Pelouze) may be regarded as going a great way towards the settlement of this much-disputed question.

Lehmann has published a very important paper on the importance of fat in the process of assimilation, and in the (so-termed) lactic fermentation. With the view of determining the chemical changes which fat undergoes in digestion, chyli-fication, &c., he instituted a series of experiments on the changes which the fat undergoes, out of the body, when placed in (as nearly as possible) an analogous position. He exposed a mixture of a protein compound, a fat, and a non-nitrogenous substance (in which the hydrogen and oxygen occur in the same proportion as in water) to a temperature of 100°. The protein-compound in these experiments was white of egg; the fatty substance was the oil of the yolk; and the non-nitrogenous substance was milk-sugar. When these substances were mixed together in water, and kept at a temperature of 100°, lactic acid was speedily produced. When the milk-sugar had all been converted into lactic acid, a further quantity of the sugar was added, until there was again a cessation of the acidifying process, not through want of sugar, but through the failure either of oil or albumen. The following is a brief summary of his principal conclusions. The protein-compound appears to suffer no change either in quantity or quality; no fermentation-globules, mould, or other low form of organization, appeared to be developed; coagulated albumen was brought back to its soluble state, and fibrin was converted into albumen. The fats were for the most part, but not always, converted into their corresponding fatty acids, and the phosphorized fats lost their phosphorus. Starch and sugar were usually converted into lactic acid, but sometimes into two other non-crystalline, and, apparently unknown, acids. When the experiment went on favourably, there was no evolution of gas; there was sometimes a development of carburetted hydrogen; but infusoria were then always present in the fluid; there were also frequently traces of carbonic acid. The subject is one of too great importance not to call forth further investigation.

Various Morbid Fluids.

The *fluid of pemphigus* has been examined in two cases by Simon. They yielded the following results:—

(1.)	
Water	940.00
Solid constituents	60.00
Fat containing cholesterin	2.60
Albumen with earthy phosphates	48.00
Alcohol-extract, with lactate of soda, and chlorides of sodium and potassium	6.50
Water-extract, resembling ptyalin	1.90
(2.)	
Water	959.8
Solid constituents	40.2
Albumen with mucus-corpuscles	28.1
Fat	3.0
Alcohol-extract	3.0
Fixed salts	4.5

In both cases free acetic acid was present.

The *liquid of hydrocele* has been analyzed by Simon and by Percy. Simon found in 1000 parts:—

Water	860.00
Solid constituents	140.00
Cholesterin, with a little margaric and oleic acids	8.40
Albumen	48.30
Albuminate of soda, with extractive matter	6.83
Alcohol-extract	2.30
Chlorides of sodium and calcium, a little sulphate, and traces of phosphate of lime	72.32
Phosphate of lime, with traces of peroxide of iron	0.70

The specimen examined by Percy contained a much larger proportion of water. He found in 1000 parts—

Water	927.4
Solid constituents	72.6
Albumen	59.2
Fatty matter dissolved by ether	A trace
Organic matter dissolved by alcohol	1.2
Organic matter dissolved by water	2.2
Chloride of sodium, with traces of chloride of potassium	6.0
Soda and lime, with sulphuric, phosphoric, and carbonic acids	4.0

The *liquid of ascites* has been recently analyzed by several chemists. Marchand found in a fluid of this nature—

Water	952.2
Solid constituents	47.8
Albumen	23.8
Urea	4.2
Chloride of sodium	8.1
Carbonate of soda	2.1
Phosphate, and traces of sulphate of soda	0.6
Viscid animal matter	8.9

Heller found in a similar investigation—

Water	950.00
Solid constituents	50.00
Extractive matters, with traces of albumen	5.97
Fat	0.84
Fixed salts (almost entirely chloride of sodium)	44.00 (!)

Percy found in a fluid of this nature—

Water	952.0
Solid constituents	48.0
Albumen	38.0
Indeterminate organic matter	3.2
Salts	7.6

Urea is a frequent constituent in fluids of this nature, but it rarely occurs in so large a proportion as in Marchand's case.

Note—The table in page 172, illustrating the fluctuations to which the constituents of the blood are liable in disease, is not drawn up (as stated in the text) from the analysis contained in this report, but from those published in Simon's "Anthropochemie."

ON THE RISE, PROGRESS, AND MYSTERIES OF MESMERISM

IN ALL AGES AND COUNTRIES.

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No. III.

THE FACTS OF MODERN MESMERISM.

§ 134. So numerous and so contradictory are the circumstances recorded as facts by the mesmerists, during the last three or four years, that it is impossible to comprehend, still more to represent, what the advocates of mesmerism consider to be the present state of its doctrines. On this account, the only unexceptionable mode of presenting the so-called facts of modern mesmerism in their true colours, appears to be, to select several of the accredited works in favour of mesmerism which have been published within the last few years, and concisely to analyze their contents. The works mentioned below* have been chosen as containing the latest exposition of mesmerism in France, America, and our own country.

CONDITIONS OF MESMERIC SUSCEPTIBILITY.

§ 135. *Statistics*.—Out of thirty-one persons mesmerized in two years, sleep-waking was fully developed in fourteen.—*Townshend*. Of one hundred persons magnetised in France by Ricard, somnambulism was induced in twenty-five.—*Lee*. A friend of Dr. Caldwell mesmerised fourteen out of fifteen. Dr. C. himself succeeded in "a heavy majority" of those on whom he operated.

- * 1. Facts in Mesmerism. By the Rev. C. H. Townshend. London: 1844.
2. The Zoist—containing Dr. Elliotson's papers. 1843-4.
3. The Phreno Magnet, edited by Spencer T. Hall, Esq. London: 1843.
4. Animal Magnetism. By A. Teste, M.D. of Paris. Translated by Dr. Spillan. London: 1843.
5. Animal Magnetism. By Edwin Lee, Esq. London: 1843.
6. Facts in Mesmerism. By Charles Caldwell, M.D. Louisville, Ky: 1842.
7. Mesmerism and its Opponents. By the Rev. George Sandby. London: 1844.
8. Mesmerism; with Reports of Cases developed in Scotland. By Wm. Lang, Esq. Edinburgh: 1843.
9. Trials of Animal Magnetism on the Brute Creation. By John Wilson, M.D. London: 1839.
10. The Rationale of Magnetism, Animal and Mental, &c. By Samuel Spurrell. London: 1844.
11. Neurypnology. By James Braid, Esq., M.R.C.S.E. London: 1843.

And also, for convenience of reference, though the author is by no means to be enrolled amongst the supporters of mesmerism, as commonly understood, many of his views being ingenious and philosophical

12. Lectures. By J. P. Catlow, Esq. Reported at length in the Manchester Guardian for 1842; and
13. A Paper by the same, on the Fallacy of Mesmero-Phrenology, in the North of England Magazine.

As far as brevity will allow, the extracts from these works are given in the words of their authors. Many passages are placed in juxtaposition, as referring to the same subject, which, in the original work, are perhaps widely separated. Superfluous parts are omitted—though in no instance is the meaning compromised—when, with that exception, the words of the original are copied verbatim. On this account, marks of quotation are seldom used, unless the expression seems intended to be emphatic, or the construction of the sentence is peculiar. Italics are always copied; but they are also frequently introduced where they are not met with in the original. The facts are not selected for the purpose of opposing mesmerism; on the contrary, the facts upon which each author appears to lay the most stress, and in many cases all the facts he furnishes, are presented. No arguments could confute the assertions of the mesmerists so completely as the facts they adduce to support them; and no change could be made in the language in which many of these facts are conveyed, without lessening their manifest absurdity, and, *pro tanto*, weakening their anti-mesmeric force. On trying to invest them with a dress of his own, only approaching the style of the original, the copy appeared so like a burlesque, that the writer felt sure the authors of the mesmeric facts themselves would have considered it such.

§ 136. *Influence of Sex, Age, Health, Mind, &c.*—Not only does a certain degree of intelligence appear requisite for the favourable manifestation of the mesmeric phenomena, but persons in perfect health have frequently exhibited them. Fear and nervous agitation are wholly incompatible with their genuine development. Sensibility, not weakness, is the real condition on which mesmerism depends. Each successive time a person is mesmerised, he becomes more easy of mesmerisation, and more at home in his new capacities. Out of twenty-three in whom sleep-waking was induced, more or less perfectly, six only were women, one only a decided invalid. One of the persons at Cambridge upon whom no effect could be produced, “was determined to resist the influence, and to that end was solving an abstruse mathematical problem” all the time he was being mesmerised. A boy, aged fifteen, mesmerises his brother, aged eleven.—*Townshend*.

§ 137. Weak persons, and sick and feeble-minded persons, are not in the least more susceptible than the healthy, and strong, and resolute. Those who are subject to sleep-waking, and the more singular forms of hysteria, are almost all susceptible. Old people are often susceptible, and males, probably, as much so as females. Sometimes there is extreme susceptibility whilst there is disease, and none afterwards when the disease is cured. Mrs. C—— was mesmerised at the first attempt in fifteen minutes, but never could be since. Even such a slight feverish illness as a cold lessens susceptibility.—*Elliotson*.

§ 138. Children are often easily magnetised. Sick and delicate persons are more susceptible of the magnetic influence than those in robust health. Where there is any unequal action, any irregularity in the system, any improper or feeble circulation, any extreme or overwrought activity of the cerebral or nervous temperament, there the mesmeric influence seems to produce an effect. Its tendency appears to be, to restore the equilibrium of a disturbed or irregular distribution of the nervous power.—*Sandby*.

§ 139. Women, generally speaking, are incomparably more susceptible of the magnetic influence than men. They have more sensibility, more tendency to the marvellous, more veneration, less energy, less pride, and, in consequence of all these circumstances, a livelier faith, which constitutes one of the most necessary conditions to the production of magnetic phenomena. Many men may be magnetised, and have been so; but most of them, it should be remarked, very much resembled women in the weakness and delicacy of their organization; or they happened to be placed in physiological conditions, which deprived them for a time of the prerogatives of their sex. Children can scarcely be magnetised. Old people not without difficulty. The first approach of youth and adolescence appear to be the periods of life, at which magnetism succeeds best; but it is chiefly at the beginning, and during the first periods, of puberty, that young girls are most susceptible of its action. In general, persons of the nervous temperament are most susceptible. It is chiefly in emaciated persons, enfeebled by some chronic disease, that it is easy to produce magnetic phenomena.—*Teste*.

§ 140. Women are mesmerisable more easily, and in a larger proportion, than men; and delicate, sensitive, and weakly women, more easily than robust and less sensitive ones. Men can be mesmerised as certainly and as deeply as women, though not in so large a proportion. Persons, when in perfect health, are as certainly and as easily mesmerised as when they are sick; and, in many cases, more so. “I have known mesmeric sleep to be retarded, and rendered less perfect, if not actually prevented, by indisposition.”—*Caldwell*.

§ 141. A temperament, composed of about three parts nervous, and one of bilious, is the most susceptible.—*Mr. Prest* in the *Phreno-Magnet*.

§ 142. It is not the persons who, in their waking state, possess the greatest amount of knowledge, or mental qualifications, who are brought to perfect somnambulant lucidity. Experience has proved, on the contrary, that it is generally the most ignorant and common individuals who most frequently arrive at this extreme development of the faculties, and who attain most quickly to perfection.—*Ricard*, quoted by *Lee*.

§ 143. With children, and persons of weak intellect, or of restless and excitable minds, Mr. Braid states that he has always been foiled in his endeavours to produce hypnotism, though most anxious to succeed.

CONDITIONS NECESSARY FOR PRODUCING MESMERIC PHENOMENA.

§ 144. *Health, strength, &c., of operator.*—A physical sympathy between the parties seems the first requisite. A superior state of health, or of muscular energy, or of mental power, on the part of the mesmeriser over the patient, seems another condition; and yet this is by no means invariable; or without exceptions.—*Sandby*.

§ 145. On the Okeys, the effect was always proportionate to the greatness of surface brought into contact, (§ 132;) or if there was no contact, to the proximity of the operator, the rapidity of the passes, the size of the surface with which the pass was made, the greatness of the living mass with which the part making the pass was connected—for example, the larger the operator, or the greater the number of persons with whom he connected himself—the greater the effect. And yet, Elizabeth Okey, who was “a small, feeble girl,” mesmerised a woman who had a “jumping fit,” and mitigated the attack very considerably.—*Elliotson*.

§ 146. *Influence of the will.*—“By exercising my influence over the will of the sleepwaker, I could, at any time, compel him to execute whatever was in the compass of his ability. That my own state of mind, or body, or both, influenced the sleepwaker, it was impossible to doubt. On days when my thoughts were pre-occupied, or my health a little out of order, the patient in the mesmeric state was dull, spiritless, and disinclined to exertion. Mesmeric phenomena really shew that the mesmeriser’s will sways the patient’s volition in a very peculiar manner. In mesmerism, it is the mind which originates the impulse. I have always found that mesmeric effects were always in exact proportion to the degree of voluntary effort I put into the performance.”

§ 147. A fellow traveller in a coach is sent to sleep and awoke again by a silent exertion of the will. Anna M——, a practised patient, is twice magnetised when supposed not to be expecting it, in a similar way. At nine o’clock one evening, Anna, being in her own house, distant a quarter of a mile, suddenly falls fast asleep and cannot be awakened by her mother and sisters, but awakes spontaneously in an hour. Her mesmeriser, at his own house, had willed that she should fall asleep at nine, and awake at ten o’clock.—*Townshend*.

§ 148. “The will is in a manner everything with me in magnetism; and the art of the magnetiser is reduced to knowing how to impress his will opportunely. Thus the magnetic fluid is moved by the will; but since it is our organs which serve it as conductors, the gestures become in consequence the indispensable auxiliaries of all mental action.”

§ 149. Rosalia is magnetised. Her operator then leaves the room, and magnetises a step on the stairs pointed out by an incredulous bystander. Rosalia is roused up and allowed to retire to her bedroom. In five minutes she is found fixed, immovable, on the tenth step, the one over which the magnetiser had made passes, and which he had willed should affect her. She says that there escaped from the step a hot vapour which sent her to sleep.

§ 150. Any object appears to the sleepwaker of whatever form the mesmeriser wills. Thus, the operator wills silently that the floor shall seem a ploughed field, or a frozen river; and the patient Rosalia says that she sees it as such accordingly. He wills that an imaginary cord shall encircle the neck of the somnambulist. Rosalia cries out, “Ah, Sir! how this squeezes my neck.” He wills that a barrier shall exist in an open doorway. Rosalia cannot pass through, and exclaims, “The door is barred.”

§ 151. By his unexpressed will, the magnetiser is able to render real objects invisible, and to make ideal objects which are not present visible to the somnambulist. A simple magnetic pass is sufficient, the operator willing at the same time, for a piece of furniture, a person, or a portion of a room, to disappear to a somnambulist. On the other hand, the mesmeriser mentally, but in silence, determines that Rosalia shall see a little girl seated on a certain chair: he makes passes over this chair. Rosalia, sleepwalking, says that she sees “little Hortense.” She then leaves the room. The magnetiser now moves the chair into six different places before he fixes it. On re-entering, Rosalia sees “not one little girl, but six little girls.” She says in explanation, “In good faith, Sir, you need not have removed the chair from its place, then I should have seen but one child; but everywhere you put it down, the fluid passed through, and formed a child quite like to that one which is above.”

§ 152. “On a great number of small cards there were written beforehand the different movements which the persons present may make the somnambulist perform, by presenting to the magnetiser such of the cards as may express their desire. Ricard, after this plain admonition, repeated each time, ‘Callixte, my friend, pay attention, I am going to speak to you;’ reads mentally the phrase or phrases which were just presented to him, adds not a word, makes no gesture, and Callixte, who constantly has the bandage on him, obeys his thought.”—§ 39—*Teste*.

§ 153. The will, in some cases, is alone sufficient (the subject being at a distance, and unconscious of the operator’s intention) for the production of mesmeric somnambulism, and the manifestation of its most extraordinary phenomena. In such cases, the facility of experimenting successfully is augmented not a little by the mesmeriser having frequently operated on his patient. Several

cases are given, in which the somnambulist names any individual *thought* of by the mesmeriser.—(Vide § 370.) *Caldwell*.

§ A Lady stated her intention of magnetising the younger of her two daughters, who were seated together at a piano in an adjoining room, separated from the one in which she herself was by folding doors. On proceeding to carry her intention into effect, magnetisation was produced, after a brief period, in the young lady, who was not aware of what was going on, her sister not being at all affected.—*Lee*.

§ 155. A certain mesmerised patient is insensible to any voice but that of the operator. It is silently intimated to the mesmeriser to *will* that his patient should be sensible to what is done and said by others. She then distinctly feels, hears, and answers, to all around her.—*Spencer Hall*.

§ 156. Of Mr. Lang's first patient it is stated, "We all in turn tried her with simple orders, but only expressed *mentally*, not articulated; and each of us in turn found his wishes complied with." On another occasion she manifested the usual response to mental orders, an effect being invariably produced by the conception of the command, "*although not always the one desired*." (!)

§ 156. With the second patient, the individuals present willed that she should raise one of her hands; this she did, in every instance, correctly. A bystander leaves the room, and "conceives the wish that the patient shall come to him; but he does not *conceive his wish* till the expiry of three minutes. When the three minutes had expired," says the reporter, "I looked towards the patient, and observed that she still kept her seat, but was sitting forward in an attitude of attention, as if listening, and she continued thus for nearly three minutes longer. Thinking that the experiment had failed, I said to the operator that he had better speak to her. He accordingly approached her, and taking her hand, inquired if she wanted anything. She said, 'What is it you wish me to do?'—'Nothing,' he answered; 'I did not wish anything.' But he had misunderstood her question. It was evident from what followed that she was asking for *directions* from him as to what she ought to do. He then said to her, 'Do you hear anything?'—'Yes,' she replied; 'a voice calls me.'—'Well then, go,' said the operator. She paused on this, and then said, 'Always asking something improper.' She now rose from her seat, and came into the middle of the room; but the light from the fire, into which this movement had brought her, seemed to confuse her, and after some hesitation, she said to the operator, 'I cannot find the way—*put me on the way*.' On this he led her to the door, and *set her face towards the darkness*. As soon as this was done, she went on with confidence and without hesitation, walked through the dark passage, went straight into the room in which the gentleman was, and proceeded to the particular corner in which he was standing."

§ 157. Of another case the operator writes,—“I have latterly several times put the patient to sleep without her knowledge or consent, by stealing behind her chair while sewing, and making a few passes over the back of the head. Once or twice I have put her asleep by merely willing that it should take place, without expressing my will, either by word or action. Another powerful proof of the *will* over certain individuals while in the sleep is the fact of *any person* being able to cause her to come to them (him?) by *silently willing it*. This she will do while blindfolded; and although a dozen persons be in the room, she has invariably gone to the individual willing her, and describes, at such times, that she feels something irresistibly drawing her forward, and cannot stay back by any effort of her own. I can also awake her at any time by merely willing it, without any contact whatever.”—*Lang*.

§ 158. "I am certain I never produced any effect by my will. In experiments of all sorts, and on all parts, I have willed most intensely and most perseveringly, and done nothing else, and no effect ever came. I have willed most intensely, and at the same time stared at the situation of a cerebral organ, or breathed two hundred times over a cerebral organ, and all in vain; whereas an accidental pointing at it has excited it. I have pointed, or made passes, or gazed, willing most intensely and perseveringly, and not willing at all, but thinking of anything except the matter before me, and the effects have come as soon in the latter case as in the former. Perfect sceptics and enemies of mesmerism every day produce effects by passes, pointing, &c., against their will, and persons often produce effects without thinking of mesmerism at all."

§ 159. Thomas Russen, who had been mesmerised by Dr. Elliotson for an attack of deafness and numbness, brought on by fright, was afterwards magnetised by his master, who states—"I mesmerised him this morning by *will merely*, and when he was engaged in conversation with some friends of mine who were in the room, and afterwards he took it into his head to go off when I was passing the room he was sitting in. He seems such an imaginative youth that he will be falling off his perch

whenever he sees me or thinks of me." He afterwards had another attack in consequence of hearing a conversation at dinner on deafness, dumbness, and *loss of sight*, amongst other subjects. He went out of the room and had a fit. On coming round in about half an hour, he made signs that he could not "speak, or hear, or see."—*Elliotson*.

§ 160. Patients may be hypnotised entirely *through the imagination*; but the most expert hypnotist may exert all his endeavours in vain if the party does not expect it, and mentally and bodily comply, and thus yield to it.—*Braid*.

§ 161. The editor of the "Magnet" states, that "he has operated on hundreds of different subjects, has experimented with the magnet, with the galvanic battery, with electricity, with minerals and metals of all kinds, and in every imaginable way, with passes and with the will; and he finds that *he can produce precisely the same results without any magnet, or electricity, or battery, or metals, or minerals, or passes, or will, at all!* True, the sleep may be induced by a battery or electrical machine, but it may be induced equally as well with a chair or a block of wood, or without any means whatever, except the mere *process* adopted for the purpose, or by the mere *direction* or request of the operator. We have caused subjects to fall asleep again and again, while we were *willing* them to keep awake all the while. Take any subject who is highly susceptible, and cause him to *apprehend* you are willing him to go to sleep, and during the sitting you will him not to go to sleep, and you will find that he will fall into the somnipathetic state, in despite of your will, just as certainly as he is susceptible, and *apprehends* what the result should be."—*Rev. La Roy Sunderland*.*

Erratum.—In the second line from the commencement of the last paper, for *first* French committee, read *third* French committee.

PROPOSALS
FOR THE
IMPROVEMENT OF DIAGNOSIS
IN THE
INVESTIGATION OF DISEASES OF THE UTERUS, &c.
WITH AN ACCOUNT OF
A NEWLY-INVENTED SPECULUM UTERI.

By PROTHEROE SMITH, Esq. M.D., Assistant-Teacher of Midwifery, St. Bartholomew's Hospital, Surgeon to the Hospital for the Diseases of Women, Consulting Accoucheur to the Central London Lying-in Institution, &c.

THE investigation of diseases peculiar to the female generative organs has, during the last few years, engaged much of the attention of the medical profession, and has already produced effects which we cannot but hail as harbingers of improvement in diagnosis, and as calculated to lead to valuable pathological results. The science of surgery, as especially applied to the examination of morbid affections of the external parts of the body, has attained to great accuracy in distinguishing physical symptoms, from the circumstance that the affected organ is at once exposed to the visual inspection as well as to the touch of the surgeon, and thus its structural condition is clearly demonstrated. In addition to these observations, I would subjoin the following remark from a late valuable Treatise on the Pathology and Treatment of Diseases of the Uterus:—"The medical science of the present day owes its superiority over that of an earlier date to no circumstance more than to the increased degree of attention which has, for a considerable time past, been devoted to the study and improvement of physical diagnosis." But I am equally desirous to affirm that advancement in the knowledge of uterine maladies has been greatly impeded by the want of that facility of investigation which arises from the simultaneous use of direct tactile examination and visual inspection of the diseased organ.

In ascertaining the physical condition of abnormal structures it is an admitted fact, that in exact proportion as we can combine these two means in pathological practice, is the accuracy of our diagnosis established. I am quite ready to admit the value of either or of both these measures, when severally applied to the end above proposed, and that, both from touch and sight, many affections of the uterus have of late been better understood and treated. I will venture, however, to express an opinion, that no one who has engaged in the investigation of uterine disease will deny that he has often been retarded in his progress by his incapability of exploring, by touch, the part when exposed to sight, or conversely, by the impossibility of procuring visual demonstration by the speculum at the same moment that he is examining the organ with his finger. Another impediment in the diagnosis of uterine pathology arises from a difficulty, which often attends