cold. That pseudo-sensation is a mere spectral illusion at the very best. Reichenbach knows this."—P. 141.

"So much for the facts themselves; and now for the theory of them. It has just been said, that the animal magnet (whether a common magnet, a man's hand, or a crystal) appears to stir, agitate, commove, or act upon the nerves of the sensitive in some yet wholly occult manner; and that one of the effects of that action—one of them—is the perception of a quasi-sensation of heat or cold in such nerve or nerves. But there are two to a bargain, and even this small amount of claim for the power of the animal magnet is open to reasonable question. Mr Braid, the hypnotist, and also the most searching of the experimental critics of mesmerism, has published a counter-statement. He asserts the principle, that the instrument employed—whichsoever of all the so-called animal magnets it may be—has nothing to do with the sensations in question; nothing, that is to say, in the way of direct causation. He can produce precisely similar sensations in certain sorts of people, both with and without such an instrument. He takes a patient's hand, lays it on the table with the palm upwards, makes passes from the wrist down the fingers, and the subject soon begins to feel cold or warm, as the case may be, under the lines of passage. He then bids the patient turn away her head, and, making believe that he is repeating the experiment, asks her what she feels; and she experiences the very same sensations as before, although no passes are being made. In short, he provokes the same sort of sensations as are described by Von Reichenbach, without the same instrumentation. He has only, by word or sign, to excite the expectation of the occurrence of such sensations in the patient's mind. Dr Holland has shown at

large ('Medical Notes and Reflections') how the direction of the expectant attention to any organ or part of the body excites actions in that part. The mesmerist, or hypnotist (as Braid prefers to call him), is also well aware that he can present any image he chooses to his patient by a word or a hint. It is, therefore, very natural for Mr Braid to conclude, that the Viennese patients experienced all those sensations, or rather quasi-sensations, merely because they more or less obscurely expected them; in other words, that they directed their expectant attention to the parts apparently operated upon, and the sensations ensued. The uniformity in character of these quasi-sensations is no objection to this view; for the uniformity in character of all spectral illusions is one of the most noticeable of things about them. There is a law of unity of procedure in the phenomena of disease, quite as clearly displayed as in those of health.

"Yet the conclusion of Mr Braid is not obligatory. The same effect may be produced by two differing causes. A man may perceive the image of a tree, because the radiance of a veritable tree paints it on his retina; but he may also perceive the image of a tree because his nervous system is disordered, and a tree of conception is thereby intensified into a tree of quasi-sensation. The perception is the same in both these cases. A hypnotic patient may see a book, because a book is placed before her; or she may see a book, because an experimentalist tells her his glove is one. Mr Braid has failed to perceive this alternative, and his inference is therefore defective. His experiments may be good and true; but so may those of Reichenbach. His effects may have been produced by suggestion; Reichenbach's by objects. Similar as they are, and divers as are their respective causes, they do not contradict one another. For our part, we accept them both. Braid's cases seem to be unexceptionable."—Pp. 141, 142.

I have thus fairly quoted what appears opposed to my views, as well as what accords with them; and now a word in explanation on one point.

From the statement contained in the sixth last sentence of the above extract, the author seems to have mistaken me on *one* point. I have all along been well aware that the mere fact of my experiments having proved the all-sufficiency of the subjective or personal influence of the patient to produce in himself the ordinary phenomena of mesmerism, did not ignore the alleged *possibility* of the like phenomena being produceable by external agency also. I am well aware of the co-operative power of certain visible and tangible impressions, even of a slight nature, in the production and modification of these phenomena,—and I have stated so in my lecture; but, inasmuch as the *mind* of the *patient alone* is capable of producing the phenomena, when no process whatever of another party is in operation, and that external agency can never, as I apprehend, be brought into play in such a manner as to enable us to assert positively and certainly that the *mind* of the *patient* has not *also* been at work, Baron Reichenbach and the mesmerists are placed in this dilemma, that they have no actual, and substantial, and indubitable proof to adduce, in support of the all-sufficiency of their alleged objective influence, where the power of the *mind* of the *patient* is *entirely excluded*. Our relative positions, therefore, stand thus:—

Let x represent the effects produced upon a sensitive patient by the processes of the mesmeriser; and let a represent the influence of the mind of the patient upon his own body; and b represent the influence of the mind and physical acts of the operator upon the patient. We then have

$$a + b = x;$$

but my experiments have proved

$$\begin{aligned} a - b &= x, \\ a &= x. \end{aligned}$$

Reichenbach and the mesmerists, however, cannot prove $b - a = x$, because they have no purely physical re-agent, or odylometer, by which to demonstrate such influence.

I am, therefore, much in the same position as the reviewer, when he says (p. 152):—"As for the hypothetical entities entitled animal magnetism or odyle, whether singular like caloric, or dual like electricity, we reject it and its

attendant speculations altogether, until such not impossible evidence of its individual activity be discovered and brought forward as no experimentalist shall be able to withstand." Nothing but a purely physical re-agent on odyle could achieve this, and as yet none has been discovered. As already stated elsewhere, in my lecture, so far is Dr Mayo's odometer from fulfilling the above requirements, that the phenomena which he adduced as evoked by his processes only tend to confirm my theory, as to the power of the mind over the body in changing physical action; and the experiments and their results performed and narrated by the reviewer, p. 157, and the conclusions which he has drawn therefrom, are in entire accordance with my own convictions on this point of the inquiry.

Regarding the odylic lights, the author says:—"Now, apart from Mr Braid's finding that precisely such lights are perceived by exceptional people, under the influence of suggestion and expectant attention, and accepting the amazingly congruous perceptions of Reichenbach's sensitives as the effects of an external physical cause, operative in magnets, metals, crystals, planets, suns, plants, and animals, there is an all-important remark to be made concerning them on the very threshold of his theory. It is this: The sensations of coolness and warmth, as produced indirectly by the same agents, are not correspondent with external phenomena of temperature. He has said so himself. They are real as perceptions, not as sensations; they are tactual illusions. By a parity of reasoning, these perceptions of light are not real as sensations; they are real only as perceptions. They are not correspondent with external phenomena of light. They are the parallels, the analogons of the quasi-sensations of coolness and warmth. They are optical illusions. A fact must be judged by its peers; and if the sensations of heat and cold produced by a magnet or a crystal are only quasi-sensations or spectres, then the sensations of red and blue produced by a crystal or a magnet are only spectres or quasi-sensations too. This at once explains how one sensitive person should see the flames three inches, and another see them ten inches high, though issuing from the same pole of the same magnet; for when a dim-sighted person sees an illuminated disc, he does not see it of half the size it presents to the eye of one who sees it twice as well, but of half the degree of illumination. It explains how 'even Bollmann,' as Reichenbach frequently says of his one blind patient, should perceive the odylic lights just like another. In fine, it explains all the little discrepancies between the reports of the sensitives, while it does not contravene the remarkable amount of similarity or identity of these reports; for spectral illusions (whether arising wholly within the nervous system, as in *delirium tremens*, or drawing one of their origins from without) are the orderly exponents of law, just as truly as any other natural phenomena. * * * We entreat his disciples to take notice, that parity of reasoning, just analogy, and the right rule of induction, compel the critical mind to place the odylic lights on the same level with the odylic heats and colds; which latter the discoverer himself perceives and states, but without precision, to be illusory as sensations, though real and constant as perceptions."—Pp. 144, 145.

In reference to the two experiments with the daguerreotype, by Carl Schuh, which Baron Reichenbach adduced as a physical proof of the optical nature of the odylic flames, threads, and smokes, the author of the review rejects them as "utterly unsatisfactory." After describing and commenting on the description given of the mode of experimenting, he says,—“Certainly these two poor experiments prove nothing. The experiment with two plates lasts a few hours; the experiment with only one, and therefore without a check, lasts sixty-four; the check in the former was rendered null by want of care about the box and the drawer, and there was no check provided in the latter. The experiments of Mr Braid are much better.

“They were made with nine plates, prepared by Mr Akers, of the Manchester Photographic Gallery,—a man professionally engaged in daguerreotype experiments, and therefore quite as likely to be an adept as Herr Schuh. Three of the plates were exposed to the action of a powerful horse-shoe (originally able to

lift eighty pounds, but somewhat reduced by use) in seclusion from light. Other three were treated precisely in the same manner, only two sheets of black paper were placed between the magnets and the plates, so as to intercept the real or supposed radiance of its poles. A seventh was confined in a box at a distance from the magnet. They were all kept in these several circumstances from sixty-six to seventy-four hours; but in no instance was there any appearance of the photographic action of light, the only changes being such chemical modifications of the surfaces 'as generally arise from keeping prepared plates for some time before exposing them to mercury.'"

Two other plates were enclosed in a camera, and exposed at such distance as must have given a picture of the poles of the magnet, and flames issuing from them, according to the Baron's statement regarding the focal distance of odyle. One was left sixty-six, the other thirty-five and a half hours so exposed; but no photographic indications were manifested.

"Now," adds the reviewer, "it is to be noticed that these are three (four) positive results. Those of Schuh, such as they were, were at the best only negative ones. In his two experiments, it is not the least impossible but that common light reached the plates; and it does not appear that he was on his guard against those chemical changes which 'generally arise from keeping prepared plates for some time.' But in the experiments of Braid and Akers, metallic sensitives were positively and indubitably submitted to the prolonged action of a powerful magnetic force, but no photographic effects ensued. This is the positive observation, not that; although at first sight it seems to be the reverse. In every point of view, in fact, the experiments of the Manchester surgeon are greatly superior to those of the Viennese authority on meteoric stones; and they settle this part of the question in the meantime."—Pp. 145, 146.

Regarding the experiments with the lens, the reviewer raises a very reasonable objection to them, as embracing such vagueness of testings as are "far below the mark of scientific accuracy, as it is practised and demanded in these days." And he then adds: "But here appears the avenging Nemesis of Reichenbach's contempt for the older mesmerists. If he had studied their works, he could neither have made nor published this set of his experiments. Braid the hypnotist, would more especially have furnished him with both facts and thoughts for his guidance. Dr Holland, who is neither hypnotist nor mesmerist, would have put him on his guard against the effects of expectant attention on certain exceptional nervous systems. In fine, our otherwise accomplished investigator would have been all the better for a little more knowledge of the physiology and pathology of the cerebro-spinal axis, considered as the instrument of the mind, and a little less knowledge of meteors. At all events, these experiments with the lenses will carry conviction into the judgment of neither physicist nor physiologist, especially if he be cognizant of the phenomena to be evoked in the mesmerised nervous system by a word, by a sign, by absolutely next to nothing; and still more especially, if he have seen how perfectly self-conscious the possessor of such a nervous system may appear to be, even when seeing water become white, a handkerchief turning into paper, and so forth."—P. 147.

Again: "It is astonishing that knowing, as he does, that there is no mutual attraction between the magnet and the cataleptic limb, he should not have defined it as an irresistible following of the removed magnet on the part of the limb. This phenomenon, in fact, considered as a phenomenon of motion, is altogether subjective in the patient. According to our experimentalist himself, a magnet suspended from one end of a beam, and balanced by weights at the other, never moved when a cataleptic hand was tending towards it with much force, was allowed to approach close to it, and was hindered from touching and clinging to it only by the stronger arm of the operator. The magnet does not draw the hand, but the hand seeks towards the magnet; and an experimenter's fist, or a large crystal, is as good as a magnet."

Is it not still more astonishing that, with a perfect knowledge of the above facts, Professor Gregory should believe the statement of Mr Lewis, as recorded

by the Dr at page 352 of his "Letters on Animal Magnetism,"—viz. "That had he (Mr Lewis) been still more elevated above Mr H., he could have raised him from the floor *without contact*, and held him thus suspended for a short time, while some spectator should pass his hand under the feet." The Professor adds : "Although this was not done in my presence, yet the attraction upwards was so strong, that I see no reason to doubt the statement made to me by Mr Lewis, and by others who saw it, that this experiment has been successfully performed. Whatever be the influence which acts, it would seem capable, when very intense, of overcoming gravity."

Knowing as I do the mental illusions to which some individuals are prone, through the influence of suggestions or previously existing predominant ideas, I can readily imagine that Mr Lewis, and others referred to in this instance, believed that they veritably witnessed the facts as stated ; but, with a knowledge of the non-reciprocity of attraction of the magnet for the body of the mesmerisee, I am bound to infer, that what they allege involved a physical impossibility ; and therefore, that the hands had been passed under the feet of the patient during a slight bound or leap by the patient,—a purely subjective act. Let this experiment be fairly tested, before *sceptics as well as converts to this odylic faith*, and they may very soon prove the result to be quite the contrary to Mr Lewis's declaration, and Professor Gregory's expression of his belief, that the influence, when very intense, is capable "of overcoming gravity."

For Professor Gregory I entertain the highest respect, for his great talents and attainments, and amiable and excellent disposition. I also owe him a large debt of gratitude for the very handsome terms in which he has spoken of me and of my writings and practice in this department of science, notwithstanding the antagonism of our theoretical views, and the vastly different extent of our faith as regards the results capable of being realised by our respective processes. Thus, at page 200 he says :—"Let us now attend for a moment to the hypnotism of Mr Braid. I have had the pleasure of seeing that gentleman operate, and I most willingly bear testimony to the accuracy of his description, and to the very striking results which he produces." After describing my usual process for hypnotizing, the Professor adds :—"In a short but variable time, a large proportion of the persons tried are not only affected, but put to sleep. Nay, there is, as I have proved on my own person, no plan so effectual in producing sleep, when we find ourselves disposed, in spite of our wish to sleep, to remain awake in bed." After describing the induction of sleep effected by reading a certain class of books, he adds :—"But let these persons try the experiment of placing a small bright object, seen by the reflection of a safe and distant light, in such a position that the eyes are strained a little upwards or backwards, and at such a distance as to give a tendency to squinting, and they will probably never again have recourse to the venerable authors above alluded to. A sweet and refreshing slumber steals over the senses ; indeed, the sensation of falling asleep under these circumstances, as I have often experienced, is quite delightful, and the sleep is calm and undisturbed, though often accompanied with dreams of an agreeable kind. Sir David Brewster, who, with more than youthful ardour, never fails to investigate any curious fact connected with the eye, has not only seen Mr Braid operate, but has also himself often adopted this method of inducing sleep, and compares it to the feeling we have when, after severe and long-continued bodily exertion, we sit or lie down and fall asleep, being overcome, in a most agreeable manner, by the solicitations of Morpheus, to which, at such times, we have a positive pleasure in yielding, however inappropriate the scene of our slumbers." Such testimony, from two such philosophers, regarding the efficacy of my method of inducing *sleep at will*, in their own persons, by such a simple process, I consider a boon to the public, as well as gratifying to myself to have had recorded by Professor Gregory, and thus diffused so much more widely than when confined to my own publications alone.

Professor Gregory thinks that I have gone too far in denying the existence of clairvoyance, and what are called the higher phenomena. It is quite possible that it may be my misfortune to have such a constitution of mind as requires too

great an amount of evidence before I can be convinced that certain phenomena are facts. Still, when I state *this* fact, that I have had many opportunities of investigating the pretensions of alleged clairvoyants of the first water, and, from knowing and attending to the sources of fallacy requiring to be guarded against, that I found *every individual clairvoyant wanting*, even including trials by myself and others, on several occasions, with a subject who has been adduced by the Professor, in his recent work, as *one of the most lucid examples on record*;—under these circumstances, I think few can feel surprised that I should still be somewhat sceptical as to the *bona fides* of these alleged transcendental phenomena, which are said only to manifest themselves *occasionally*, and that again only in *a few individuals*, and, moreover, before those *only* whose foregone conclusions incline them, unwittingly, to overlook sources of fallacy of vital importance in such an investigation, and to accept vague generalities as clear and satisfactory replies, on points which ought to be determined with the utmost rigour and unmistakeable accuracy. To say that ninety-nine negatives will not gainsay or disprove *one* positive, as many argue, I readily admit; but I admit it only on the following conditions,—provided always that the alleged *positive fact* can be clearly and satisfactorily proved to be *a fact*. In such a case as that, however, I would look very charily at the solitary alleged fact, from a fear that it might, after all, not be a *real* but only a *spurious* result—a mere illusion—arising out of the numerous chances of error having deceived me in some way in this solitary successful case. The amazing industry of Professor Gregory has enabled him to publish a great number of curious cases, some of which, I admit, are difficult to explain, but scarcely more so than the feats of the mysterious lady who was lately in London, who candidly avowed her achievements were accomplished by *art*, and not by the alleged clairvoyance of the mesmerists; and yet her secret, so far as I have heard, has never yet been discovered. From all which I have seen, read, and heard on the subject, I think I am fairly entitled to say, that if we are not warranted to pronounce the things alleged to be performed by clairvoyants *impossible*,—feats which never *can* be proved by any possible amount of evidence,—still I consider I am justified in saying, that it is highly improbable that such a power will ever be realised so as to be satisfactorily proved to the conviction of mankind at large.

At pages 30-32 of Dr Ashburner's translation of Baron Reichenbach's researches on odyle, the Doctor has appended a note, in which he asserts that blue light may be seen (by some individuals) issuing in copious streams from his eyes, when he has concentrated his "thoughts on acts of volition or study." Having enunciated this *flaming fact*, the Doctor then asks, "Will any one venture to say that a force, having relation to such a light, is not a material power? The light," he continues, "proceeds from the brain of a person willing, and impinges on a sleeper—sent to sleep by a magnet, or by a crystal. The light is sent forth by the will of that person, and becomes a motive power; for the recipient sleeper (or waking patient) moves and obeys the mandate received through the luminous agency." Then, "In proof of the material agency of the light which emanates from the human brain," the Doctor asserts, "I have caused it to travel seventy-two miles, producing immediate effects." He further asserts that, mentally, he can summon a party, while wide awake, to come to him at his bidding, although at a distance of nearly two miles from him; and he adduces, as another example, a patient, who "for some months required the force of the light emanating from his (my) brain by the exertion of the will to enable her to sleep at all, when she was at the distance of nearly two miles from him (me)." Not only so, but the Doctor moreover asserts, that he can "render an individual insensible and rigid," merely "by imagining a circle round her;" or that he can render an imaginary bar on the carpet visible to this patient, which will send her to sleep if she attempt to cross it; and he then adds, "Sometimes I have placed this bar of light across the threshold of a door, and it has been impossible for her to pass over it." Nay, more, he alleges that he can extrude this blue light from his finger-points, and collect it in a glass, and then put people to sleep "by pouring the fluid on the back of their necks." And, furthermore, he

asserts,—“On several occasions lately, I have sat in one room willing the mesmeric light into a wide-mouthed phial, of a pint capacity, and have taken it into another room, where, pouring the *substance* on a patient's head, she has instantly fallen asleep.” Dr Ashburner then enunciates the following propositions as the necessary inferences to be drawn from these *facts*:—“*That a force, which is a material agent, attended by or constituting a coloured light, emanates from the brain of man when he thinks; that his will can direct its impingement; and that it is a motive power.*”

These are wonderful announcements—at least they must appear so to those who are not aware that individuals, who, like Dr A. and his patients, are surcharged to overflowing with this blue flaming force, see and feel (that is, they *perceive*) what they *believe*, instead of being in the condition merely to believe what they veritably *see and feel*. To those, however, who are familiar with the sensuous illusions to which such individuals are prone, and the easy credulity of such parties, as well as with the power of imagination, belief, and habit, in influencing certain subjects and sending them to sleep, &c., from their merely supposing that some process is going forward for the purpose of affecting them in such and such a manner, (which may happen to prove successful, when no process whatever of another person may be in operation); and the quickness with which some mesmeric patients catch suggestions, which might be overlooked by others, such as even a look, or movement, or the mere peculiar manner of the person on whom their attention is fixed, as explained at large in my lecture,—I say, to those who are aware of these peculiarities and sources of fallacy, all these apparent marvels of Dr A. are mere matters of course, easily admitting of explanation, independently of any blue flaming force emitted from the Doctor's brain, and impinged, by his will, on the sleeping or waking patient, in the manner alleged.

For example,—for Dr A. to will a patient to come to him *at his own house, or other usual place of meeting*, in the case of a person whose presence he might frequently desire, and who believed that he possessed the power of transmitting his messages to her mentally; granting that such person should *occasionally* make her appearance shortly after the transmission of such mental mandates, this would carry conviction to the mind of no one accustomed to rigorous investigation, that there was any necessary connection between the willing of the Doctor and the personal appearance before him of his patient, and for this reason,—because, under the circumstances named, there might be many accidental coincidences, merely from the patient imagining to herself that she was required by him at such and such a time. But, if the Doctor will only accompany a few gentlemen to half a score different houses, all situated within a mile and a-half of the residence of his patient, each of the houses to be fixed on by some of the gentlemen as they pass along the street in a carriage not known to the patient, and all the gentlemen be allowed to accompany the Doctor into each house, to watch the results of his mental mandates, the true state of the case could very soon be determined. Having done this, if the patient does not at once find them out in each of their hiding places, then the Doctor's theoretical notions must have been erroneous; whereas if she finds them out on each occasion within a reasonable time, and by a direct track and without inquiry, then there will be good ground to concede to him and his patient the possession of some occult power.

But Dr Ashburner declares that the power of his will is not only able to control the behaviour and movements of organised and living beings in some mysterious manner, without physical contact, word, or visible movement of his body, and even when at a distance, but he actually asserts that he possesses the like control even over inanimate matter itself. Thus, in the “*Zoist*” for October 1847, page 274, he has asserted, that by fixing two perpendicular glass rods, each nine inches in height, in a piece of flat board, at a distance of ten inches from each other, and another glass rod being placed so as to rest horizontally upon the top of the perpendicular rods, all of them about a quarter of an inch thick, and having suspended a gold ring from the middle of the horizontal bar of glass, by a fine silk thread,—having made all these arrangements, Dr A. asserts that

he can sit at the distance of eighteen inches from the ring, and, by a *mandate of his will*, that he can compel the precious metal to ignore the vulgar law of gravity, and actually advance towards him;—a feat quite sufficient to prove the wonderful power of his brain—as regards the vividness of his imagination and self-esteem, at least.

Could the Doctor only prove this alleged fact to the satisfaction of *others*, as well as of himself, it would be the very physical odometer so much desiderated at the present moment by the mesmerists and believers in the alleged new force of Reichenbach. I predict their disappointment, however, whenever it is tested *with requisite caution*, and which may be easily done as follows:—Let the ring so suspended be placed on a firm table, and covered with a glass shade, excepting the side next the Doctor, which ought to be of pasteboard or wood (as *glass* obstructs his odyle force). Being thus enclosed, oscillation from currents of air, from the breath of the operator and others present, would be guarded against, whilst the attendants could watch the ring in such positions as to render the slightest divergence from the perpendicular perceptible. This would be a most legitimate and conclusive experiment, provided it were tested by those who are proof against the illusions arising from predominant ideas and expectation, even when in the conscious state.

It certainly appears somewhat ludicrous, however, to hear this learned expounder of Reichenbach gravely narrating his proceedings, of sitting in one room willing the flow of the flaming fluid from his brain into a wide-mouthed *phial*, and collecting and carrying it into another room, in what, according to Reichenbach himself, and also according to Professor Gregory, the other translator and expounder of the Baron's views, must have been a *bottomless vessel—a mere sieve*—for both these gentlemen assert, as one of the grand characteristics of odyle, and that in which it differs, in particular, from electricity, is this, that it *passes through glass and resin*, as well as through all other matter. But I have overlooked the important distinction, that what is a *bottomless vessel—a mere sieve*—to the odyle of Reichenbach and Gregory, may be capable of being rendered impervious, *even to odyle*, by the impingement of a coloured light of a more substantial quality, sent out by the omnipotent will of Dr Ashburner, from his peculiar brain.

It is certainly deeply to be deplored that some mesmerists—some of those who contend stoutly for the value of mesmerism in a therapeutic point of view,—and who also contend for the veritable existence, as the cause of the phenomena, of a mesmeric fluid,—a special influence or force, such as the *vis formativa*, or *anima mundi* of by-gone years, or the odyle of Reichenbach,—for all these are merely different modes of expressing the same idea;—I say it is deeply to be deplored that some of these individuals, in their ardent zeal for advancing the claims and powers of their alleged occult protogee, should have gone to such extravagant lengths as to place it in the stead of Deity, investing it with the attributes of omniscience, omnipresence, and omnipotence. They seem to have invested it with a sort of impersonal intelligence, and power, and forethought, and design, and action, which, by mankind at large, who have been aided and enlightened by the revelation and wisdom contained in the volume of Holy Writ, are considered attributable to God only—the *Great First Cause of all*. By the latter, all the cosmical forces are merely viewed as the agents appointed by the *Great First Cause*, by a benevolent, intelligent, and Almighty Will, and Eternal Power, for accomplishing the purposes of His infinite wisdom, will, and providential arrangements; but the former class advance the creature to the place of the Creator.

To find individuals, as has lately been the case (see “Letters on the Laws of Man's Nature and Development,”—by Henry George Atkinson, F.G.S., and Harriet Martineau,—London, Chapman, 1851), publishing to the world their full-fledged, daring, unblushing atheism, denying their belief “in a God or the future,” and recording the following atheistical confession made by Miss Martineau herself,—“There is no theory of a God, of an Author of nature, of an origin of the universe, which is not utterly repugnant to my faculties, which is not (to my feelings) so irreverent as to make me blush, so misleading as to make me mourn.”

And again, to find them asserting that "philosophy finds no God in nature, no personal Being or Creator, nor sees the want of any." And again, that "never has a God revealed himself miraculously." I say all this only proves, as a reviewer of their work has well said, that they must "have searched nature in a very different spirit, and in a directly opposite direction, to that in which it was searched by a Newton." How miserable must be the condition of such individuals, compared with that of those who, when they walk abroad and look upon the face of nature, can find "books in trees, sermons in stones, music in running brooks, and 'God' in *everything*."

The critic above referred to ("Medical Gazette" for April 25, 1851), further adds:—"For aught that is apparent in this work, it might have been the written records of the reflections of two heathens, who, having found some books of human learning, have studied them, and thirsting for still higher knowledge than that of the mere material phenomena of the world, find themselves strangely bewildered. Their state may be not inaptly described in the words of a writer, whom our readers, we believe, will regard as of some authority:—'That which may be known of God is manifest in them; for God hath showed it unto them. For the invisible things of Him, since the creation of the world, are clearly seen, being understood by the things that are made, even His eternal power and Godhead; so that they are without excuse; because that, when they knew God, they glorified him not as God, neither were thankful; but became vain in their imaginations, and their foolish heart was darkened; professing themselves to be wise, they became fools.'"

To find individuals making such avowals as those above quoted, whilst declaring themselves most zealous champions for mesmerism, and going so far as to represent it as the only infallible means whereby to interpret nature, I consider is a great misfortune; because it is calculated to raise an invincible prejudice in the minds of many against the whole inquiry, merely through the moral perversity and folly of a few individuals. Let those who would be scared from the farther investigation of the subject, in consequence of the blasphemous ravings of such persons, in their denial even of the existence of a supreme God, as well as their infidel assaults regarding the miracles of our blessed Saviour, turn to the admirable work,—"*Mesmerism and its Opponents*," by the Rev. G. Sandby, vicar of Flixton, Suffolk, and they will find an ample and able exposition to prove that there can be no comparison or affinity between the facts of mesmerism and the miracles of Christ. They will also find the value of the mesmeric treatment of diseases ably supported, by examples drawn from the reverend gentleman's personal experience.

To prove the extent of folly and absurdity to which parties may descend, who give themselves up to such flights of fancy, and to such erring operations of dis-tempered reason, on speculations of this nature, I shall adduce a single example. And could there be a proof of more consummate folly manifested, or a better example adduced of the truth of the adage—"extremes meet"—than is furnished by one of the copartners in the authorship of the work above referred to, having declared in that work "philosophy finds no God in nature, nor *sees the want of any*,"—in other words, that he considers the whole universe started into existence *without* a cause; and that all the varied, and minute, and mighty operations in nature may proceed *without* a cause; and yet, that this *philosopher* must needs admit, on another occasion, that even that "baseless fabric of a vision"—so slight a thing as *a dream*—required a *cause* for its production; even so mighty a cause as the breath of this philosopher's nostrils breathed into a lady's glove, and sent to her? See p. 517 of Professor Gregory's "*Letters on Animal Magnetism*," where he gives the following extract in a letter from Mr Atkinson:—"On one occasion I *breathed a dream* into a glove, which I sent to a lady: the dream occurred."

In the estimation of all competent judges, the true marks of transcendent genius is to possess activity of the *whole* mental faculties in *harmonious and due proportion*, rather than an individual faculty or two developed in excess, with positive deficiency or perversion of the others. But the latter is the condition

actually manifested by patients said to be clairvoyant; for it is an undoubted fact, as illustrated in my lecture, that with the class of subjects who are prone to manifest the vigilant phenomena,—that is, those who exhibit the power of suggestion and predominant ideas over their sensations, feelings, reason, and will, during the conscious state,—the imagination becomes inordinately vivid; the attention too abstractive, or fixed on a predominant idea, to the disregard of all else, so that the ordinary functions of the organs of special sense may be perverted or temporarily suspended, merely through an audible suggestion of another person, or a slight physical impression; and the will and reason are reduced to a state of morbid prostration, or they are inordinately active, whilst the other faculties are in a state of abeyance. As sometimes happens in certain cases of insanity, such individuals may *occasionally* perform extraordinary feats, and make striking remarks on certain points, or in relation to certain subjects; but no confident reliance can be reposed on their announcements, because of their incongruities on other points, on which they are palpably erroneous to the conviction of all sane minds. Moreover, in subjects who pass into the second-conscious stage of the sleep, and who are alleged then to be in the *more highly clairvoyant state*, all these abnormal peculiarities are manifested in a still higher degree. Hence, the slightest suggestion, or leading question, instantly excites corresponding ideas, with such vividness that they cannot be corrected by an appeal to the organs of special sense and reason, and every *idea* is accepted, and spoken of, and reasoned upon, as a *present sensation or reality*. It may, therefore, easily be comprehended why individuals with such peculiar fancies and longings—as Miss Martineau and Mr Atkinson should be so much enamoured of mesmeric clairvoyants, as to have represented them as the *only true interpreters of nature*; because a few suggestions or leading questions, can enable such subjects readily to manufacture, according to order, a fabric of whatever structure or pattern may be most in accordance with the desires and notions of the high priests and priestesses of such oracles. Our Osiris and Isis may, therefore, in this manner, most readily succeed in having the whole desires of their hearts distinctly realised and audibly proclaimed from the lips of their wonderful clairvoyants, even to the comfortable assurance of man's future annihilation, or mere material decomposition and change of form. True, even the wise man, Solomon, wrote regarding death, that, when the wheel becomes “broken at the cistern, then shall the dust return to the earth as it was, and the spirit shall return to God who gave it;” and the Apostle Paul also said, “There is a natural body, and there is a *spiritual* body;” and again, “This mortal must put on *immortality*.” But what are the authority of Solomon and St Paul, and the whole oracles of God, in the eyes of these *modern philosophers*, compared with the revelations of their *natural or mesmeric clairvoyants*,—who can furnish them with the comfortable assurance that the conscious principle or soul of man, shall attain, after death, to the exalted condition of being even like “the brutes that perish”?

What a contrast have we here displayed in these poor, humble, grovelling and chilling desires and hopes of these modern philosophers, when compared with the rich, and exalted, and sublime, and animating, and high and holy hopes and aspirations and convictions, of those who have believed in the immortality of the soul, as also in the existence of an Almighty and Benevolent Creator,—sublime hopes and aspirations, and rational convictions, which have been fondly cherished by the wisest and best of men, both in ancient and modern times, throughout the whole civilised world? By way of contrast, I shall adduce a single example, from the pen of Addison:—

“The soul, secur'd in its existence, smiles
At the drawn dagger, and defies its point.
The stars shall fade away, the sun himself
Grow dim with age, and nature sink in years;
But thou shalt flourish in immortal youth,
Unhurt amidst the war of elements,
The wreck of matter, and the crush of worlds.”

But if Miss Martineau and Mr Atkinson determine still to hold by their new doctrine, and to contend that mesmeric clairvoyants are the *only true interpreters of nature*, and should they be resolved to reject the simple and obvious interpretation given by me in the second last paragraph (which I feel confident is the true interpretation in cases generally, when patients have no intention of perpetrating fraud, but are merely misled and directed by the suggestions of others), in such case, will they be good enough to inform us why there should occur such mighty discrepancies amongst the revelations even of clairvoyants themselves? For it now appears, that, whilst the clairvoyants of Miss M. and Mr A. have been assuring these authors that there is no God or Creator, and no such thing as a future state of consciousness, or personal existence after death, the mesmeric clairvoyants of America, from whom has sprung the religious sect called the Rappists, amongst other marvels, "profess to have intercourse with the *dead of all ages*, with saints, prophets, and apostles, and to commune *directly with God himself*." One of the religious journals of these fanatics, is advertised as being edited by the *twelve Apostles, to whom the sub-editors act as amanuenses*!! Let Miss M. and Mr A. reconcile these discrepancies, and egregious acts of folly and extravagance, *if they can*, by their new philosophy and *unerring oracles*.

Is it not grievous to find two otherwise clever persons, presenting to the world such a monstrous progeny, as this first-fruits of their literary matrimony? Is it not a cause of the deepest sorrow and regret, that a woman like Miss Martineau, who had written so much and so well on other subjects, should have thus damaged her fair fame and future usefulness, by the publication of a book, which, like the Upas tree, threatens death and destruction to all who shall dare to approach within its baneful influence? As regards the public, there is *one* point in which these authors have been fortunate, namely, in the *intense potency* of their poisoned draughts. It is a curious and interesting fact, that the very eagerness of assassins frequently insures the safety of their intended victims, the extreme potency of the poisoned cup causing instant nausea and rejection of what, in a more moderate and diluted dose, would have been retained, absorbed, and proved fatal; so, fortunately, will it prove in the present instance; the baneful dose is so gross and nauseous, as must produce a salutary recoil, in those who peruse such infidel, demoralizing, and blasphemous ravings.¹

But even granting that all the speculations of Baron Reichenbach are illusions, and that there is really no entity in his alleged odyle, or the special influence, or magnetic fluid of Mesmer (which was only a different name for the same alleged influence or agent); and granting that the alleged clairvoyant feats are of a similar cast, still I quite concur with the author of the review in the "*North British*," that, "so extensive, orderly, and authentic a narrative of sensuous illusions, is an invaluable contribution to the science of medical psychology."

ARLINGTON HOUSE, OXFORD STREET,
Manchester, 19th June 1851.

¹ In an able article on the above work which appeared in the "*Westminster Review*" for April last, the following observations occur:—"The *new lights* promised by our authors turn out to be chiefly composed of very *old-fashioned rays of darkness*"; and again, "views that we not only consider unphilosophical, but peculiarly calculated to unfit those who hold them for the elucidation of important truth." Again, "it exhibits a wild tendency to generalize, and gives no indication of that patient accuracy of experiment, that can alone win the respect of the scientific world." Again, "Miss Martineau and Mr Atkinson are led to consider that matter alone has a positive existence, by the very class of phenomena that in other minds have produced the strongest collateral proof that mind only is real and eternal. In this there is nothing unnatural (with such individuals), for that state of mind which finds it more reasonable to ascribe the origin of thought to physical forces, than to suppose physical forces the creatures of intelligence, is likely to be affected by many circumstances in a manner which is not natural, and can scarcely be considered sane."

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is of great importance in the theory of the differential equations of the second order. The second part of the paper is devoted to the study of the properties of the solutions of the differential equations of the second order. It is shown that the solutions of the differential equations of the second order are of great importance in the theory of the differential equations of the second order.

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