Animal magnetism.

ANIMAL MAGNETISM.

[*Continued from Vol. I. p. 306.*]

The committee of the Royal Academy of Medicine of France, appointed in 1826, adopted a resolution not to advert in their report to any facts or phenomena which did not come under their own immediate observation. To this resolution one exception only was admitted, — the case of the operation performed on Madame Plantin, by M. Cloquet. This case had been admitted by the College of Surgeons, and was considered to be so well authenticated, that it would have been improper to have excluded all notice of it from the report.

The committee devoted five years to the prosecution of their inquiries, and did not make their report till June, 1831. During this period they examined numerous cases, in several of which no discoverable effects were produced. In others, the effects were slight, but well ascertained, and in several all the higher and more extraordinary phenomena were evolved. The limits of these articles do not permit us to enter on many of the details even of the most important cases which they have put on record, especially as it is our purpose to state some facts, scarcely less important, of which we have ourselves been witnesses. We shall therefore limit ourselves to a few of the many cases, attested and recorded by the committee.

Among the subjects experimented on was M. Itard, a member of the committee; and though none of the higher phenomena were developed, effects were produced quite decided and unequivocal, and such as the committee considered could not be ascribed to imagination or any known physiological agency. In reference to this case, and two others not less remarkable, the committee observe: —

> These three cases appeared to your committee to be altogether worthy of remark. The subjects of the first two — one a child of twenty-eight months, the other a deaf and dumb boy, — were ignorant of what was done to them. The one indeed was not in a state capable of knowing it, and the other never had the slightest idea of magnetism. Both however manifested the effects of its influence, and most certainly it is impossible in either case to attribute this sensibility to the imagination. Still less is it attributable to this in the case of M. Itard.
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> It is not over men of our years, and, like us, always on our guard against mental error and sensible delusion, that the imagination such as we view it has any sway. At this period of life, we are enlightened by reason and disengaged from those illusions by which young persons are so easily seduced. At this age we stand upon our guard, and distrust rather than confidence presides over the several operations of our minds. These circumstances were happily united in our colleague; and the Academy knows him too well not to admit that he really experienced what he declares that he felt.

The next case we shall quote is one in which some of the higher effects were produced.

CASE OF PIERRE CAZOT.

Paris, August, 1827, to May, 1828.

Attesting Witnesses. — MM. Bourdois, Double, Itard, Gueneau de Hussy, Guersent, Fouquier, Leroux, Magendie, Marc, Thillaye, and Husson, members of the committee appointed by the Royal Society of Medicine of France; M. Foissac, physician attending on Pierre Cazot.

Pierre Cazot, aged twenty years, a hatter by trade, was born of an epileptic mother, and had been subject to epileptic fits, which usually occurred five or six

times a-week. He was admitted to the *Hôpital de la Charité*, in the beginning of August, 1827. He was immediately subjected to the processes of magnetising, and sleep was produced at the third sitting. At the tenth sitting, on the 19th August, at nine o'clock in the morning, he exhibited the usual appearances of magnetic somnambulism in the presence of the members of the committee. He then declared, that at four in the afternoon of the same day he would have an attack of epilepsy, but that it might be prevented by previously magnetising him. The committee preferred to await the fulfilment of his prediction. The fit took place precisely at the time foretold by the patient.

On the 21st August, being thrown again into somnambulism, it was determined to ascertain whether he acquired the usual insensibility of the skin. M. Fouquier, one of the hospital physicians, suddenly thrust a pin an inch long between the fore-finger and thumb of the right hand; he also pierced with a pin the lobe of the ear: the eyelids being separated, the conjunctiva were struck several times with the head of a pin. The patient evinced no sign of sensibility.

On the 24th August, being magnetised and thrown into somnambulism, M. Fouquier thrust a pin an inch long into his fore-arm, — another, the sixth of an inch long, under the breast-bone (*sternum*), — a third into the pit of the stomach, and a fourth into the sole of the foot. M. Guersent, a member of the committee, pinched him in the fore-arm so severely as to produce a livid spot. M. Itard, another member, leaned on his thigh with the whole weight of his body, — all without any manifestation of sensibility or consciousness on the part of the patient; nevertheless, he heard, understood, and answered questions put to him by the committee, and the following dialogue took place: —

Q. How long will your fits continue?
A. For a year.
Q. Do you know whether they will follow close on one another?
A. No.
Q. Will you have any this month?
A. I shall have one on the 27th, at twenty minutes past three o'clock.
Q. Will it be severe?
A. Not half so bad as the last one.
Q. On what day will you have another?
A. (*after showing signs of impatience*) On the 7th September.
Q. At what hour?
A. At ten minutes before six in the forenoon.

On the day on which this conversation took place, Cazot was obliged to leave the hospital in consequence of the indisposition of one of his children. An accident prevented his return to the hospital on the 27th, the day predicted for his next fit, and his medical attendant having thrown him into a magnetic sleep just before the predicted hour, the fit did not take place.

On the 6th, Cazot was again admitted to the hospital. It is necessary to bear in mind that in his waking state he had no consciousness of what had passed in the intervals of his magnetic somnambulism, and consequently had no knowledge of the prediction he had formerly made, that he should suffer a fit on the 7th. After his admission to the hospital on the 6th, he was again thrown into the state of somnambulism by the usual processes, in the presence of the committee. He then repeated his former prediction, that he should suffer a fit at ten minutes before six the following morning. Measures were taken on this occasion to conceal from Cazot the presence of M. Foissac, who operated upon him, to obviate any effect, which might be produced either by imagination or deceit on the part of Cazot. It was arranged, that when Cazot was to be awakened, a signal should be given to that effect to M. Foissac, and that the latter should awaken the patient by a mere act of his will, without any motion or sign. While the attention of Cazot was engaged by the questions addressed to him by the committee, the signal agreed upon was given by M. Fouquier, *upon which M. Foissac, by the mere act of his will, awakened the patient.*

The committee assembled next morning to witness the fulfilment of Cazot's prediction. They met at a quarter before six, and in five minutes the fit commenced in their presence, and was attended by all the usual symptoms

It was determined now to place the magnetiser, without informing the patient, in an adjacent room, and to try the effect of the customary operations through the wall, or partition. Accordingly, on the 10th September, Cazot was invited to the house of M. Itard, at seven o'clock in the evening, it having been arranged that M. Foissac should not come till a later hour. M. Itard and the other members of the committee entered into conversation with Cazot, and thus engaged him during the evening. At half-past eleven o'clock, M. Foissac arrived, and being conducted to an antechamber, separated from the room occupied by Cazot and the committee by two doors, both of which were closed, proceeded in the usual manner. Three minutes had not elapsed when Cazot said, "I believe M. Foissac is there, for I feel myself stupefied." At the end of eight minutes he was put in the state of somnambulism, and foretold that, on the 1st October next following (in three weeks from that day), he should have a fit at two minutes before noon.

This fit took place exactly at the moment predicted, and was witnessed by the members of the commission. It was more than usually violent and severe, accompanied by tetanic rigidity of the trunk and limbs, convulsive contortions of the eyes, decided *opisthotonos*, stifled and tremulous respiration, and pulse from 132 to 160.

As frequent communication necessarily took place between Cazot and his medical attendant from the time of its prediction to the access of this fit, it occurred to the committee, that persons not having the personal knowledge of and confidence in M. Foissac which they had, might imagine some collusion between him and the patient. To meet such a possible objection, they determined to lead M. Foissac into an error with regard to the next prediction.

On the 6th October at noon, Cazot arrived at the house of M. Bourdois, having no reason to know that M. Foissac was expected. In half an hour afterwards M. Foissac arrived, and was conducted, without the knowledge of any of the parties, to an adjacent room. A person was sent by a concealed door to inform him of the position of Cazot, with a request that he would set Cazot asleep and awaken him.

At thirty-seven minutes past twelve, while Cazot was engaged in conversation with the commissioners, and in examining and commenting on the pictures which hung round the cabinet, M. Foissac commenced his operations in the drawing-room. At the end of four minutes Cazot winked slightly, and became restless; and at the end of nine minutes he fell asleep, and somnambulism ensued, when the following dialogue took place: —

M. Guersent. Do you recognise me?

Cazot. I do; M. Guersent.

M. Itard. When shall you have another fit?

Cazot. In four weeks from this day, at five minutes past four in the afternoon.

M. Itard. When shall you have another?

Cazot. (*Collecting himself, and hesitating*) In five weeks afterwards, at half-past nine in the morning.

The two days thus predicted were the 3d November and 9th December next succeeding.

The procès-verbal of this meeting being afterwards read over to M. Foissac, in order that he might join the commissioners in attesting it, the reader was instructed to read the day predicted for the first fit the 4th, instead of the 3d November; and the time of the second fit was, in like manner, misstated. M. Foissac took notes of these times.

M. Foissac, as Cazot's medical attendant, was accustomed to put him in a state of somnambulism occasionally, to relieve him from headaches, to which he was subject. Some days after this meeting, conversing with the patient in that state, he questioned him about the time of his next fit, to verify the result of the conversation with the commissioners; and Cazot informed him, that the day would be the 3d and not the 4th November. M. Foissac, conceiving that an error had crept into the procès-verbal, immediately informed M. Itard of this.

The committee subsequently witnessed the two predicted fits: the first took place at *six* minutes past four, instead of five minutes, as predicted; — and *it was*

remarkable that the fit commenced when Cazot was in a profound sleep, in which he had been for two hours before. The fit predicted for the 9th December took place at a quarter before ten, instead of half-past nine, and was, like the former, preceded by a deep sleep, in which it commenced.

On the 11th February, 1828, Cazot predicted a fit for the 22d April, at five minutes past twelve o'clock, which was afterwards witnessed by the committee. It commenced at *ten* minutes past twelve, and was remarkable for its violence. In his fury, Cazot bit his hand and fore-arm. After it had continued thirty-five minutes, M. Foissac magnetised him. The convulsions soon subsided, and were succeeded by somnambulism. In this state he predicted two fits; the first for the 25th June. In two days after, on the 24th April, he was thrown down by a restive horse, which he tried to stop, and was so severely injured, that he died of the contusions on the 15th May.

CASE OF PAUL VILLAGRAND.

Paris, August, 1827.

Attesting Witnesses.—The Committee of the Royal Academy of Medicine, before mentioned; and M. Foissac, Doctor in Medicine, and others.

Paul Villagrand, a student at law, aged twenty-four years, was afflicted in 1825 by paralysis of the whole of the left side of the body. He was admitted to the *Hôpital de la Charité* in April, 1827, after being treated, without effect, by acupuncture, seton in the neck, and applications of *moxa* along the vertebral column. At the time of his admisssion to the hospital he was unable to support himself on the left leg, walked on crutches, and could not lift his left arm to his head. He was very hard of hearing with both ears, and saw very imperfectly with his right eye. M. Fouquier, the physician of the hospital, observed in him, besides paralysis, the symptoms of enlargement of the heart. Up to the 29th August, 1827, bleeding, purges, and blisters were used with very little effect. On this day he was magnetised by M. Foissac, by order and under the inspection of the physician of the hospital, M. Fouquier.

At this first sitting, he immediately experienced a sensation of warmth, followed by twitchings of the tendons. After many visible and ineffectual efforts to keep his eyelids open, his head at length fell upon his breast, and he slept. From this period his deafness and headaches ceased; but it was not until the ninth sitting that he slept profoundly. At the tenth, he answered questions inarticulately. At a later period, in his somnambulism, he declared that he could not be cured by magnetism; and he prescribed for himself a continuation of pills composed of the extract of *nux vomica*, which he had before taken, with sinapisms, and baths of Barèges. On the 25th September, the committee, wishing to examine the state of his body, caused him to be undressed, and ascertained that the inferior left leg was thinner than the right, — that the right hand closed more strongly than the left, — that the tongue, when drawn out of the mouth, was carried towards the right commissure, — and that the right cheek was more convex than the left.

Being then magnetised, and placed in a state of somnambulism, he repeated his former prescription of treatment, desiring that on the same day a sinapism should be applied to each of his legs for an hour and a half; that the next day he should take a bath of Barèges; and that, upon coming out of the bath, sinapisms should be again applied for twelve hours without interruption, sometimes to one place and sometimes to another; that, upon the following day, having taken a bath, blood should be drawn from his right arm to the extent of a *palette* and a half. Finally, he added, that by following this treatment, he would be enabled, on the 28th, to walk without crutches. The prescribed treatment was followed; and on the 28th, in the presence of the committee, he came, supported on his crutches, into the consulting-room of the hospital, where, being magnetised as usual, he was placed in a state of somnambulism. He then declared to the committee that he should return to bed without the use of his crutches, and without support. Upon being awakened he called for his crutches. The committee told him that he had no need of them. He rose, and supported himself on the paralysed leg, passed through the crowd, who followed him, descended the step of the consulting room, crossed the second court of the hospital, ascended two steps, and when he arrived at the

bottom of the stairs, he sat down. After resting two minutes, with the assistance of an arm and the balustrade, he ascended twenty-four steps of the stairs which led to the room where he slept, went to the bed without support, sat down again for a moment, and then took another walk in the room, to the great astonishment of all the patients, who, until then, had seen him constantly confined to bed. From that day he never resumed his crutches.

On the 11th October following, the committee having repaired to the hospital, he was again magnetised, and announced that he would be completely cured at the end of the year, if a seton were placed two inches below the region of the heart. At this sitting he was repeatedly pinched, and pricked with a pin to the depth of a line, in the eye-brow and in the wrist, without producing any sign of sensibility.

On the 29th October, the committee, having repaired to the apartment of the patient to examine the progress of his cure, ascertained, before he was magnetised, that he walked without crutches more firmly, to all appearance, than at the preceding sitting. His strength was tried with a dynamometer. When pressed by the right hand, the instrument indicated 60 lbs., and by the left, 24 lbs. When pressed by the two hands together, united, it indicated 62 lbs. He was then magnetised, and in four minutes became a somnambulist, when he declared that he would be completely cured upon the 1st January. In this state his strength was tried again with the dynamometer; when the right hand exerted the force of 58 lbs. and the left 52 lbs., and the two hands united 90 lbs.

While in a state of somnambulism he walked cleverly, hopped upon the left foot, and knelt upon the right knee. He raised up the body of M. Thillaye, a member of the committee, turned him round, and sat down with him on his knees; and drew the dynamometer through the whole scale of its traction. Being requested to go down stairs, he took the arm of M. Foissac, and descended and ascended the stairs two or three at a time, with a convulsive rapidity. On awaking he lost this astonishing increase of strength; his walk was slow but sure, — he could no longer sustain the weight of his own body on the left leg, and he made an ineffectual attempt to lift M. Foissac.

A few days previous to this experiment he lost two pounds and a half of blood, had still two blisters on his legs, and a seton on the neck and breast. It will, therefore, be observed how great an increase of strength attended the process of magnetism, seeing that during the whole time the somnambulism continued, the strength of the body was more than quadrupled.

After this Paul renounced all medical treatment; and towards the end of the year, as he expressed a wish to be placed and kept in a state of somnambulism, in order to complete his cure by the 1st January, he was magnetised on the 25th December, and continued in a state of somnambulism until the 1st January.

During this period he was awakened for about twelve hours at unequal intervals; and on these occasions he was persuaded that he had been only a few hours asleep. During the whole of this period his digestive functions showed increased activity.

On the 28th December, having been then asleep and in a state of somnambulism for three days, he set out on foot, accompanied by M. Foissac, from the Rue Mondovi, in search of M. Fouquier at the hospital, where he arrived at nine o'clock. He there recognised the patients and the pupils, and read with his eyes closed, a finger having been applied to his eyelids, some words which were presented to him by M. Fouquier. All the committee had thus witnessed, seemed to them so astonishing, that, being desirous of following out the history of this somnambulist to the end, they assembled on the 1st January at the house of M. Foissac, where they found Paul still asleep, in a state of somnambulism. Fifteen days before that, the setons had been removed from the neck and breast, and a cautery had been established in the left arm. Paul declared that he was cured, and that, unless guilty of some imprudence, he should live to an advanced age, and should die of apoplexy. While in this state, he went out of the house, walked and ran in the street with a firm and assured step, and, on his return, carried with the greatest facility one of the persons present, whom he could scarcely have lifted before he was set asleep.

The committee now determined to investigate the power alleged to be possessed by the patient, of receiving perceptions of sight with the eyelids closed; and wishing that every possible precaution should be taken that no part of the organ should remain uncovered, it was arranged that members of the committee themselves should hold the eyelids down with their fingers, so that the upper eyelid should be constantly pressed upon the under. On the 12th January they assembled for this purpose at the house of M. Foissac, where there were present, besides the committee, M. Las Cases, deputy, M. de ———, aid-de-camp to the King, and M. Segalas, member of the Academy. The patient, being as usual put into a state of somnambulism, MM. Fouquier, Itard, Marc, and Husson, members of the committee, alternately kept the eyes closed with their fingers, as agreed upon. A new pack of cards being provided, which had not before been opened, the sealed paper bearing the government stamp was broken, the cards shuffled, and particular cards, selected at random by the committee, were successively presented to the patient, who immediately recognised them. Those cards were — the king of spades, the ace of clubs, the queen of spades, the nine of clubs, the seven of diamonds, the queen of diamonds, and the eight of diamonds.

The eyelids being still kept closed, as before, M. Segalas presented to the patient a book, which M. Husson had brought with him. The title of this book was as follows: *Histoire de France dépuis les Gaullois jusqu'à la Mort de Louis XVI. par Anquetil*, 13 *vol.* 8*vo. Vol. VII. Paris*, 1817. This titlepage being presented to the patient, he read the words in large characters "Histoire de France;" he could not distinguish the two intermediate lines, but read the name "*Anquetil.*" The book was then opened at the ninety-eighth page, and the patient commenced to read the first line, *le nombre de ses* (here he passed over the word *troupes*, and continued) *au moment où on le croyait occupé des plaisirs du carnaval.* He also read the running title *Louis*, but could not read the Roman cipher XVI. which followed it. A piece of paper was presented to him, upon which had been written the words *agglutination* and *magnétisme animal;* he spelled the former, and pronounced the latter. Finally, the *procès verbal* of this sitting was presented to him; and he read very distinctly the date, and some of the more legible words. Throughout the whole of these experiments the fingers were never removed from his eyes, constantly pressing the upper upon the under lid. It was remarked that the ball of the eye moved in the manner it would do were it directed to the objects of its vision.

Similar experiments were repeated, in the presence of the committee, on the 2d and the 13th of February. On the latter day, Mr. Jules Cloquet, the anatomist and surgeon, being present, kept the eyes of the patient shut with his fingers.

The conclusions to be drawn, says the report of the committee, from this long and curious case, are easy; they flow from the mere exposition of facts reported:

1. *The patient, whom a rational medical treatment by one of the most distinguished practitioners of the capital failed to cure of a paralysis, was cured by the process of magnetism, in consequence of following exactly the treatment prescribed by himself.*
2. *In this state his strength was remarkably increased.*
3. *He gave the most undoubted proofs that he could read with his eyes closed.*
4. *He predicted the period of his cure, and this cure took place accordingly.*

CASE OF MADEMOISELLE CELINE SAUVAGE.

Paris, 1826-7.

Attesting Witnesses. — The Committee of the Royal Academy of Medicine, before mentioned; M. Foissac.

Mademoiselle Celine Sauvage was a patient susceptible of somnambulism by the magnetic process, and was put into that state at various times, in the presence of the committee, in the months of April, June, August, and December, 1826, and January and February, 1827.

In this state, her sensibility was almost entirely annihilated, for she made several inspirations, having a bottle filled with hydrochloric acid under her nostrils, without manifesting any emotion. M. Marc pinched her wrist; a needle, used in acupuncture, was thrust a quarter of an inch into her thigh; and another, of

the same depth, into her wrist. These needles being united by means of a galvanic conductor, perceptible convulsive motions were produced in the hand; but the patient was quite unconscious of all that was done. She heard the voices of persons who spoke close to her; and touched her, but she did not remark the noise of earthenware broken by falling beside her.

The power of this patient to distinguish the internal diseases of persons placed in magnetic connection with her was tried, in the presence of the committee, in three different cases: first, with M. Marc, a member of the committee; second, with a young lady, a patient of M. Husson, member of the committee; third, with another patient of M. Husson, a young married woman, Madame La C———.

In the case of M. Marc, the patient having applied her hand to his forehead, and to the region of the heart, declared that the blood had a tendency to the head; that, at that moment, he had a pain on the left side of the head; that he suffered oppression after having eaten; that he was subject to cough; that the lower part of the breast was gorged with blood; and that something impeded the alimentary passage. She prescribed bleeding, hemlock poultices; that the breast should be rubbed with laudanum; that he should eat little and often; and that he should abstain from exercise immediately after a meal.

M. Marc confirmed these declarations, so far as admitting the oppression after meals, the cough, and the pain on the left side of the head, at the time of the experiments.

In the *second* case, the patient whose diseases the somnambulist was made to examine, was a young lady suffering under dropsy of the abdomen, accompanied by various internal diseases, the particulars of which need not here be detailed, but the nature of which had been ascertained by operations previously performed by M. Le Baron Dupuytren; and among the remedies prescribed by that physician, was the use of the milk of a mercurialised goat. On the 21st February, 1827, M. Husson, without any previous notice as to his intention, called on M. Foissac and Mademoiselle Celine, and conducted them to a house in the *rue Faubourg du Roule*, without intimating to them the name, or the residence, or the nature of the disease of the person whom he wished to submit to the examination of the somnambulist; nor had the committee the slightest reason to believe that either M. Foissac or the somnambulist had any previous knowledge of the patient, or of the intention of the committee to submit her to examination. Before the entrance of the patient to the room with Mademoiselle Celine, the latter was thrown into a state of somnambulism by M. Foissac; the patient was then brought in, and her hand placed in that of the somnambulist. The latter examined her for eight minutes, — not as a physician would do, by pressing the abdomen, by percussion, or by scrutinising it in every way, but merely by applying her hand repeatedly to the stomach, the heart, the back, and the head.

Being interrogated as to the state of the patient, the somnambulist described the state of the intestines; and her description was found to be in accordance with what had previously been ascertained by M. Dupuytren. She prescribed various remedies; and, among others, *the milk of a goat which had been previously rubbed with mercurial ointment.*

In the *third* case, of Madame La C———, the whole right side of the neck was deeply obstructed by a great congeries of glands close upon each other. The committee proceeding in this case in the same manner as in the former, the somnambulist declared that the stomach was attacked by a substance like poison; that there was a slight inflammation of the intestines; that, in the upper part of the neck, on the right side, there was a scrofulous complaint; and prescribed a mode of treatment, which being followed for some time, a perceptible amelioration of the symptoms took place. But the patient, not thinking her recovery proceeding with sufficient rapidity, induced the family to call another consultation of physicians, who ordered her to be again placed under mercurial treatment. She became worse, and expired after two months of acute suffering. The body was examined, and a *procès verbal* of the result was signed by MM. Fouquier, Marjolin, Cruveillier, and Foissac: it verified the existence of a scrofulous obstruction in the neck, and the diseases of the stomach.

The committee thus sum up the result of their observations with the somnambulist: — First, that, in the state of somnambulism, she discovered certain diseases affecting three persons placed in magnetic connection with her. Secondly, that by the declaration of the first, the examination of the second by puncture, and the *post mortem* examination of the third, the annunciations of the somnambulist were confirmed. Thirdly, that the modes of treatment she prescribed were within the limits of those remedies with which she might have been acquainted, and the order of the things which she might reasonably recommend; and, fourthly, that she applied them with discernment.

Although this committee emanated from the Academy itself, was composed of members who were known not to be believers previously in the alleged phenomena of animal magnetism, and had prudently confined themselves to the mere statement of the facts they had witnessed and the tests by which they had decided on the reality of these facts, yet their report was received by the majority of the members of the Academy with the most clamorous and indecent hostility and opposition, as will be seen by the following account of the proceedings on that occasion: —

The hall, in which the Academy assemble — so empty on ordinary occasions — was crowded upon that day, and even the passages were obstructed by the curious. It might have been supposed that one of those decrees on which the weal or woe of the nation depend, was in agitation; and all the members of the Academy, even those enfeebled by their age, were at their posts. The meeting was then opened, and M. Husson, the reporter of the committee, appeared at the bar, with a voluminous roll of papers in his hand, and delivered, in a grave and measured tone, the report. During the commencement, the members of the Academy listened with uneasiness to the detail of the facts; but, when the reporter arrived at the point of his narrative in which he detailed the magnetic phenomena of somnambulism, lucidity and prevision, a murmur arose among the assembly, which gradually increased until several of the learned physicians jumped from their seats, and apostrophised in terms of unmeasured indignation and contumely the distinguished members of their own committee, who related conscientiously the facts which they had seen and publicly attested.

An outcry was raised on all sides against the members of the committee, whose cause, however, was immediately espoused by the few partisans of animal magnetism then present, who retorted by such exclamations and charges as the following: 'You do not believe in the facts of magnetism? be it so: but in this very place the circulation of the blood was denied; yet the blood does circulate. In this place, they who first practised inoculation were denounced as impostors, and the patients as dupes and idiots; yet was the inoculation no imposture, nor were its subjects in a state of idiotcy. In this place, the physicians who first prescribed tartar-emetic were put on their trial and expelled the Academy; yet you yourselves now employ it in enormous doses. This is the institution which ridiculed those who affirmed that stones fall from the sky; yet meteoric stones do fall.' Thus, the sanctuary of science was rendered a scene of Babel-like confusion.

The question was now raised, whether the report of the committee should be printed; which, after another stormy contention, was negatived. As, however, the members wished a copy of it for their own use, they committed the incredible folly of following up their vote against its being printed by another — that it *should be lithographed for their own use;* as if, in the present age, such a document, after such a proceeding, could by any possibility escape publication.

A few years ago the subject of animal magnetism was revived in this country by the late Mr. Chevenix, who succeeded in convincing Dr. Elliotson, then physician to St. Thomas's Hospital, of the reality of several of the reported effects, by actually producing these effects on hospital patients who were under the care of Dr. Elliotson [illegible]

visit of the Baron Dupotet gave a further stimulus to the inquiry, by the public exhibition of still more extraordinary effects; and within the last two years, the magnetic treatment has been resorted to as a curative agent by Dr. Elliotson, in University College Hospital; and several cases have there occurred which must, we think, convince every mind not under the bondage of prejudice, that the time has arrived when the scientific community, and more especially the medical branch of it, are imperiously called upon to institute an inquiry respecting the nature, the laws, and the effects of this new physical agent.

In most of the cases in which this treatment has been pursued in the University Hospital, beneficial effects have followed: in some the maladies of the patients have been subdued, in others mitigated, and in a comparatively small number the treatment has been ineffective. Our present object, however, is not so much to direct attention to the therapeutic effects of these processes, as to regard them as indicating the existence of a new physical agent, the laws of which cannot fail to be an interesting subject of inquiry and examination, not for medical men only, but for all who take an interest in the progress of science.

One of the cases in which the greatest variety of phenomena have been developed is the following: —

Elizabeth O'Key, age sixteen, a housemaid, was admitted to the hospital on the 4th April, 1837. She had suffered epilepsy for twelve months previously; the fits occurring once or twice a week, and frequently several times on the same day. She also suffered headaches, which were generally worse in the morning and evening. For the first two months she was treated with small doses of mineral medicines, without much effect. In the month of June following, such remedies having failed, the Baron Dupotet, with Dr. Elliotson's permission, commenced the process of mesmerising or magnetising her. After several sittings sleep was produced, and her epileptic fits became less frequent. The operation of magnetising has been constantly, almost daily, practised on her from that time to the present.

The phenomena of sleep or coma, sleep-waking, somnambulism, and extatic delirium, attended with external insensibility, have been all successively developed. Her epileptic fits ceased altogether in last October; since which time she has no bodily illness, save headache, which has constantly afflicted her, though in a less degree than formerly.

This girl, when in her natural state, has great intelligence and sound sense combined with the timidity of character and modesty of manner proper to her age and sex; her temper is of remarkable sweetness, her disposition singularly affectionate, and her countenance is characterised by a corresponding expression. In the presence of strangers she is silent and reserved, never speaking except in answer to questions directly put to her; her replies are then sensible and judicious, never more or less than the questions require, and uttered in a low and gentle tone, with rather a downcast expression of countenance, apparently resulting from great modesty of disposition.

When by any of the usual manipulations she is magnetised, her countenance changes its expression, — her eyes become fixed — the optic axes inclining slightly to the nose, one rather more than the other; the eyelids droop, but do not quite close. By further manipulations she falls into magnetic sleep, in which she remains for a short time. She awakens spontaneously, always with a slight exclamation indicative of agreeable surprise; her eyes open, and her whole countenance is changed, assuming an expression of singular activity and liveliness. She becomes forward and loquacious, humorous, witty, and sarcastic; she utters sallies of irony, and mimics various persons with irresistible humour; she criticises the costume and appearance of those around her, expressing pleasure at neatness of appearance and brilliancy of colours. She also recoils with fear from countenances having an appearance or expression (as those of foreigners) with

which she has not been familiar; all her natural timidity is apparently removed, and her phraseology totally changed: she often repeats, accompanied by sallies of laughter, the vulgar cant which she has heard among the lower classes of people: she sings, with great sweetness of voice and correctness of tune, airs which she has learned — mixing in a ludicrous manner the serious with the comic, the religious with the profane. She will, for example, commence the 100th Psalm or the hymns of the church service, and then suddenly commence *Jim Crow.* In the same manner she will recite Scripture alternately with the slang she has learned from the lower orders. She will proceed in this way before an assembly of several hundred persons, quite unconscious of any cause for restraint or reserve: her moral qualities, however, remain unimpaired; and, indeed, (being stript of the reserve imposed by her timidity of character, when in her senses,) are rendered still more striking. To the persons with whom she is in daily intercourse, such as her medical attendants and the hospital nurses, she now evinces the most unreserved feelings of affection, — often embracing them, pressing their hands, and showing the most touching tenderness towards them.

When in this state her body is deprived of all external sensibility. Her hair may be pulled, her flesh pinched or bruised, the point of a pin or needle may puncture her, without any consciousness of pain being evinced. On one occasion it was thought advisable to insert a seton in the back of her neck, with a view to the relief of her headaches; this was done while delirious without any indication of consciousness on her part, by one person behind her back while another was talking to her in front. After she was awakened and restored to her natural state, she immediately felt the wound, and was greatly astonished on being informed of what had been done.

When in the state of magnetic delirium just described, this patient can, at any time, be thrown into the state of sleep or coma by a simple motion of the hand within a short distance of her person; and the effect will be equally produced whether the motion be made before or behind her, or in any other position. We have also seen the effect produced when she was sitting near a closed door, the operator being on the other side of it.

If, instead of moving the entire hand, a single finger be presented to her, and moved in the same manner, she is thrown into a peculiar state, intermediate between coma and delirium, which Dr. Elliotson calls the state of *somno-vigilium,* or *sleep-waking.* This state more closely resembles natural somnambulism than any other of the magnetic phenomena which we have witnessed. In it the patient is sufficiently awake to stand steadily upright; the eyes are nearly closed, — the eyeballs fixed, and the features and limbs generally in repose; the patient is sensible to words spoken in a whisper at her ear, and will sometimes reply in a low and scarcely audible tone, but is alarmed and starts if the voice of the speaker be raised much above the tone of a whisper, — in which case she usually complains that the speaker is *cross.*

In this state some of the most remarkable phenomena are developed in this patient.

If a person present the points of his fingers near one of her limbs, — say her hand,—and draw them gradually away, and perform this operation repeatedly, the hand of the patient will slowly move in the direction of the motion of the hand of the operator; and this motion will continue until the hand and arm of the patient follow that of the operator, as far as the mechanism of the patient's limb will permit. The same effect will be produced, if the hand of the operator be directed to the leg or foot of the patient.

Again, if the operator bring his fingers in contact opposite the mouth of the patient, and slowly separate them, by moving one hand upwards and the other downwards, the jaws of the patient will receive a corresponding motion, — the mouth opening by reason of the upper jaw following the ascending, and the lower the descending hand of the operator.

If the hands of the operator, instead of being separated by a motion upwards and downwards, be separated by a horizontal motion to the right and to the left, the lips of the patient suffer a corresponding motion.

patient, and be separated, by raising one and lowering the other, the eyelids will suffer a corresponding motion, the upper eyelids ascending and the lower descending, leaving the eyeballs uncovered, and giving to the countenance a wild and terrible stare. After the mouth and eyes have been thus caused to open, the whole countenance of this sweet and timid girl assumes the most ghastly and insane expression.

These and many other similar phenomena may be produced at will by any operator; and we have seen persons visiting her for the first time, never having before witnessed any of the magnetic phenomena, produce them when directed to make the proper movements.

Although no one who has had an opportunity of knowing the amiable and artless character of this little girl could for a moment entertain the idea of her being an impostor (to suppose which it would also be necessary to believe her to be the most consummate actress in the world); yet it was thought right to submit the process to such tests as would put aside the supposition of imposture. With this view Dr. Elliotson, and subsequently Dr. Lardner and others, caused screens of various opaque substances, such as pasteboard, wood, metal, &c. to be interposed between the operator and the patient, so that the patient should not be aware of the motions which the operator wanted to produce. The effects under such circumstances have always been the same as when no screen was interposed; with this exception, that they were slower in being produced, and somewhat less in degree when produced. The fact was also by these means satisfactorily established, that the influence, whatever it is, which produces these phenomena, is capable of being transmitted through the various substances which were used as screens.

To remove still more effectually the possibility of collusion between the patient and the operator (were so monstrous a supposition admissible, the rank and respectability of the medical men engaged, and the simplicity and artlessness of the poor little patient, being considered), after having interposed the screens, several visitors directed what motions the operator should make, — the operator himself not knowing previously what those directions would be; and, in such cases, the same effects ensued. On one occasion, the patient being placed in a chair, at some distance from a pair of folding doors which separated the apartment from an adjacent one, the operator was placed in the other apartment; the doors being closed, it was suggested by Dr. Lardner what motions should be made. The patient was affected in the usual way through the doors, — the motions of her limbs corresponding with those which the operator had been instructed to make.

Although the hands and fingers of the operator are the most usual instruments by which these effects are produced, they are not the only ones.

The patient being in the sleep-waking state already described, the operator stands behind her, his face being presented to the back of her head at a distance which may be varied within considerable limits; but, generally, the intensity of the effect will diminish as the distance increases. Thus placed, if the operator throw his features into any particular position and retain them so for about a minute, the features of the patient will undergo a corresponding change, and imitate those of the operator: thus, if the operator open his mouth, the mouth of the patient opens also; if the operator smile, the patient smiles — but the smile is evidently mechanical and superficial, the mind having no share in it; if the operator impart to his features the expression of anger or horror, frowning, or wildly staring his eyes, the countenance of the patient indicates the same expression. This will happen if an opaque screen be interposed between the operator and the patient; but, in that case, as before explained, the effect is produced more slowly and less decidedly.

The patient and operator being in the same position, if the operator throw his limbs into any particular attitude, the limbs of the patient will take the same attitude; and, in a word, the whole body of the patient appears to be goverend by the motions similar in all respects to those of the operator.

In the production of these phenomena the great difficulty is, to prevent the pa-

tient from falling into a state of magnetic sleep, or coma; for the very actions or motions of the operator, which she is expected to follow, have frequently also the effect of magnetising her, and throwing her into sleep.

Having ascertained that the magnetic or mesmeric influence is transmitted through every material substance on which experiments have been made, it occurred to Dr. Lardner to institute an inquiry as to its capability of reflection, and to determine whether the physical laws of that reflection bore any analogy to those which are known to prevail in the cases of the reflection of light, sound, and heat. In the course of the observations made upon the patient, it had been found by Dr. Elliotson that if she were induced to present her hand towards her own person and move it in the same manner as another operator would do, she would produce in herself the same effects, throwing herself from delirium into sleep-waking, or coma; and it was also ascertained that by making the same motions of the hand at her image in a common looking-glass, a like effect would be produced.

In order to submit this question to a more conclusive test, Dr. Lardner proceeded in the following manner: A mirror was placed, at a distance of several feet from the patient, having its plane at an angle of about forty-five degrees with a line drawn from the person of the patient to the mirror. Another mirror was placed at a distance of from twelve to fifteen feet from the first, receiving on its plane the rays from the first, also at an angle of forty-five degrees. Dr. Elliotson presented himself to this second mirror in the direction of the ray reflected from it. By this arrangement, the operator was placed in an apartment at a considerable distance from the patient. The two reflections would thus carry the ray of the magnetic influence (if it were subject to the same laws as those which govern light) from the patient to the operator, or *vice versa*. Things being thus arranged, Dr. Elliotson made towards the second mirror the motions of the hand which, when made towards the person of the patient, usually throw her into a state of coma; after eight or ten motions thus made, the patient dropped off in a magnetic sleep. This operation was repeated sufficiently often to render it certain that the sleep was not casual, but that it was connected with the movements of the operator by the relation of cause and effect.

This experiment by the multiplied reflection was subsequently tried by Dr. Lardner, assisted by Mr. Wood of the University Hospital, and others, very frequently, and in the presence of many witnesses, and always with the same effect.

It may be objected, that in these experiments the patient saw the operator by the reflection of the mirrors. But to this it is answered, that the same effects were produced, 1st, When the patient's eyes were closed; 2d, When she was turned from the mirror; 3d, When the operator was placed in a dark apartment, and did not stand opposite the mirror towards which he made the passes; 4th, That the operator could not be seen by another person looking into the mirror from the place occupied by the patient.

It having been ascertained that the influence proceeding from the operator to the patient penetrated through screens of various substances, it occurred to Dr. Lardner to inquire whether the influence reflected from the mirrors had the same power of penetration. For this purpose, the mirrors being adjusted as before, a silk handkerchief and a cotton towel were successively thrown over the first mirror, and the operator proceeded with the usual manipulations for a considerable time without producing the slightest effect. A person stationed near the first mirror was now directed to remove the cloth from it—the operator never ceasing the manipulations; immediately on removing the cloth from the mirror, the usual effects were produced on the patient, and she dropped into a state of coma.

The same experiment was tried, with the same result, by placing the cloth upon the second mirror, by interposing it between the two mirrors, and by interposing it between the person of the patient and the first mirror.

Thus it appears that the magnetic influence is so far enfeebled by reflection, that it loses its power of penetrating substances through which it passes freely when not reflected.

It was also ascertained that when either mirror was put out of that position which the law of reflection requires, the effect was not transmitted to the patient; but that the moment it was restored to the same position, the effect was produced.

Mr. Herbert Mayo, who was present at some of these experiments by multiplied reflection, proposed to try the effect of the influence reflected from metallic surfaces: it was accordingly tried by him, assisted by Dr. Lardner and Mr. Wood, with surfaces of tin, zinc, and copper. It was found that the two latter surfaces, being unpolished, failed to reflect it; but the surface of tin did so, although with an intensity very inferior to that of a mirror.

Wishing to ascertain whether the magnetic influence was either all, or nearly all, reflected from the surface of the mirror, it occurred to Dr. Lardner to try whether any portion of it could be transmitted through the mirror. With this view he placed the mirror between the operator and the patient — the reflecting side being presented to the operator. After continuing the manipulations for a considerable time, the usual effect was produced: thus it is evident that, as in the case of light, the reflection of the magnetic influence is not complete, but a portion of it is transmitted, although the greater portion is reflected.

To ascertain whether the reflection takes place chiefly from the anterior surface of the glass, or from the posterior or silvered surface, an experiment was tried to reflect the influence from a plate of unsilvered glass; but, though the process was continued a considerable time, no effect was produced.

The method which had been used to throw this patient from her natural and waking state into the state of somnambulism had been invariably to present the fingers to her head, and hold them there for a certain length of time. It occurred to Mr. Wood to ask her, when in a state of sleep-waking, whether there was any other process by which the same effect could be accomplished. After some consideration, she informed him that it might be done by pinching her ears. The experiment was tried, and immediately succeeded; and this is the method which is now used by the operator.

The method of throwing her into coma when in a state of somnambulism was, to wave the hand towards her person. She was asked in the same manner, whether there was any other way in which she could be thrown into coma. She answered, that if the thumbs of the operator were pressed upon the palms of her hands, the effect would be immediately produced; and also that if the operator pressed his hands upon her shoulders four successive times, she would be restored to her natural state. Experiments were accordingly afterwards tried, and always succeeded.

In her waking or natural state, this patient is totally unconscious of every thing which occurs in her sleep-waking or ecstatic states. If, after several hours of this state of delirium, she is restored to her natural state and interrogated as to the time she came into the room, she is only conscious of having lately entered it; and she is utterly ignorant of the persons with whom she had been but recently in conversation. Her sense of hearing, in the delirious state, is unimpaired so far as regards the loudness of sound, but she loses all judgment as to its direction: thus, for instance, if Dr. Elliotson or Mr. Wood—with whom she is very familiar, and to each of whom she is affectionately attached — speak, she will hear and recognise them; but will be quite unable to discover what part of the room they are in. If she is told that they are in the pocket of a person who happens to be opposite to her, she believes it, and straightway commences a search. On one occasion she was assured that Dr. Elliotson, who was standing beside her and speaking to her, was inclosed in the glass of a gentleman's spectacles who sat opposite to her, and she straight set about, with the utmost anxiety, to pick the physician out of the glass. She loses, in this state also, much of the judgment and sense derived from experience: she will believe, for example, that her mother is a man, or any other absurdity of the kind: nevertheless, at any time, she can, by single manipulation, be restored in a few seconds to the full possession of her senses, and be invested with that

amiable character and appearance which we have described at the commencement of this statement.

It has been supposed by some persons who have devoted attention to animal magnetism, that the intention or will of the operator is essential to the production of the phenomena. With a view to test this, Dr. Elliotson instituted the following experiment: —

A child of seven years of age, who was also an epileptic patient, and who was known to be entirely ignorant of the process and effects of magnetism, was placed before the patient, and instructed to move her hand in the manner which usually throws the patient into a state of coma. At first no effect ensued; but, after the motions had been repeated six or seven times, the somnambulist became dull and silent, and her countenance lost all expression. She was thrown into a state of sleep-waking intermediate between delirium and coma. The motions were continued, but no further effect was produced; and after they had been repeated nine or ten times more, the patient recovered herself, and was restored spontaneously to the state of delirium.

The child was now again desired to move her hands as before; but it occurred to Dr. Elliotson to try whether the contact of his own hand with the person of the child would have any effect upon the process. He accordingly placed his hand on the shoulders of the child, while the latter made the prescribed motions. These motions had not been repeated more than half a dozen times, when the somnambulist fell into a state of perfect coma. This experiment was repeated sufficiently often, both with and without the contact of Dr. Elliotson, to establish clearly the fact, that the coma could not be produced in the child without the contact of a second person.

This analogy was pursued farther. Dr. Elliotson desired another gentleman to place his hand on the other shoulder of the infant operator, so that two bodies should be in contact with her. Under these circumstances, three motions of the hand produced perfect coma in the patient. Pursuing further the same analogy, five persons next laid their hands on the person of the little operator; and a single motion of the hand, under these circumstances, suddenly produced a state of perfect coma in the patient.

It appears, therefore, evident, that several persons being in contact with the operator, the efficiency of the operation is in proportion to the total mass of animated matter thus in contact. Analogy suggested a corresponding inquiry as to the patients, viz. whether two or more patients being in contact possess a common susceptibility; and, if so, whether the operation produced upon one will be transmitted to the other undiminished, or shared among them so as to diminish its intensity upon each.

With this view, three patients (each of whom was capable of being thrown into coma by presenting the points of the fingers at the head for a few seconds) were placed in contact with each other; the hand of the operator was presented to one of them, and it was found that coma was produced, but not until after the lapse of a much longer time than would have been sufficient to produce it in the same patient had she not been in contact with the others. It was also observed that in one or two seconds after the first patient fell into a state of coma, the second fell into the same state; and, after a like interval, the third. This experiment was also repeated sufficiently often to connect the effect with the cause clearly and satisfactorily. The patients were separately thrown into coma, out of contact with each other, after a very short interval; while, when in contact, the effect was produced, as stated, only after the lapse of a considerable time, — but then it was produced on all of them.

The patients being in a state of coma, processes were known by which any of them could be awakened. One of these processes was, drawing the fingers over the eyebrows, commencing from the nose outwards. This method, repeated two or three times, was always sufficient to awaken any of the patients from the state of coma; but, when all the three were in that state, holding each other's hands,

the eyebrows to awaken any one of them; but the moment any one awakened, all the three awakened.

Thus it appears that the magnetic influence is transmitted by contact from the body of one patient to the body of another, and the whole effect produced by the operator, acting upon one of them, is distributed equally among all who are in contact.

It occurred to Mr. Ward to investigate experimentally the mechanical force which would be capable of resisting the attraction by which the limbs of the patient were drawn by the operation of the magnetiser; and, with this view, weights were attached to the hand of the patient, which she must lift, in order that her hand should follow that of the operator; in this way various heavy weights were raised by her with facility, which she could not have lifted in her natural and waking state. Mr. Wood asked her, when in the sleep-waking state, what quantity of weight might be attached to her arm, when submitted to the attraction of the magnetiser, and she replied that *an hundred weight might be raised, but that her arm would probably be hurt by it, so that she should not recover the injury for several days.* She was then asked what was the greatest amount of weight which might be attached to her arm without injuring her, and she replied *eighty pounds.*

The following experiment was in consequence made on one occasion in the theatre of the University Hospital, in the presence of an assembly of several hundred persons. A surgical bandage was attached to the arm, to prevent the strings by which the weight was suspended injuring the flesh. The patient being in the delirious state, and the arm hanging downwards beside the body, the strings of the bandage were passed through the rings of two weights, one of fifty-six pounds, and the other of twenty-eight pounds, amounting to eighty-four pounds, and were so connected with the bandage that the arm could not be moved upwards without raising the weight. The amount of weight being rather more than that which the patient had named as the greatest amount which could be safely suspended, Mr. Wood addressed to her the inquiry, whether the weight then suspended from her arm, which was eighty-four pounds, could be lifted by her without injury; she replied that *it was more than she had told him, and she did not like it.*

It was then thought advisable to detach the twenty-eight pounds weight, and to replace it by one of fourteen pounds, as no division of weights happened to be accessible which exactly amounted to eighty pounds. Seventy pounds were therefore now attached to the arm of the patient, and Mr. Wood proceeded to present his fingers towards her hand, and to move them repeatedly upwards. The patient being seated on a chair, her arm at first indicated strong efforts to follow the hand of the operator upwards, and a slight motion was imparted to the weights, without, however, raising them. After the operation was continued for rather more than a minute, the patient rose from the chair, drawing her hand up, and extending it at the same time slightly outwards towards the operator, and lifting the weights with considerable effort: immediately, however, on attaining the erect posture the mechanical effect of the weights taking the centre of gravity from over her feet, drew her whole body downwards, and she fell in the direction of the weights and towards the operator; not, however, until the weights were raised five or six inches from the ground.

It is needless to state that this girl would, in her waking or natural state, have been totally unable to raise any weight even approaching in amount to seventy pounds. She was subsequently thrown into a state of delirium, and then restored to her natural state, and was desired to raise in each state the fifty-six pounds weight, which she tried in vain to do.

The fact, that in the sleep-waking state the patient imitates the motions and gestures of a person placed near her, suggested the inquiry, — whether a like effect would ensue if combined positions were taken by two or more operators. With this view, the patient being in a state of sleep-waking, two operators placed themselves near her, each laying his hand on the person of the other. After the lapse

of two or three minutes, the hands of the patient gradually moved until they took the same attitude as the hands of the two operators. The patient then approached them, and slowly advanced her hands until she placed one of them on the hand of each operator; after which, in a few seconds, she dropped into a state of coma.

In this experiment, if the hands of the operators be crossed, the patient will also cross her hands; and, in a word, will imitate the position of the operators as nearly as circumstances will permit.

Although it appeared sufficiently evident that, in this experiment, the patient was not guided by sight; yet, to test that, the patient being placed in the sleep-waking state, Dr. Elliotson and Dr. Lardner placed themselves behind her, and united their hands in a crossed position, each holding the wrists of the other with the alternate hands. After the lapse of some minutes, during which the patient expressed in her features much anxiety and vexation, and even shed tears, she raised her hands gradually to the horizontal position, and crossed them at the wrists; she then turned slowly round, and advanced towards the operators, until her wrists were immediately over theirs, at a distance of about eighteen inches from them; then stooping and preserving her arm in the same position, she gradually lowered herself until her hands were placed upon the wrists of either operator: immediately when the contact was established, she fell off in a state of coma.

In all these experiments the eyes of the patient were closed as in sleep.

The manifest connection of the phenomena of animal magnetism with the nervous system naturally suggested the inquiry, — how far the operation of electricity upon that system would be modified by it.

With this view, galvanic and electrical apparatus were prepared by Professor Wheatstone, and administered to the two patients, Elizabeth and Jane O'Key, by Professor Wheatstone and Dr. Lardner, in the presence of Dr. Elliotson, Dr. Roget, and a great number of medical and scientific men. The shock of the galvanic apparatus was taken by some gentlemen present, among others by Sir William Molesworth, and in each case produced a very severe effect; when administered, however, to the two patients, no visible effect whatever was produced: they held the ends of the wire steadily, and apparently without any sensation or consciousness of any particular effect. It was observed, however, that a contraction of the muscles of the hands was apparent, and the patients were not able to disengage their hands from the extremities of the wire. Leyden phials were subsequently charged by an electric machine, and the shock taken by each of the patients without any effect, except an expression of surprise, and a burst of laughter on seeing the spark pass between the jar and their hands. These experiments were performed on the patients in the state of delirium.

The opposition of the general body of the medical profession to the prosecution of this inquiry, and the ridicule which they endeavour to cast upon all who even evince a willingness to witness the reputed effects, must, no doubt, obstruct the investigation; and, what is still worse, by bringing it into discredit with the public, throw into the hands of ignorant and uneducated charlatans an agency the power and importance of which are still unascertained. Yet, if we recur to the history of medicine, we shall find abundant evidence how little value ought to be placed upon the adverse opinion of the medical profession, *as a body*, upon any new discovery in physics, but especially in therapeutic science. In the whole records of the progress of the medical art, it is a remarkable and instructive fact, that not one great discovery can be found which was not, when first promulged, encountered with hostility, opposition, and ridicule, by that profession. Yet each of these discoveries has forced its way through professional darkness by the light of its own truth. The immortal Harvey was covered with ridicule for his doctrine of the circulation of the blood; and the public deeming him an unsafe adviser, he lost an extensive practice. When the

virtues of antimony were made known, in the middle of the seventeenth century, the incorporated medical profession of France denounced it as a dangerous and ignorant innovation, and prohibited its use. Soon afterwards the same body issued its anathema against the use of a then newly discovered remedy called Peruvian Bark. So recently as the middle of the last century the medical profession was thrown almost into a state of phrenzy at some rash enthusiast who actually proposed to infect children purposely with the smallpox, pretending thereby to anticipate the voluntary approach of that destroyer of human life, and thereby to disarm him of his terrors. A proposition so monstrous was declared to be "mercenary cruelty and direct murder." Dr. Wagstaffe, physician to Bartholomew's Hospital, the most eminent and learned physician of that day, declared it to be "contradictory to reason," denied its influence in resisting future infection, and condemned it as keeping up a perpetual source of pernicious contagion. As in all cases of incipient knowledge, its advocates fell into contradictions and inconsistencies, owing to the limited number of instances on which they were compelled to found their generalisations. Dr. Wagstaffe, taking advantage of this, declared that such inconsistencies proved the doctrines they advocated to be altogether unworthy of confidence.* Finally, the pulpit lent its aid; and the oracles of the church declared that inoculation proceeded "from the hands of Satan, and that the whole art was of infernal invention." The Royal Academy of Medicine of France seconded the exertions of the medical faculty of Britain, and proscribed the process, as "murderous, criminal, and magical.† Whatever, therefore, may be the result of the inquiry respecting the alleged facts of animal magnetism, we presume the opposition of the medical profession, here or elsewhere, will not weigh much in the estimation of well-informed persons.

The subject has recently been forced upon the attention of scientific men by the startling nature of the effects exhibited, not by unknown pretenders, but by qualified members of our College of Physicians, graduates of our old established universities, and professors of established character in our medical schools. Among these, Dr. Elliotson holds the foremost and most honourable place. With a moral courage which does him honour, and with a philosophical spirit worthy of a Laplace or a Cuvier, he has prosecuted these inquiries, discarding all theories and hypotheses, and confining himself in the first instance to the collection and classification of phenomena. He has also afforded every possible opportunity, not only to the medical profession, but to scientific men generally, to witness the extraordinary phenomena which have been developed, and to propose such tests of their reality, and to adopt such means for removing delusion and collusion, as they might think fit. In these proceedings he has encountered every species of petty annoyance and obstruction; and we grieve to be compelled to say that the liberal council of the liberal University College have lent themselves to these most discreditable proceedings. On one occasion, being desirous to submit the phenomena to the observation of a number of scientific men, and thinking the theatre of the hospital too small for the due development of the effects, he sought and was refused the use of one of the larger and more commodious theatres of the College. And recently we learn that he has been compelled to discontinue these demonstrations altogether. His medical colleagues, with the exception of the enlightened

* A respectable weekly journal (the Athenæum) adopts precisely the same ground of objection against those who advocate the facts of animal magnetism.

† 1745.

and philosophical Drs. Grant and Lindley, and Professor Graham, have studiously absented themselves on these occasions, although we have seen frequently present the leading medical professors of that branch of the metropolitan university which, with less clamour about the principles of liberalism and toleration, seems better to understand their practice. The effect produced on the minds of several physicians who have attended these demonstrations has led to the formation of a committee of Fellows of the Royal Society—including, it is said, Dr. Roget, Mr. Mayo, Professors Faraday, Wheatstone, and others—to investigate the phenomena. It is gratifying to know that this step has at length been taken, were it only to rescue, as we are sure it will ultimately do, the names of Dr. Elliotson and other ardent and sincere inquirers from the vituperation of certain journals, whose respectable conductors have been induced to lend themselves to the opposition to this inquiry.*

The reported facts of animal magnetism are either real or they are not. If real, they are subjects of vast importance, whether regarded as appertaining to general physics or to the special science of medicine. The question therefore is, has not a sufficiently strong case been made out to render the subject deserving of any serious attention from scientific men?

So long as these phenomena were only pretended to be produced by persons admitted to no station in the community of science, vain and shallow enthusiasts, or by persons stigmatised with the reputation of quacks and charlatans, they might have justly been deemed unworthy of serious investigation; but this has long ceased to be the case; and if it shall appear that men holding the highest intellectual position in human society have recorded their assent to any of the alleged phenomena, can it be doubted that they are fit and proper subjects of inquiry for all who take an interest in the advancement of physical science, and that to investigate their reality, their laws, and therapeutic influence, is eminently the duty of that profession to whose skill and care the health and physical well-being of the community are confided?

It cannot be supposed, by any individuals of that profession, that, in a country like ours, blessed with a free and intelligent press, they will be allowed to stifle an inquiry thus circumstanced, and to shrink from the investigation of a question, the importance of which is attested by the suffrages of some of the most eminent philosophers who have enlightened the world in the last half century.

Among the authorities which have assented to the reality of a specific agent producing the effects ascribed to animal magnetism, are the names of such men as Laplace and Cuvier. Laplace, in his *Théorie Analytique du Calcul des Probabilités*, says —

"Of all the instruments by which the imperceptible agents of nature can be discovered, the most sensitive are the nerves, especially when their susceptibility is exalted by particular causes; it is by their means that the slight electricity developed by the contact of different metals is discovered. The singular phenomena which result from the extreme sensibility of the nerves in particular individuals, have given rise to various opinions relative to the existence of a new agent denominated

* The Times newspaper stigmatises those who endeavour to investigate these effects as *quacks*; and the Athenæum warns the committee off, roundly declaring that "every scientific man who regards his own character should keep aloof of them, and refrain from sanctioning, by direct participation in their proceedings, a transaction so likely to lead to mischievous consequences." We suspect that such men as Faraday, Roget, Mayo, and Wheatstone will hold this sagacious advice very lightly, especially as the writer develops his views more fully by declaring that "mankind is more benefited by doubt, *whether reasonable or not reasonable*, than most persons imagine." The world will be

Animal Magnetism; to the action of common magnetism; to the influence of the sun and moon in some nervous affections; and lastly, to the impressions which may be experienced from the proximity of the metals, or of running water. It is natural to suppose that the action of these causes is very feeble, and easily disturbed by accidental circumstances; but, because in some cases it has not been manifested at all, we are not to conclude it has no existence. We are so far from being acquainted with all the agents of nature, and their different modes of action, that it would be quite unphilosophical to deny the existence of the phenomena, because they are inexplicable in the present state of our knowledge."

"We must confess," says Cuvier, in his Comparative Anatomy, "that it is very difficult, in the experiments which have for their object the action which the nervous systems of two individuals exercise upon one another, to distinguish the effects of the imagination of the individual upon whom the experiment is tried from the physical result produced by the person who acts upon him. The effects, however, on persons ignorant of the agency, and upon individuals whom the operation itself has deprived of consciousness, and those effects which the lower animals present, *leave no doubt that the proximity of two animated bodies in certain positions, combined with certain movements, have a real effect, independent of imagination.* It also clearly appears that these effects arise from some nervous communication established between the individuals."

In the discussion to which these phenomena have given rise, it is often asked how these effects can be accounted for? and this is asked in a manner which implies that the inability to account for them is sufficient to set aside the reality of the facts themselves. Nothing can be more unsound in philosophy, or untenable in logic, than such an inference. We know that the gravitation of the sun is transmitted through space to distances of hundreds and thousands of millions of miles; that at this distance it produces enormous mechanical effects; yet, if we are asked to account for these wondrous effects — can we do so? Newton investigated their laws, and placed us in a condition to predict with certainty their succession for countless ages to come; but he utterly failed in accounting for them, and in showing by what particular agent it was that they are conveyed through the universe with a speed so inconceivable, and to distances so immense.

The progress of all knowledge requires that the individual facts should be first well ascertained; that as their number is multiplied, and their relation developed, they shall be classified; that then the general laws which govern them shall be rendered manifest; and the last result at which the human mind arrives is the theory by which these facts are accounted for. How absurd, then, and how unphilosophical must be the notions of those who now, in the very dawn of the science of animal magnetism, (if so it can be called,) when we are in possession only of a few scattered and isolated facts, and even these few matter of dispute as to their reality and as to their concomitant circumstances, expect that a satisfactory and sufficient theory shall be furnished to account for them!

In conclusion, — without affecting indifference to the threats of those journalists who offer us the pleasant alternative of being posted as quacks or dupes, — our reverence for truth overbalancing our fear of their ridicule, we are compelled to admit that many of the facts of animal magnetism have been established by evidence, to our minds, as conclusive as any of the proofs on which other physical facts repose; that the facts thus established require the admission either of an agency in nature hitherto unnoticed, or, what is tantamount, the admission that new functions shall be ascribed to some known agent; that this agency is material, is propagated through space in straight lines; that various corporeal substances are pervious by it with different degrees of facility, and according to laws which still remain

to be investigated; that it is reflected from the surfaces of bodies, according to definite laws, probably identical with or analogous to those which govern the reflection of other physical principles, such as light and heat; that it has a specific action on the nervous systems of animated beings, so as to produce in them perception and sensation, and to excite various mental emotions. Of these several propositions we cannot discover any grounds of doubt which would not shake all the foundations of physical science.

The phenomena recorded and observed also suggest some probable conjectures, which may be confirmed, modified, or overturned by more extended and varied experiments. It appears probable that, whatever may be the *medium* by which this action is *propagated* through space, its proximate exciting cause is animated matter; that the energy of the action has a necessary relation to the quantity of animated matter in the agent; that this energy is weakened according to some definite relation to the distance through which it is propagated; that, without any visible external movement on the part of the agent, a mere mental operation or emotion, by affecting his nervous system, may cause the latter to excite the requisite action in the propagating medium, which being conveyed to a distance, may affect the nervous system of another animated being, and thereby produce in it corresponding mental perceptions and emotions. If the power of the mind of the agent to produce mechanical motion in his nervous system be admitted, — and this cannot be denied, — there is nothing in the last conjecture which is not in perfect accordance with all that we know of the organs of sense, and the way in which they are affected.

We may be wrong in these guesses at what we think the observed facts have already shadowed out; but even though wrong, we shall still be more content with the course we have taken than if we followed the safe counsel of a contemporary writer, and expressed doubts, *whether reasonable or unreasonable.* We may be ridiculed, should the event not confirm our anticipations; but we shall be ridiculed in good company, and shall receive countenance of our fellow-sufferers, the shades of Cuvier and Laplace.

Since the preceding article was put in type, several new facts developed in the practice of Dr. Elliotson have come to our knowledge, which corroborate strongly the inferences to which we have arrived. We regret that the limits and objects of this journal will not allow us to lay the statement of them before our readers.

We are authorised to say, that Dr. Elliotson is willing and anxious to submit them to the observation of any medical or scientific men who are desirous of prosecuting the inquiry, and to institute any tests on their reality which may be suggested to him, provided the council of University College can be induced to withdraw their opposition to the investigation.