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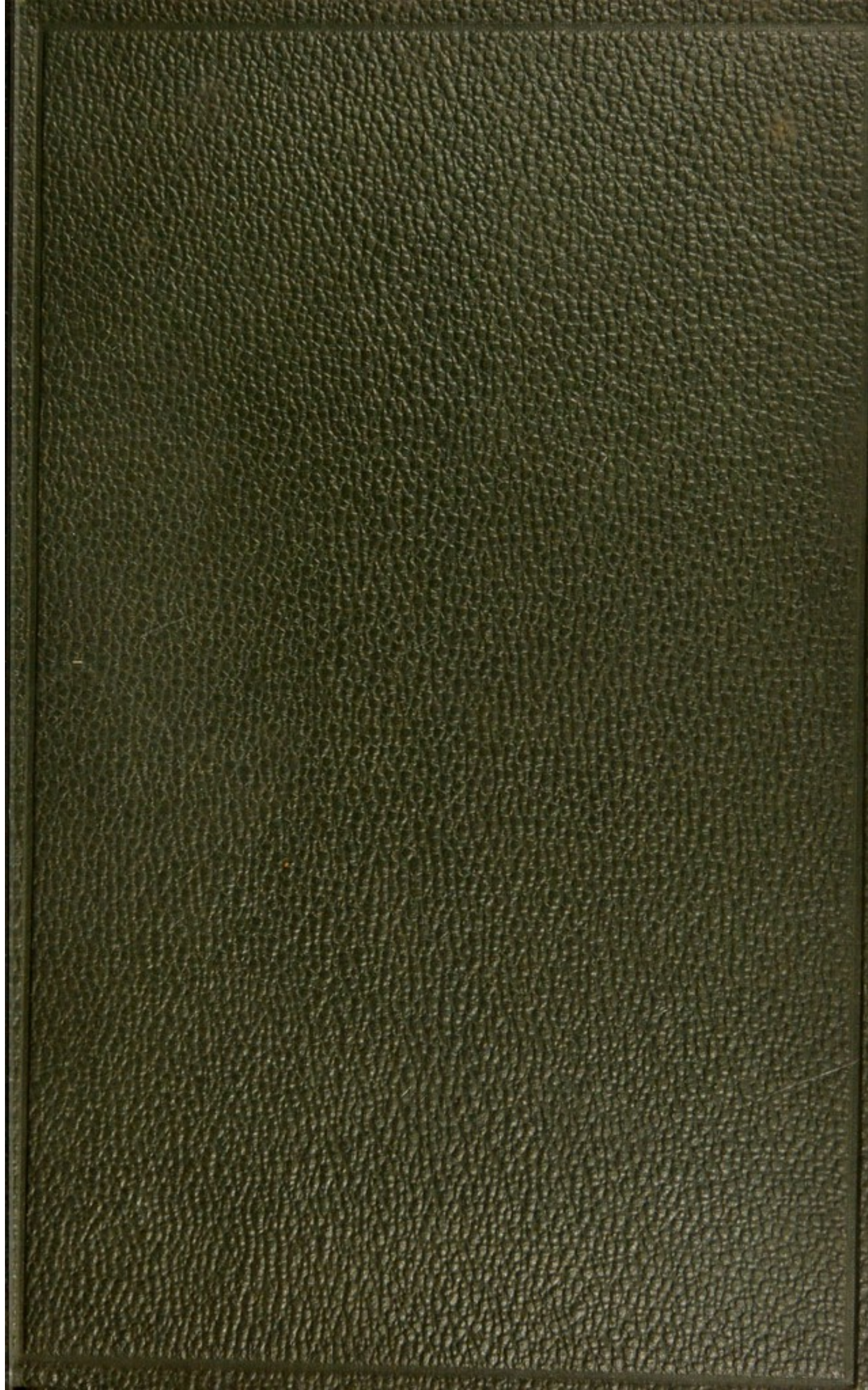
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HYPNOTISM
OR
PSYCHO-THERAPEUTICS.

BY

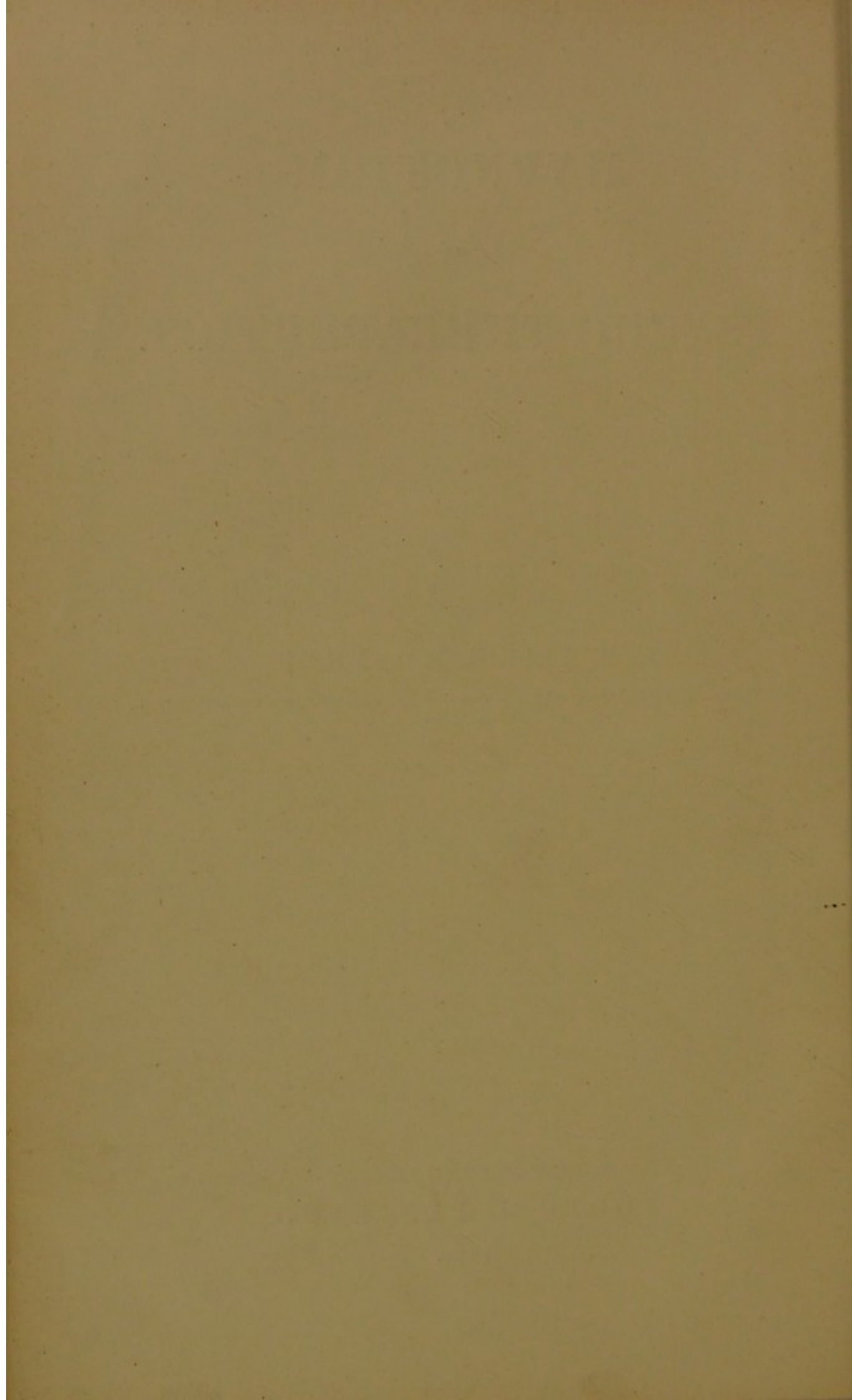
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OF MEDICINE.



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PREFACE.

THE following pages originally appeared in the *Edinburgh Medical Journal*, and they are now collected and republished in response to numerous requests. It was my intention to alter the form of the papers somewhat and to introduce fresh material, but I regret that other claims upon my time have prevented my so doing.

ERRATA.

- Page 4, line 12, *for* " quatre " *read* " quart."
- Page 14, line 12, *for* " physical " *read* " psychical."
- Page 16, line 23, *for* " common " *read* " working."
- Page 16, line 29, *for* " cerebral " *read* " mental."
- Page 24, line 13, *for* " nun " *read* " grüsst."
- Page 30, line 32, *after* " above " *insert* " by Liébault."
- Page 31, line 37, *for* " glance " *read* " stare."
- For* " Liébault " *read* " Liébault " throughout.

HYPNOTISM, OR PSYCHO-THERAPEUTICS.¹

Two small books on the subject of hypnotism, suggestive therapeutics or animal magnetism, having been sent me for review, I will take the opportunity thus presented to refer at some length to a subject which, although tabooed in this country, has been exciting great interest in professional circles on the Continent. I do this all the more readily, because of my firm belief that the subject deserves more attention than has yet been paid to it by British medical men and scientists. Be this, however, as it may, whether there be anything or nothing in hypnotism, it will be certainly well to examine the question, and to indicate what is known and thought on the subject on the Continent, so that the constant notices which it receives in the literature of the day may be read intelligently and appreciated, not passed over with an incredulous shrug of the shoulders and a contemptuous smile.

Probably no one will deny that great strides have been made on the Continent in investigating the various phenomena of hypnotism, in suggesting theories as to its production and action, in experimenting as to its therapeutic uses, and in trying to establish it upon a firm scientific basis, thus raising it from the low level of arrant quackery to the higher plane of scientific

¹ *Psycho-Therapeutics, or Treatment by Hypnotism and Suggestion.* By C. Lloyd Tuckey, M.D. London, 1889, p. 80.

Hypnotism, or Animal Magnetism. Physiological Observations by Rudolf Heidenhain, M.D., Professor of Physiology in the University of Breslau. Translated from the fourth German edition by L. C. Woolridge, M.D., D.Sc. With a Preface by G. J. Romanes, M.A., F.R.S. Second edition. London, 1888, p. 103.

accuracy. When one first commences the study of the subject as developed at the present time, one is struck by the immense amount of work which has been accomplished during the past ten years, and also by the fact that, with but few exceptions, British observers, instead of being in the forefront of the investigation, are so conservative that they have held aloof from it, and left to others the burden of the research and the possible obloquy resulting therefrom. One cannot help hoping, however, that the time will soon arrive when they will cast aside their prejudices and examine for themselves facts which, unless I am very much mistaken, may be justly utilized in the alleviation of suffering and the cure of disease, not in the universal sense claimed by some extreme enthusiasts, but to a limited and particulate extent.

I think it will not be difficult to show that the uses of hypnotism are fairly well defined, that its possible abuses are definitely indicated, and that it deserves considerable investigation before we are justified in relegating it to the domain of the unpractical.

I am anxious to confine my remarks to the present condition of the subject rather than to the past. It would be interesting, indeed, to trace the rise of hypnotism from the time when it was known in India 2000 years ago, and practised by the religious fanatics, the so-called Gogins, or when it was employed by the Hebrews and Assyrians in the cure of disease. I may note in passing that in the British Museum there is a bas-relief taken from an ancient tomb in Thebes, showing a hypnotist and his patient. I might relate how hypnotism was practised by Mahomedan sheiks in producing those states of exalted brain function which have given rise to so much of their literature, if not to their religion. One could also very properly speak of the old Greek monks, who, by gazing at their navels, induced the ecstatic trances for which they were once so celebrated. And it would be still more interesting to refer to hypnotism and suggestion as known and practised by uncivilized races, but Dr Otto Stoll is about to publish a work on the rôle which suggestion and hypnotism play in the psychology of nations, and I will not anticipate him. Hypnotism could also be traced through the ages up to the time when it was investigated by Braid in 1843, Elliotson in 1838, Esdaile in 1846, and Mitchell, U.S.A., in the same year. To refer in detail to all this, however, would lead me from

my present purpose, and would involve an analysis of the true and the false, which, however interesting, would serve no practical purpose, nor would it be suited for a purely medical journal.

I must, however, allude for a moment to the apparent dread of investigating hypnotic phenomena shown by British scientists. It is to be attributed to the unfortunate impostures which were practised between the years of 1840 and 1850. Men naturally shrink from laying themselves open to the charge of dabbling in a once thoroughly discredited procedure. One is, however, inclined to think that the discovery of chloroform and ether as anæsthetics did more than anything else to prevent the adoption of hypnotism as an anæsthetic agent. It is impossible to believe that the results of, say, Esdaile's work, would have been allowed to fall into obscurity had not agents been discovered, the anæsthetic action of which was produced by physiological action, which could be more easily understood, and the operation of which gave no possible handle to the charge of possible fraud or necromancy. Now, however right and proper it may have been to avoid the chance of such charges in the past, it must be admitted that now-a-days all such fear is, to say the least, selfish and cowardly. Men whose scientific reputation is beyond all question have investigated the subject on the Continent. They have shown us over and over again that beneficial results do accrue from the use of hypnotism, and we are therefore not justified in refusing to study the matter for ourselves, and to see whether its therapeutic uses are based upon truth or error. One must certainly admit that any one engaging in this work should be ready to meet with opposition and criticism, but such is the case in all epoch-making discoveries or researches. We need only recall the opposition to Jenner and the vaccination he introduced, or, more recently still, the outcry against Pasteur in his endeavours to stamp out diseases, such as anthrax and hydrophobia, by inoculation, or the researches of Koch with regard to cholera. When Lister introduced anti-septics he was decried, and yet what benefits they have conferred upon suffering humanity! Ovariectomy was once thought to be an operation perfectly unjustifiable, yet study, experiment, and practice have raised it to such perfection that no one will be found to condemn it now; but Sir Spencer Wells and Dr Keith had many a hard battle to fight with prejudice and ignorance

before they attained their present position. Electricity was once, and is still to a large extent, in the hands of self-styled professors, and yet it has a great future before it in connexion with medicine, and few will now deny the benefits to be derived from its scientific use in suitable cases?

And, to come nearer home, the profession in this city, at least, should not forget how Simpson and his chloroform were decried. The religious world was in arms at his audacity in trying to relieve the pain which was believed to be in accordance with the Divine intention. So it will ever be, and those who take up the investigation of this subject may make up their minds at the outset for many a *mauvais quatre d'heure*. This, however, notwithstanding, it is surely the duty of professional and scientific men to face facts, and to lend their learning, experience, and scientific training to the investigation of this subject, by which means they will wrest it out of the hands of charlatans and quacks, and place it upon no uncertain footing.

Statistics are always dry. I will therefore compress as far as possible the information we possess in regard to the literature which has been written during recent years upon the therapeutic action of hypnotism. We find that from 1860 to 1888 more than 178 papers and books were published in France upon this subject. In Belgium and Holland, between 1885 and 1888, 18 publications appeared; in Italy, between 1860 and 1888, 49; in Spain, between 1860 and 1888, 16. In England and America, between 1843 to 1887, 39 were published, most of them making their appearance between 1843 and 1853. During the last three years some 4 papers have been read on hypnotism in Great Britain, 1 lecture delivered on the subject in Aberdeen, and about 15 references made to it in the current medical literature of the day. I will however subsequently refer to this. In Greece, Poland, and Russia, between 1884 and 1888, 11 papers appeared; in Denmark and Scandinavia, in 1888, 23 papers were published; and in Switzerland, 13 between 1880 and 1888. In Austria and Germany, between 1886 and 1888, no less than 118 books and papers made their appearance. We thus find that a total number of 476 books and papers (many of the papers extending to three or four numbers of various magazines) have been published, and the vast majority of this literature has appeared on the Continent, for the infor-

mation published in the English language can hardly be considered as either original or more than a drop in the bucket, if we except the writings of Braid of thirty years ago.

I think that we are entitled to take it for granted that this accumulation in literature could not be brought about owing to the simple phantasy of misguided men, and we have therefore a *prima facie* case for justifying us in expecting for this subject earnest attention and investigation. But more than this, so convinced are various Governments of the reality of hypnotism, that they have forbidden all public exhibitions of its phenomena, and have limited its use to the medical faculty. Holland, Portugal, Italy, and Switzerland have all taken this action.

Although the profession at large has, I think, unjustifiably held aloof from the study of hypnotism, it must not be thought that no intimations of its possible value are to be found in our text-books, and to drive this fact home a few quotations may be allowed. Sir Thomas Watson said,—“Do not suppose . . . that I ignore the glaring *facts* of mesmerism. I have seen and scrutinized too many of them to doubt their genuineness, or to ascribe them to mere imposture or collusion. You may desire to know, and you have a right to know, my creed upon this vexed and much abused subject. It is this. Of the brain and nerves there are many and various strange conditions which we reckon as manifestations of disease or disorder. . . . I might have described to you the curious condition or alternating conditions of double consciousness and the familiar phenomenon of sleep-walking. Now, whatever condition of this kind may arise thus spontaneously may also, I believe, be produced in some persons under the mesmeric proceedings. The phenomena are subjective phenomena; the determining influence is from within as much as, or even more than, from without, . . . not, however, through any material or occult influence emanating from the mesmeriser, but subjectively from the mental attitude in which the person mesmerised is led to place himself. . . . I believe, too, that sleep may sometimes be conciliated by the monotonous biddings of mesmerism where drugs might fail to procure it, and that such sleep may become sometimes and in certain diseases a mode and instrument of cure.”¹

In Tanner's *Practice of Medicine* it is stated that “a cataleptic

¹ *Lectures*, 4th edition, 1875, vol. i. p. 717.

state may be induced by strongly fixing the attention on one object for a short time. The mental faculties get tired, there is diminished nervous influence or force, and persons so affected then believe that they are unable to move, cannot see, etc., until the so-called mesmeriser grants them permission." And again, "there can be no doubt that the manœuvres employed by mesmerists will induce sleep when practised on certain susceptible persons. In properly selected cases there is no objection to the physician resorting, therefore, to this remedy."¹

In Quain's *Dictionary of Medicine* H. Charlton Bastian writes,—
"The scientific study of the phenomena presented by hypnotised persons is unquestionably of great interest and importance from the point of view of the higher cerebral psychology." Again, "the whole subject is one of great interest for the practitioner of medicine, now that the absurd theories have been got rid of. We must be careful, however, to pursue the study of the condition itself in a strictly scientific manner, and watch lest the too ready adoption of hypnosis as a curative agent may do harm rather than good, and that not to the patient only, but also to the practitioner. The statements of the results obtained by Braid are little less than marvellous; and there can be no doubt that the therapeutic uses of hypnotism ought to receive a new and thorough investigation by some instructed and well-trained observers. The pitfalls besetting such an investigator are by no means few; but, on the other hand, the gains to the science of medicine and to therapeutics might be great."² And again he writes,—
"Braidism certainly deserves more attention than it has received. . . . If only half the results which have been attributed to it would follow the systematic adoption of this method for the alleviation of many diseases, it is one which should commend itself to the earnest attention of future inquirers, who may be able to place the practice upon a broader and firmer foundation than that on which it now rests."³

With the opinions expressed in the above quotations I agree. At the same time, I can quite appreciate the reluctance to investigate the phenomena of hypnotism which undoubtedly obtains in this country. It is certainly due to the remembrance of the

¹ Vol. i., 7th edition, pp. 505 and 523 (1875).

² Quain's *Dictionary of Medicine*, vol. ii. p. 976.

³ *Ibid.*, vol. i. p. 132.

unfortunate experiences of Braid, of Gregory, and of other observers in the forties; and also to the failure of travelling charlatans who practise hypnotism to demonstrate its phenomena to the satisfaction of the scientific mind. This surely is not to be wondered at, and one can hardly understand scientific men expressing an opinion on exhibitions where trickery is perfectly allowable, although the exhibitions are sometimes distressing and undesirable. An example of this kind of inquiry may be given. At the Medical Congress held in London in 1881, a Dr Beard from New York invited a number of scientists and medical men to witness some experiments in hypnotism and clairvoyance. It appears that he failed in his experiments, and his failure gave rise to a correspondence in the *Times* and *British Medical Journal*. Naturally the scientists were disappointed, and I mention this case because, in the first place, it shows that when hypnotic phenomena are witnessed in a scientific spirit by competent observers, fraud, or even unconscious deception, are not likely to pass muster; and, secondly, because there are a few sentences in the letters written to the *British Medical Journal* which we quote, in order to show the view which the writers take of hypnotism and its manifestations. For instance, J. Mortimer Granville writes,—“I have no more or other faith in the phenomena of hypnotism than all physiological psychologists possess, and that is, as nearly as possible, *nil* In common, probably, with all who have studied mental disease and disorders, I believe there are certain neuroses in which minds, not so constituted that their faculties converge and may be focussed, will, under certain conditions or influences, fall into a state of disorganization akin to the polarization of light, and when this state occurs and while it lasts, there is likely to be a disruption of the normal relations between the centres, or congeries of centres, which compose the nervous system. Taking advantage of this disorder, an expert operator may succeed in establishing special communication between his mind and the revolving faculties of his subject. Of course the communication thus established must be physical and actual. There is nothing mysterious or out of the ordinary course of things in this. The whole phenomena of mind, without exception, are, I believe, purely physical in their mode of causation.”¹

¹ *British Medical Journal*, 1881, vol. ii. p. 305.

Dr H. Donkin, referring to the same séance, after giving an account of its failure, says,—“I think that to some degree, in the interests of science, and more especially in that of practical medicine, the alleged cures of the kind described above should be investigated. That a psychical condition, which may be called by the name of hypnotism or artificial somnambulism, exists will probably not be denied. Its counterfeit is so easily produced, so many of its phenomena being entirely subjective, and offering such a fertile field for imposture, that physiologists and physicians cannot be too jealous in sifting every alleged case that comes before them. The majority of alleged cases, which are probably wholly impostures, requires the supervision of the police more than that of the physician; the minority, which are partly or wholly genuine, are more or less pitiable cases of disease, the ‘treatment’ (or prolongation) of which will probably lead to the ultimate damage or incurability of the patient.” We shall see subsequently how far this last statement is justifiable.¹

Crichton Browne also published a long letter concerning the séance, giving in great detail a description of it, but I will only quote a paragraph which apparently gives his opinion of hypnotism. He says, “All experts are agreed that certain curious phenomena, which have been designated hypnotism, are witnessed under exceptional circumstances in certain animals and human beings; but most experts are equally well agreed that much that has passed as genuine hypnotism has been rank imposture. No practical physician with a knowledge of nervous disease can read the literature of hypnotism, or critically watch a series of hypnotic exhibitions, without arriving at this conclusion. The difficulty is to eliminate the imposture, and determine what remains. The process of elimination must, I presume, be carried on by the ordinary methods by which error and falsehood are disengaged from truth. Testimony must be sifted, evidence weighed; and hence the paramount importance of determining the credibility of persons who manifest hypnotic phenomena, a large majority of which may be successfully simulated.”

As a contrast to the above-mentioned exhibition of failure, we may refer for a moment to a demonstration of the phenomena of

¹ *British Medical Journal*, 1881, vol. ii. p. 306.

hypnotism given before the Medical Society of Manchester in 1885. Dr Walter Whitehead, referring to it, makes the following remarks:—"I can affirm that of every one I have since met who witnessed the demonstration—and I have discussed the matter with at least a score of our leading professors, teachers, and medical men—not one expressed a hint of disapproval at what took place, or stated that they disbelieved the genuineness of what they had seen Six weeks ago I was practically ignorant and wholly sceptical of the merits of mesmerism; now I am convinced that it is a subject of deep psychological interest, but devoid of any practical application in the domain of surgery, and I strongly deprecate its being made the means of pecuniary gain and public amusement. These convictions I believe I share in common with the major part of those who have had frequent opportunities of investigating the subject during the last few weeks in Manchester."¹

Let me now very briefly refer to the attention paid to the subject of hypnotism in this country. It is probable that the little attention which it has received is due to, or perhaps we should say took its start from, a paper published by Dr Arthur Gamgee in 1878, in which he gave an account of a demonstration on the phenomena of hystero-epilepsy given by Professor Charcot at the Salpêtrière. At this demonstration were present, amongst others, the following physicians and scientific men:—Professors Virchow, Grainger Stewart, Turner, Oscar Liebreich, Ray Lankester, Dr Broadbent, Mr Ernest Hart, etc. Professor Charcot demonstrated the remarkable influence of solenoids and magnets upon the diseased organisms, as well as the ready induction of hypnotic and cataleptic conditions in various patients. It is unnecessary to describe just now the remarkable effects which were produced, but they appear to have been greatly appreciated by the gentlemen present, and we cannot imagine that they were likely to have been misled in regard to the facts they saw, either by the distinguished demonstrator, or by the patients he submitted to their observation. Professor Gamgee, in a few remarks at the end of his paper, says:—"The reader who is acquainted with physics and physiology will at once admit that many of the facts narrated are absolutely inexplicable in the present condition of physiology," and he goes

¹ *British Medical Journal*, 1885, vol. ii. p. 721.

on to mention that Claude Bernard, shortly before his death, told Charcot, after having seen the same phenomena, that "the facts show how little we *do* know."

Since this time there have been a number of short notices with regard to the subject in our current medical literature, consisting chiefly of a few lines giving quotations from Continental sources, but we may search in vain for any real general scientific interest exhibited with regard to the subject. In November 1880, Professor Stirling gave a lecture on hypnotism in Aberdeen, in which he expressed the opinion that Braid's facts had been rediscovered in Germany by Weinhold and Heidenhain, and that the subject was one which must shortly occupy the attention of the physician and physiologist, as well as the psychologist.¹

At a meeting of the Brighton and Sussex Medico-Chirurgical Society on 3rd February 1887, Dr Gasquet read a paper on hypnotism. He thought it was due to various degrees of removal of inhibition, that its curative value was very doubtful, and that the social and moral dangers connected with it were enormous.²

The Paris correspondent of the *Lancet*, referring to a communication made by M. Luys to the Academy of Medicine of Paris, in 1887, in regard to his researches concerning "Solicitation expérimental des phénomènes des motifs chez les sujets en état d'hypnotisme," says—"It is regrettable that the 'facts' stated at the last meeting should have been brought forward by one who has hitherto enjoyed the reputation of a savant on cerebral physiology, and whose work on the brain is a standard text-book, but M. Luys will have done a service in forcing the Academy to an expression of opinion concerning the practices carried on in many of the Paris hospitals, where hypnotism, daily misapplied under a therapeutic pretext, has nearly constantly only one effect—that of destroying the mental and moral equilibrium of those previously sound in this respect, and of inducing many patients into the gravest degradation of hysteria." As will be subsequently seen, this correspondent's view is hardly borne out by facts.³

I next find a leading article on hypnotism in the *Provincial Medical Journal* (1887, p. 559), contrasting the methods of M.

¹ *British Medical Journal*, 1880, vol. ii. p. 797.

² *Ibid.*, 1887, vol. i. p. 512.

³ *Lancet*, 1887, vol. ii. p. 547.

Lufs with those formerly made by Dr Esdaile in India. The writer concludes by saying, "We fail to see the medical advantages of hypnotism. If a patient wants a piece of steel extracted without pain, ether and chloroform are at hand, and the thing is done. Public exhibitions of this kind have an injurious effect, and in some countries they have been forbidden by law."

At the Medical Institute in Liverpool on 6th December 1888, Dr Karl Grossmann read a paper on hypnotism, and illustrated his remarks by means of hypnotised individuals.¹

At a meeting of the British Medical Association in August 1880, Preyer of Jena read a paper on sleep and hypnotism, and Dr G. M. Foy read another on hypnotism at the Royal Academy of Medicine in Ireland, on April 6th, 1888. We shall have to refer to those two papers later on, and here we have reached the end of our list. It must be admitted that it is not extensive, nor does it show that the importance of the subject has been recognised.

Having now cleared the way, it is time that I should explain how persons are hypnotised at the present day, before proceeding to point out the therapeutic uses and possible dangers of hypnotism, and to investigate as far as possible the theories which have been brought forward to explain its action.

We must, however, first inquire as to the number of persons who are susceptible to the hypnotic power. It has often been asserted that hysterical people, or excitable and nervous races, provide the majority of hypnotisable subjects. This is a mistaken idea, for it is found that, in all races and at all ages, the majority of persons can usually be hypnotised, although not all with the same facility. English, Germans, Dutch, and Swedes are more difficult to hypnotise, as a rule, than are the French, Spaniards, or Italians; but this refers to hypnotism acting immediately, or, in other words, on the first attempt, for it is found that in numerous cases in all countries three, four, or five attempts have sometimes to be made before success is attained, and, be it noted, a good deal depends upon the experience of the mesmeriser, as the following figures will show. When Forel, professor of psychology at Zurich, published his first report on treatment by hypnotism, he stated that of the 41 persons he attempted to hypnotise he had

¹ *British Medical Journal*, 1888, vol. ii. p. 1413.

failed with 14. In his second report on 58 cases, he had failed in 11, but in his third report on 29 cases he had only failed in 3.

Baierlacher found 121 persons susceptible to hypnotism out of 146 he tried to hypnotise, and in nearly all of his failures he had only one sitting. As he justly remarks, two or three sittings are in many cases required before some persons can be hypnotised.

In giving statistics as to the percentage of persons capable of being hypnotised, authorities vary. Wetterstrand, in Sweden, found only 17 persons who could not be hypnotised in 718 cases in 1887.¹ Van Renterghem reported to the Medical Congress at Amsterdam in October 1887, that he had only failed to hypnotise 9 out of 178 patients.²

Of 1014 patients submitted to hypnotisation by Dr Liébault in Nancy in 1880 only 27 failures occurred.³ Beaunis in 1884-85, only failed to hypnotise 60 out of 753 persons.⁴ Bottey says that 30 per cent. of all cases can be hypnotised; Morselli, 70 per cent.; Liébault, 92 per cent.; and Bernheim states that hospital surgeons who cannot at least hypnotise 80 per cent. of their patients have no right to express any opinion on the subject of hypnotism, with which statement Forel agrees completely.⁵

Age has certainly a great influence in rendering a person susceptible or otherwise to an hypnotic sleep. In an interesting table which Professor Beaunis has drawn up, we find that all patients under 14 can be hypnotised, and that failures occur after that age in the following proportion. From 14 to 21, 10·3 per cent. of failures; from 21 to 28, 9·1; from 28 to 35, 5·9; from 35 to 42, 8·2; from 42 to 49, 12·2; from 49 to 56, 4·4; from 56 to 63, 14·4; and above 63, 13·5. It must not be understood from this, however, that this great percentage refers to the production of absolute somnambulism (somnambulism, as will be fully explained later on, is the last stage to which hypnotism can be pushed); for although 55·3 per cent. of the cases between 7 to 14 years of age exhibited the symptoms of somnambulism, yet from 14 onwards the

¹ *Wetterstrand om den hypnotiska suggestionens användning i den praktiska medicinen.* Hygiea, Stockholm, 1888.

² *Beitrag der therapeutischen Verwerthung des hypnotismus.* Leipsic, 1888.

³ *Psycho-therapeutics*, Tuckey, p. 31.

⁴ *Ueber Hypnotische Suggestionen*, Sallis. Berlin, 1888.

⁵ *Der Hypnotismus*, Moll. Berlin, 1889.

average number of cases in which that phenomenon was observed was 10 per cent. In other words, the greatest proportion of somnambulists is found in childhood and youth; 26·5 per cent. from 1 to 7 years, and 55·3 per cent. from 8 to 14 years. In old age the number of somnambulists decreases, but it remains at the relatively high figure of 7 to 11 per cent. It has often been stated that somnambulism can more easily be induced in women than in men, but this statement does not tally with the facts, for we find that the proportion of cases in which somnambulism is observed is pretty equally divided, it being met with in 18·8 per cent. of men and 19·4 per cent. in women.¹

With regard to these statistics, it is only fair to remark that they deal with French patients, and that they occurred at Nancy, where, owing to the long-continued researches of Liébault and Bergheim, hypnotism is well understood, and the people knowing all about its action are not frightened at it. Still, almost the same percentage is obtained by Van Eeden at Amsterdam, and one cannot suggest that the Dutch are either excitable, easily impressionable, or hysterical people.

In order for a person to be hypnotised, certain things are requisite. In the first place, the patient must be willing to be hypnotised, and have perfect confidence in the hypnotiser. I shall refer later on to the possibility or not of a person being hypnotised suddenly or unwillingly. Secondly, the patient must be comfortable or at perfect ease; and, lastly, and most important of all, the hypnotiser must possess perfect confidence in himself, and the more he knows of hypnotism and the greater his experience, the more chance he has of success. All observers agree that the longer they practise hypnotism the more easily they induce hypnotic sleep in their patients, and the fewer failures they meet. The statistics given above of Forel's practice illustrate this, and it is only natural to suppose that first attempts are likely to be unsatisfactory; and just as a surgeon becomes, as a rule, a better operator the more experience he possesses, so too a hypnotiser lives and learns.

The popular idea that only hysterical persons can be hypnotised, or at any rate are far more easily hypnotised than healthy individuals, is quite wrong. Hysterical, nervous persons are, as

¹ *Suggestive Therapeutics*, Eernheim. New York, 1889, p. 20.

a rule, difficult to hypnotise, and in many cases it is almost impossible to bring them under the influence of hypnotism, owing to the instability of their mental powers. Charcot's work at the Salpêtrière does not cause us to modify this opinion.

It should be distinctly understood that reference is being made to the ordinary hypnotising of ordinary individuals,—individuals who are not suffering either from hysteria, any nervous disease, or diminished brain power.

Although persons may be hypnotised in many ways, all the methods can be conveniently divided into two classes,—1. Hypnotism produced by physical impressions; 2. Hypnotism produced by physical suggestion; although probably in both methods a certain amount of expectation is necessary in order to obtain a satisfactory result. Dealing with the first method, we find that hypnotic sleep may be induced by the subject fixing his eyes upon an object held in such a position as to cause a convergence of the eyes, or a strain upon accommodation. Although this method is often successful, it is not free from objection, as it may easily produce excessive stimulation of the brain, giving rise to either dizziness, headache, or even convulsions.¹ Again, the object may be held above the eyes in such a position as to compel the patient to tire the eyes by the effort to keep them open. Hypnosis may just as easily be induced by getting the subject to look at the operator's finger, or to gaze steadily into his eyes.

Impressions produced by sound can also hypnotise a person: the attentive listening to a loud ticking watch or clock,—the monotonous, long-continued, but gentle beating of a drum—or the sudden striking of a loud gong, may all produce the same effect, as will also, in some cases, the sudden flashing of the electric light into the patient's eyes. It is also possible to hypnotise a person by exerting an influence upon the tactile sense. The eyes may be closed by the fingers, and gentle pressure be exerted upon the eyeballs, or by gently stroking the skin. It is possible, too, to produce hypnotism by making passes with the hands close to, but not touching, the patient. This may act either by inducing currents of air, or by inducing an alteration in the temperature, but in all probability this method of procedure induces the sleep in a complex

¹ *Die Suggestions Therapie*, Baierlacher. Stuttgart, 1889.

manner, both physical and mental stimuli being utilized at one and the same time. I may here mention in passing that Pitres holds that in many cases individuals possess what may be called hypnotic points, the pressure upon which may induce almost instantaneous sleep. These spots vary in extent from 1 to 4 c.m. in diameter. They may be on one or both sides of the body, their number varying from 3 or 4 to 30 or 40 in the individual. I will not refer more to this, as further observations are required to confirm the statements, but we may say that De la Tourette credits it, and gives a remarkable case in which a girl was accidentally hypnotised by pressure on one of these spots which was situated on her elbow.¹

These points are found mostly in hysterical patients, and I certainly believe that mental impressions play a not unimportant part in the production of hypnotism by this method.

I now come to the method of hypnotising which I have called psychical suggestion. It is probably the best of all methods, and it is the one which is so largely practised by Liébault, Bernheim, Forel, and others. Hypnotism is induced as follows:—The patient is either lying comfortably in bed or reclining easily in a comfortable arm-chair. He is told to think of nothing, to keep the mind as blank as possible, but to fix his eyes and attention on some special object,—almost anything will do, from the operator's face or hand to a mark on the ceiling or the pattern of the carpet. Then the phenomena which attend the oncoming of natural sleep are gradually suggested to him: "Your sight is growing dim and indistinct; your eyelids are becoming heavy; a numbness is creeping over your limbs; my voice seems muffled to you; you are getting more sleepy; you cannot keep your eyes open." Here the eyes close of themselves, or are closed by the operator, and it is generally found that the patient is indeed asleep. About two minutes of this "talk about sleep" will usually produce the hypnotic effect; and on subsequent visits even less time is required.²

Dr Liébault, in order to give his patients confidence, and also to arouse their imitative faculties, usually allows them to see several persons hypnotised before their own turn arrives. The patients are awakened, as a rule, by simply telling them to awake. If the

¹ *Untersuchung ueber der hysterogenen Punkte.* Gaube, 1882, vi. p. 58. *Der Hypnotismus*, de la Tourette. Hamburg, 1889, p. 79.

² *Psycho-therapeutics*, Tuckey, p. 23.

sleep has been very profound, however, as it is when the stage of somnambulism is reached, the order may have to be repeated several times, or the patient may be fanned, or the operator blows gently into the eyes. Liébault's explanation of his method is simple in the extreme. The patient's attention being fixed, the accommodation of the eyes is strained, the sight tired; the pupils consequently dilate, vision becomes dim, the eyes being tired naturally close, and the monotonous tones of the operator suggesting sleep to him, what wonder that it occurs?

It should be remembered that some people have no inclination to sleep, or show no drowsiness. In such cases Bernheim says, "I take care to say that sleep is not essential; that the hypnotic influence, whence comes the benefit, may exist without sleep, and that many patients are hypnotised although they do not sleep. If the patient does not shut his eyes or keep them shut, I do not require them to be fixed on mine or on my fingers for any length of time, for it sometimes happens that they remain wide open indefinitely, and instead of the idea of sleep being conceived, only a rigid fixation of the eyes results; in this case closing of the eyes by the operator succeeds better. . . . Passes, or gazing at the eyes or fingers of the operator, are only useful in concentrating the attention, and are not absolutely essential."¹

According to the experience of Bernheim and Liébault, common people, those of gentle disposition, old soldiers, artizans, people accustomed to passive obedience, are easier to hypnotise than preoccupied people, and those who often unconsciously oppose a certain mental resistance. The idea of being hypnotised must be present, and the patient must submit to the hypnotiser, using no cerebral resistance. It is often impossible to influence people who make it a point of honour to show that they cannot be hypnotised; in fact they oppose a kind of counter suggestion.²

Faria simply fixed the attention of the patient, and suddenly in a commanding voice said, "Sleep," and the patient slept.

Although for the sake of clearness I have separated these two methods from one another, I am inclined to think that the division is practically more imaginary than real, and doubt very much whether it is possible, except, perhaps, in the case of

¹ *Suggestive Therapeutics*, Bernheim, p. 4.

² *Ibid.*, p. 5.

very young children, to induce the hypnotic sleep, until a more or less vivid idea of the result of the method is mentally grasped by the subject.

Before passing on to mention the various degrees of hypnotic sleep, I may perhaps refer to auto-hypnotism, and also to hypnotism at a distance. With regard to auto-hypnotism, there can be no doubt it is of very rare occurrence, and it is chiefly met with in persons who have been very frequently hypnotised. It may be simply explained by stating that it is a mere effort of will on the part of the individual in question, the intense concentration of the mind abstracting it from its surroundings, and thereby inducing the hypnotic sleep. In much the same way we can explain those cases in which persons have been hypnotised through the telephone, or have fallen asleep at times suggested to them by the hypnotiser. Conscious or unconscious expectation has been aroused with the expected result.

Bourneville and Regnard published, both in their *Iconographie photographique de la Salpêtrière* and in *Le Progrès Médical* (1881), their methods of producing hypnotism, and they state that in predisposed patients merely extending one hand over the head is sufficient for the purpose, and that hypnotism at a distance is the result of the imagination. On one occasion M. Bourneville told a patient that from his own house he would cause her to fall asleep at three o'clock, and on the following day he learnt that at three she fell asleep. He states that he did not even think of the patient at the time when she supposed him to be exercising his mysterious influence over her, and that the effect produced was due to her own imagination.¹ When writing on the dangers of hypnotism, I shall refer to this again.

Persons may be hypnotised in varying degrees. Charcot distinguishes three degrees in hypnotised hysterical patients.² He

¹ *British Medical Journal*, 1881, vol. i. p. 1010. See also a novel, entitled *In his Grasp*, by Esme Stuart; and *Herr Paulus*, by Walter Besant.

² It may be interesting to note that practically there are two distinct schools of hypnotists: the Paris school, which is headed by Charcot, and adhered to by Richer, Dumont, Pallier, Voisin, Bérillon, Binet, Féré, Tamburini, Heidenhain, Grützner, Preyer, etc., who chiefly hypnotise by physical stimulation of the central nervous system; and the Nancy school, headed by Liébault, and adhered to by Bergheim, Beaunis, Wetterstrand, Delbeuf, Liégeois, Forel,

says they are sharply divided, and he names them the cataleptic, the lethargic, and the somnambulistic. I will do no more than refer to them, as I do not intend to deal in this paper with the subject of hypnotism in relation to these hysterical cases.

The Nancy school, for purposes of description, divides the intensity of hypnotic influence into six degrees. This division, however, is purely theoretical, and it is merely used in order to classify each patient influenced without making a long description necessary.

1st Degree.—This occurs in the smallest number of cases. The patient experiences a more or less pronounced dulness, heaviness of the eyelids, sleepiness. This may last from several minutes to an hour; usually, however, it passes off as soon as the operator's influence is withdrawn. Some patients remain motionless, others move a little and change their position, but still remain sleepy.

2nd Degree.—The eyes are closed, the limbs relaxed, the patients hear what is said to them or about them, they have an inclination to sleep, their brain is in the condition called hypotaxic or charmed. This degree is characterized by suggestive catalepsy.

3rd Degree.—The drowsiness is more pronounced; apart from suggestive catalepsy, the patient is capable of making automatic movements, *i.e.*, rotation of the arms, etc., suggested to him by the operator. He hears everything that is said around him.

4th Degree.—This is characterized, in addition to the preceding phenomena, by the loss of relationship to the outer world. The patient hears only what is said to him by the operator. His senses are only in communication with the operator, but are, however, susceptible of being put into relationship with any one.

5th Degree.—Light somnambulism. Patients remember, in a vague sort of way, on awaking, what has happened to them. Sensibility is destroyed; suggestive catalepsy is present; there are automatic movements; and hallucinations may be caused by suggestion.

6th Degree.—The state of deep somnambulism. It is in reality the fifth degree intensified. The memory of all that has happened during sleep is absolutely destroyed, and cannot revive spontaneously. In both the fifth and sixth degrees the patient is reduced to docile or automatic obedience. Though inert or passive

Berger, Mendel, Moll, Krafft-Ebling, etc., who hypnotise by the psychical stimulation of the central nervous system.—*Zur Einführung in das Studium des Hypnotismus*, Maack. Berlin, 1888.

if left to himself, he does as he is told,—walks, stands still, speaks, sings, laughs, dances; operations may be performed upon him without feeling, and it is in these stages that suggestive therapeutics may be employed with most advantage.¹

One may note here that Bernheim thinks that hypnotism should not be defined as induced sleep. He believes that expression gives a too narrow meaning to the word, and leaves out of count many phenomena which suggestion can bring about independently of sleep. He defines hypnotism as “the induction of a peculiar psychical condition which increases the susceptibility to suggestion. Often, it is true, the sleep that may be induced facilitates suggestion, but it is not the necessary preliminary; it is suggestion that rules hypnotism.” He believes that suggestive sleep differs in no respect from natural sleep; the same phenomena of suggestion can be obtained in natural sleep if one succeeds in putting one’s self into relation with the sleeping person without waking him. This view of the subject enables him to include under the term hypnotism all the various methods which, acting upon the imagination, induce the psychical condition of exalted susceptibility to suggestion with or without sleep.

In order to give as clear an idea as possible of the symptomatology of hypnotism,—although all the symptoms are, in point of fact, due to the selfsame cause, namely, an alteration in the central nervous system,—it is well to try and divide the subject into the physiological and psychical symptoms. This, however, is not always possible, and even at the present day it is doubtful how far many of the physical symptoms are really due to hypnotism itself and not to the means used to induce it. For example, when hypnotism is induced or attempted by the concentration of the eyes upon a given point, the eyes may water, and it is an open question whether the tears thus produced are to be regarded as a symptom of hypnotism or only the consequence of the strain upon the eyes.

It must also be distinctly understood that various symptoms may be cultivated, and therefore it is of no use to expect that each symptom I shall presently mention will be fully demonstrable in any given case. It is necessary to bear this in mind, because

¹ Abbreviated from *Suggestive Therapeutics*, Bernheim, pp. 5–12.

in so many of the cases of which accounts are published the remarkable results obtained are certainly due to repeated practice and development. One observer will be interested in observing one symptom, and in the subjects he hypnotises he will educate or cultivate that symptom, and at any demonstration he may give he will as naturally bring it prominently forward, and call attention to it, as a fond parent would get his child to repeat the best known poem in his *repertoire* if he wished to impress assembled friends with the capability of the infant prodigy.

It is not possible to assert that any symptom or symptoms will be invariably present in a hypnotised person, and it is only by knowing what hypnotism is, and by having, as it were, a mental picture of the subject, that a correct opinion can be formed as to whether a person is hypnotised or not. We should naturally doubt the diagnosis of a layman,—say, in a case of typhoid fever or in an obscure case of insanity,—although he might have a fairly good book knowledge of the subject. It requires an educated and trained observer in many cases to make a diagnosis. A clear conception of a disease must be in the mind's eye, a knowledge of the methods of investigation must be at the finger's end, before a certain diagnosis can be come to with reference to any disease. It is just the same with hypnotism; it would be surprising, indeed, were it not so. We shall probably do best by saying that the first symptom of the hypnotic state is an increase of consciousness, or an increase in the power of receiving impressions or suggestions,—“*vermehrte Suggestibilität*,” the Germans call it. Every one is capable of receiving suggestions, is capable of being influenced by either surrounding objects or impressions conveyed by gestures, tone of voice, or, more readily still, by verbal communications. In the early training of children this influence will be recognised by all. It is well known, too, that experimenters, wishing for certain results, are apt to read their experiments in a way satisfactory to their preconceived ideas. A good illustration of this may be taken from Creighton's views on vaccination; he well exhibits auto-suggestion; he has a fixed idea that vaccination is useless, and therefore all he reads or sees confirms him in his theory.¹ Again, too, expectation may exert a great influence upon the

¹ *Edin. Med. Journal*, Aug. 1889, p. 142, etc.

mind. Suggest an effect, and the effect is the more easily produced. It is a matter of common experience that conversation turning to unpleasant subjects will induce various sensations, from nausea on the one hand to faintness or mere creepiness on the other. Bonniot uses the following example with reference to this point:—A person is embarrassed. You say to him, "You are blushing," whereupon the blush is induced. Considering these facts, we must remember, throughout the study of the symptoms of hypnotism, the possibility of imitation, suggestion, and expectation.

Passing on to the physiological phenomena witnessed in hypnotised persons, we notice that voluntary muscles are affected. The degree to which they are affected depends partly upon the method which has been used in producing hypnotism, partly on the susceptibility or otherwise of the patient. When hypnotised, some persons can move, others are apparently as passive as in deep sleep. Both conditions, however, can be modified or abolished by order of the operator. Now, not only can all the muscles be affected, but isolated groups of muscles,—for example, paralysis of a leg or an arm may be induced, analogous to Erbs's "*Lähmung durch Einbildung*," or Russell Reynold's "paralysis dependent on idea." This paralysis is characterized by the following clinical signs,—absolute loss of motion and sensation, exaggerated reflexes and ankle clonus. There is also a complete loss of muscular sense and an alteration in the reaction of muscles to electricity, as well as vaso-motor disturbances. This kind of paralysis can be produced both during and subsequent to hypnotism (by post-hypnotic suggestion). It is also possible to cause rigidity of the muscles, a kind of tetanic contraction being produced. According to the relaxation or otherwise of the muscles, the character of the hypnotic state may be differentiated into an active and a passive state. The passive state is that in which the hypnotism most nearly approaches natural sleep; the active form is so different that a casual observer might at first think that the individual was quite awake. Now, these effects are undoubtedly produced by psychical means, but at the same time it is quite possible, by the pressure upon a nerve during the hypnotic sleep, to produce the contraction of a muscle, and in the last degree of hypnotism this contraction may be brought about by simply rubbing the skin over the muscle. This proves that the effect can be produced without psychical action, and without

the patient knowing which muscle or group of muscles is to contract.

With regard to muscular strength, differences of opinion are held. Some authorities maintain that the grasp of the hand, for instance, is more powerful during hypnotic sleep than in a normal condition; others again doubt this. It appears, however, that in the majority of cases, if it is suggested to the patient that he is powerful, he certainly exhibits more power than he would do under ordinary circumstances, and there are many cases on record where weak girls have been rendered exceedingly powerful when under the hypnotic influence.

With regard to the electrical reaction of nerves and muscles, many authorities state that the strength of the stimulus required to produce a muscular contraction is only about half that required under normal conditions. Of this opinion, at least, are De la Tourette, Morselli, and Mendelsohn, as well as Rosenthal, but Heidenhain, Berger, and Moll apparently doubt this statement.

It is of extreme importance to understand the action of the eye during hypnotism. As soon as the hypnotic influence commences to affect a subject, the eyes tend to close, and this closure of the eyes is important, because, whether brought about manually or by suggestion, it tends to increase the hypnosis. According to most observers, the pupils become more or less dilated and the eyeballs rotate upwards, but in most cases they probably do not converge. The eyes are not quite, but almost, completely closed. The importance of this remark will be seen presently. A slight tremor is seen in the eyelids, sometimes even a distinct spasm. It must be noted, however, that in some exceptional cases a person may be placed in the deepest hypnotic sleep with the eyes open. In such cases the eyeballs slightly protrude, but it is probable that this occurs only where hypnotism has been induced by fixing the eyes upon a bright object. Some observers, *e.g.*, Moll, found that when patients were hypnotised by suggestion alone the pupils were slightly contracted. Paralysis of accommodation may often be noticed, and the pupil reflex is either abolished, or at any rate considerably lessened. The conjunctivæ are insensible.

With regard to sight, hearing, taste, and smell, there is, in slight hypnosis, little alteration from the normal. In deeper hypnosis the senses may become extremely acute, and in very deep hypnosis

they may be abolished altogether. At the same time, during the hypnotic sleep these senses are to a greater or less extent at the command of the operator, and they can be abolished or increased within reasonable limits at his will.

Illusions and hallucinations with regard to these senses may be induced. For instance, suggest to a hypnotised person that he cannot see, and he becomes blind; that he cannot hear, and he becomes deaf. Let him smell the strongest ammonia, and he will not be affected, if you have told him he cannot smell.

Again, the acuteness of the sense of sight is sometimes so great that its range may be doubled as well as the vision being sharpened; and hearing may be rendered so acute that a conversation in the next room may be overheard by the hypnotised subject.

It may here be noticed that common sensation is affected during hypnotism. Very slight variations in temperature can be distinguished in objects held at a distance of about an inch from the body. The sensation of weight may be heightened, so that very slight differences in the weight of various articles can be correctly estimated; and if we test common sensation by means of the points of the compasses, we find that a hypnotised person is able to distinguish the two points at a much slighter distance than under normal circumstances. For instance, according to Berger, a person in whom Weber's compasses applied to the skin in the waking state would require 18 degrees to produce a twofold sensation, when hypnotised would distinguish the points at 3 degrees distance.

With regard to the various sensations of hunger, thirst, joy, sorrow, sickness, etc., they can all be influenced by suggestion, and feeling may be so abolished during the hypnotic sleep that operations may be performed without causing the patient the slightest pain.

The circulation is stimulated if the person is hypnotised by fixing the eyes; if by suggestion, it is not affected; but during the hypnotic sleep the rate of the pulse may be either diminished or increased at the will of the operator. The same remarks apply to the breathing, and respiration may be brought to a complete standstill, but this inhibition is, of course, dangerous if continued longer than half a minute. It is possible, too, to induce an increased temperature in localized areas on the body; a difference of from 2 to 3 degrees Fahr. may be effected at will, and the application of a postage stamp will produce a blister on a hypnotised person should

the suggestion be made to him that the blister has been applied. Copious perspiration may be also induced. Bleeding of the nose has been successfully suggested in many cases, as also the production of stigmata.

I must now pass on to consider the psychological alterations which are, or which may be, produced during the hypnotic sleep. First, with regard to memory. In the lighter stages of hypnotism it is not affected, and the person on coming out of the hypnotic sleep remembers everything that has happened. In deeper sleep memory is abolished, unless after awakening a hint be given to the person as to what has happened. For instance, Heidenhain hypnotised his brother. He said to him, "Alles schweige jeder neige ernsten Tönen nun sein Ohr." At first, after awakening, the brother made futile endeavours to recollect, but as soon as the word "schweige" was mentioned he had complete recollection, and reproduced the sentence. In the deepest stage of hypnotism memory is absolutely abolished; but it is most important to remember, that if the subject is hypnotised again, the memory of what has happened at a previous sitting revives. I will subsequently call attention more particularly to this fact; in the meantime, suffice it to say that some individuals who are frequently hypnotised may be said to lead two lives—an ordinary everyday life, and a hypnotic life filled with spectres and fantastic dreams. During the hypnotic sleep the most vivid recollection of long-forgotten scenes or experiences can be induced with comparative ease. Binet and Féré give an instance which displays the acute memory of somnambulists: "A girl in a state of somnambulism was in Charcot's room at the Salpêtrière when Parrot, the physician to the Refuge for 'Enfants Assistés,' entered. The subject was asked what was the stranger's name, and she replied, to the surprise of all present and without hesitation, 'M. Parrot.' On awakening, she declared that she did not know him; but after looking at him for a long while, she finally said, 'I think he is a physician at the "Enfants Assistés."' When about two years old she had been for some time in this Refuge, and had long forgotten the physician, whom she now recognised with difficulty in her waking state, while she could during somnambulism give his name at once when ordered to do so."¹

¹ *Animal Magnetism*, Binet and Féré, 1887, p. 136.

The writer once had occasion to hypnotise a person aged about 50. She very easily passed into a deep hypnotic sleep, and, to his great surprise, commenced to speak English, although no one present knew that she could understand a word of the language. During her waking state she did not know a single word of English, and it could be proved that, at any rate for twenty-five years, she had never spoken it. The only explanation of this incident which I can give is that when very young she must have had some knowledge of the language. This case is exactly on a par with one which Benedikt relates: An English officer was hypnotised by Hansen, and during the hypnosis he suddenly spoke a new language. It subsequently turned out that it was the Wallachian, which the officer had learned as a child and had quite forgotten.¹

Perhaps the most important point with regard to treatment by hypnotism is the memory of the occurrences during previous hypnotic sittings, for it is by a knowledge of this fact that patients can be trained, and unless it is remembered it may give rise to undoubted errors in experiment. As Moll says, on one occasion he told a hypnotised person to raise the left leg, and as he said this he accidentally took hold of the patient's right hand. On a subsequent occasion, when the patient was hypnotised, he took hold of the hand, and immediately the left leg was raised.

Perhaps one or two other points with regard to memory should be briefly mentioned. By means of suggestions, one can blot out completely the recollection of a certain number of years of the patient's life, or make them believe that they have performed certain actions. This may be termed retro-active suggestion. Or one can, by means of suggestion in hypnotic sleep, produce, say aphasia or agraphia, and it is possible to carry over this influence to the waking state by telling the person that after awakening he will be unable to perform this or that action, or to remember certain circumstances. The previous life of the patient can also be recalled in the most vivid manner either in whole or in part. For instance, if a soldier is hypnotised, some battle he has fought can be brought to his remembrance, and he will act, think, and speak as if on the battlefield. Or, give an old lady a doll, and tell her

¹ *Der Hypnotismus*, Moll, p. 88.

that she is a child once more, and if you try to take away the plaything, she will cry and call for her mamma. In the same way, it is possible to make persons believe that they are kings, beggars, actors, or anything else one may wish. One can also make them perform actions after awakening—actions which have been suggested to them during the hypnotic sleep. These are the so-called post-hypnotic suggestions. For instance, a person may be told that an hour or two hours after waking from the sleep he will see a certain person; that person will be seen at the appointed time; or that, when the clock strikes a certain hour, he is to perform a certain act, and the act will be performed. But, between the time at which he awakens and the time at which he is either to see or to do something, he will be quite oblivious to the order which has been given him. This certainly does not correspond to anything we experience during our ordinary state of existence. We cannot by any means be certain to remember to perform a certain act at a definite time, nor could we say to ourselves that at a given moment, an hour or two hence, we should see a spectral figure which would be to us as a real one. It must be distinctly understood that there are no means of ascertaining that the patient is in any way otherwise than absolutely himself between the time he awoke from the hypnotic sleep and the performance of the action. It should, however, be stated that cases are occasionally seen in which a person under this post-hypnotic suggestion may be susceptible to other suggestions even in a waking state, until the act he has been ordered to do has been fulfilled; but this will not be the case if the hypnotised person is told during the hypnosis that after waking he is to be perfectly himself.

Moll summarizes these post-hypnotic states as follows, and, as far as I can ascertain, his summary is well borne out by facts:—

1. There is a condition in which, during the fulfilment of a suggestion received during sleep, the person falls into a temporary hypnotic condition which is followed by forgetfulness of the act performed.
2. A condition in which there is not the least sign of hypnotism—that is to say, the person is perfectly awake.
3. A condition in which the suggestion had been fulfilled and the act followed by complete forgetfulness, and unaccompanied by new suggestibility.
4. A condition in which the patient is liable to suggestibility and memory.

It is sometimes noticeable that, when

a person fulfils the required act, the eyes are fixed and the face is expressionless.

I must now refer for a moment to *rappport*. This is, as a matter of fact, only the exaggeration of a normal condition. Just as a person in ordinary life may be attracted to, or readily influenced by another, so one person may be more readily hypnotised by one operator than by another; and, again, the explanation of the sole influence of an operator upon a patient, to the exclusion of the influence of bystanders, is to be explained by the patient having had the attention fixed upon the operator during the induction of the hypnotic sleep. Now, although at first the patient only sees, hears, and obeys the operator, yet this condition, which we can call by no other term than *rappport*, can be conveyed to a bystander, should the operator wish it, and convey the suggestion to the patient. This may be illustrated by supposing that a cataleptic fixation of the arm is produced by the operator in a patient. No bystander will be able to put an end to such a contracture by a fresh excitement of the same nature, which seems to prove that such contractures cannot be brought about without psychical action on the part of the patient.

In all probability one is justified in stating that there is rarely any total loss of consciousness during hypnotism. At the same time, there can be no doubt that the will power of the person hypnotised is diminished. It is, however, quite possible for a hypnotised person to fight against the suggestions of the operator, and this takes place the more readily if anything is suggested which is out of harmony with the normal character of the subject. It has been found extremely difficult to influence persons to do anything which they may consider wrong during a hypnotic sleep, and I believe that I am justified in saying that in the vast majority of cases moral sense becomes more acute, more sensitive, during the hypnotic sleep than during the waking hours. Beaunis relates cases in which hysterical convulsions have occurred when actions have been suggested which the patient did not approve of, and Moll says that he has known persons demand to be awake when he has made suggestions to them which they did not appreciate. Pitres mentions that once, having suggested to a girl that she would be unable to speak after he had awoken her, she refused to awake until he withdrew the command. It is also found in some

cases, where the hypnotised individuals apparently consent to suggestions to be performed after awakening, that they subsequently successfully withstand the impulse to perform an act inconvenient to them; and it is in such cases that it is necessary to choose some distinct external suggestion in order to attain obedience in an unwilling subject.

Before leaving the symptoms of hypnotism, which it will be seen are of an extremely intricate character, it may be well to give a very brief summary of the symptoms which Charcot and his school attribute to the three stages or degrees into which hypnotism is divided by them. I quote from Von Schrenck-Notzing:—

1. *Catalepsy*.—Produced by a strong sensory stimulant, *e.g.*, a sudden intense noise, or the sudden exhibition of an intense light.

Symptoms.—Immobility, *flexibilitas cerea*. If the arm be stretched out horizontally it will remain in that position for a certain time without alteration in respiration. After a varying period it will fall to the side. Pressure upon muscles, tendons, or nerves relaxes the muscles affected. Paradoxical contraction is lessened, and appears slowly.¹ Tendon reflexes are weakened; respiration is slowed; the magnet is without influence; and apnoea is frequently seen. There is anæsthesia of the skin and ovaries; the senses are blunted. With regard to the circulation, the peripheral vessels are contracted. The eyes are open, and have an immovable staring gaze. Verbal suggestions have little effect; on the other hand, suggestions may be conveyed through the muscles.

2. *Lethargy*.—Produced by fixing the eyes upon a moderately bright object.

Symptoms—The muscles are perfectly relaxed. A condition of neuro-muscular hyper-excitability obtains. Mechanical irritation of muscles, nerves, and tendons produces a rapid contraction of the corresponding muscles. The tendon reflexes are increased; the paradoxical contraction is more rapid. Susceptibility to æsthesio-

¹ A paradoxical contraction is, according to Westphal, "when a sudden and energetic movement of dorsal flexion is, for instance, given to the foot. The anterior tibial muscle contracts so as to produce adduction and a certain degree of dorsal flexure of the foot, which remains fixed in this position." Erlemeyer thinks that *contracture by antagonistic distension* should be substituted for the expression *paradoxical contraction*.

genic irritation is increased, especially to magnets. There is hyperæsthesia of the ovaries and hearing, as well as analgesia. The respiration is deep and more rapid. With regard to the circulation, the peripheral vessels are dilated. The eyes are nearly closed, and the eyelids tremble. Mental dulness is, as a rule, complete; in exceptional cases, suggestions or suggestive hallucinations may be received.

3. *Somnambulism*.—Induced by regular, continuous, feeble sensory stimuli, or else by the suggestion of sleep.

Symptoms.—The muscular condition is almost normal. Gentle irritation of the skin, such as blowing on it and stroking it, causes the group of muscles under the skin to contract. The same irritation will cause the muscles to relax again. Mechanical irritation easily produces general muscular rigidity, which does not give way to the mechanical irritation of the antagonistic muscles. Tendon reflexes normal; analgesia sometimes present. The senses are mostly sharpened, and the receptibility of sensory impressions is heightened. The eyes are half open; the lids vibrate. Consciousness and mental activity are clouded. Suggestions easily produce results, but opposition to suggestion may be present.

These three stages may be made to pass the one into the other. If the operator closes the eyes of a person in the cataleptic or the somnambulistic state, the lethargic state will be produced. By the operator opening the eyes, the lethargic state may be changed into the cataleptic condition. Rubbing the vertex in cataleptic or lethargic stages will produce somnambulism.¹

To avoid confusion, as we have referred to Charcot's three stages, and tabulated the symptoms which he attributes to them, it will probably be of advantage to tabulate the degrees of hypnotic sleep and their symptoms as specified by the two great exponents at the Nancy School. Liebault distinguishes six stages of hypnotism, as follows:—

Degree 1.—Symptoms.—Drowsiness; the eyelids feel heavy; it is usually impossible for the patient to open the eyes; a feeling of lassitude is experienced; consciousness is absolutely unaffected. This stage is almost invariably seen, especially in women.

Degree 2.—Suggestive Catalepsy (Hypotaxis). *Symptoms*.—Con-

¹ *Ein Beitrag zur therapeutischen Verwerthung des Hypnotismus*, Von. Schrenck-Notzing, Leipsic, 1888, pp. 5, 6.

consciousness retained; if a limb be placed in a certain position, it is retained there for a few seconds and then tremulously sinks; the fingers do not retain a position which may be given them; the eyelids are closed; the limbs are flaccid; the patient's relation with his surroundings is uninfluenced; memory of what has happened is perfect on awakening.

Degree 3.—Symptoms.—Movements suggested to the patient are automatically continued, such as rotating the arm; contracture of muscles, if suggested, takes place; sensibility is diminished; consciousness and memory are retained. Most patients assert that they have never slept, and say that they have obeyed the operator in order to please him.

Degree 4.—Symptoms.—The hypnotised person is *en rapport* with the hypnotiser alone. He is absolutely shut off from the influence of others, unless the operator transfers the *rapport*. Other symptoms are present as in the third degree. Consciousness and memory are retained.

Degree 5.—Light Somnambulism. Symptoms.—Diminished or completely abolished sensibility; consciousness clouded; memory uncertain and indistinct; suggestive hallucinations are possible. Other symptoms as in the fourth degree.

Degree 6.—Deep Somnambulism. Symptoms.—Consciousness abolished; complete amnesia after awakening. The symptoms mentioned in the fifth degree are all more strongly marked.

Bernheim gives a slightly different arrangement of the degrees of hypnotism, making nine degrees distinguishable.

A. *Degrees 1 to 6.*—After awakening, the patient remembers everything that has happened.

1st Degree.—Symptoms.—The patient is susceptible to certain suggestions, namely, to the sensation of warmth in different parts of the body or to the abolition of pain. None of the symptoms mentioned above are present. The patients assert confidently that they have never slept.

2nd Degree.—Symptoms.—The patients are unable to open their eyes spontaneously. Otherwise negative symptoms.

3rd Degree.—Symptoms.—Suggestive catalepsy is present. The patient has, however, the power of consciously arresting the suggestions.

4th Degree.—Symptoms.—Suggestive catalepsy is present, the

patient being unable to withstand suggestions made to him unless they are neutralized by the operator. Automatic movements suggested by the operator are usually obeyed.

5th Degree.—Symptoms.—Suggestive contracture may be induced.

6th Degree.—Symptoms.—Automatic obedience. In this stage the hypnotised person can only walk with difficulty. It is impossible to induce either hallucinations or illusions.

B. Degrees 7 to 9.—Somnambulism. Amnesia subsequent to awakening.

7th Degree.—Symptoms.—All those mentioned in the other degrees are present, but it is impossible to induce hallucinations.

8th Degree.—Symptoms.—Hallucinations may be produced.

9th Degree.—Symptoms.—The patient is subject to hallucinations and also to post-hypnotic hallucinations.

More or less analgesia is usually present in all the degrees, but it is most frequent in the last three.

The next point we have to examine is one of no little importance, namely, the investigation as to whether a person who is professedly in a hypnotic sleep is really hypnotised, or whether he is simulating. With reference to this question, it is to be hoped that our former remarks will be borne in mind, and that investigators will not jump at the conclusion that it is by any means easy always to arrive at a right conclusion. When we remember that some of the best intellects of Europe have sometimes been deceived, it is only to be expected that novices should be either too credulous, or, what is just as bad, too bigoted or sceptical. I will as briefly as possible call attention to the points chiefly worthy of notice.

In the first place, the behaviour of the eye should be carefully watched. It is not easy to describe on paper its behaviour. The eyelids gradually sink or close as the hypnotic influence commences to be felt. The action of the frontalis should also be observed. It acts as it does when the eyes of a sleeping person open. The convulsive rotation upwards of the eyes should be noted, but the tremor of the eyelids has no value. In cases where the eyes are open during the hypnotic sleep, attention should be paid to their expression. A peculiar cold and blank glance will be seen. The expression of the face is like that of a mask, and the *tout ensemble* of the person is characteristic. In most cases the movement of

the limbs is remarkable for its sluggishness, as if they were heavy. Some few exceptions to this rule are found in persons who are only very slightly hypnotised. It is most important to notice the expression of countenance of the person when various suggestions are made to him. In a moment his face will change from the expression of anger to one of joy, or from a look of scorn to one of approval. Indeed, this almost instantaneous change of expression is usually thought by the ignorant to be a proof of fraud. Again, the expression of wonder and astonishment when the person awakes should receive attention, and then, of course, his action in regard to post-hypnotic suggestions must be carefully studied. It is by no means an easy matter for all these points to be simulated, either consciously or unconsciously. The person trying to cheat usually over-acts his part, and it will be noticed that those persons who are imposing usually obey each suggestion with extreme rapidity, whilst experience teaches that in real cases of hypnotism the speed with which a person obeys the operator increases gradually,—at first the commands being obeyed slowly, almost, as it were, with a certain amount of reluctance, but subsequently with great rapidity. Most impostors are very fond of pretending insensibility to slightly painful impressions, because they erroneously believe it to be a very common symptom of hypnotism.

Proceeding to examine certain objective signs, I may first refer to the behaviour of the respiration, and also the rigidity of the arm in the cataleptic state. If the arm is connected to a registering drum, it will be found that no curve will be produced in a hypnotised person, and that the respirations will be quiet and even. In an impostor the respiration will be quickened, and a distinct curve will be noticed upon the drum. Again, it is impossible for an impostor to simulate the neuro-muscular phenomena noticed in the lethargic state, as described by Charcot. The application of the faradic current will usually unmask an impostor if it is suddenly applied. In some cases it may be well to examine the supposed impostor with the ophthalmoscope, when anæmia of the retina will not be present if he is simulating, or the sphygmograph may be applied to the radial, as increased blood-pressure cannot be simulated.

Although the points just mentioned are, I think, sufficient for the purpose of detecting fraud, yet it should be stated that the

absence of any one given symptom does not prove fraud. Lastly, it will not always do to take the confession of a person that he has been imposing as absolutely true. There are very many cases on record in which persons who have been really hypnotised have been perfectly unconscious of all that has happened, and have been convinced in their own minds that they have never even shut their eyes, although it has been conclusively proved that they had been in the deepest hypnotic sleep for no inconsiderable time. It is as difficult, if not more so, to prove that a person is simulating hypnotism as it is to prove the simulation of insanity.¹

I think that it will be convenient to refer now to the real and supposed dangers with which the practice of hypnotism is surrounded; and in order to hold the balance level, a few quotations will be necessary, the value of which I will afterwards venture to criticise.

I gave a quotation from Crichton Browne. In the same letter from which that quotation was taken he goes on to say,—“But, as regards the genuine phenomena of hypnotism, the residuum that is left when all conscious and unconscious imposture has been winnowed out, a word of warning is desirable. There has been a

¹ For full particulars on these points, see *Der Hypnotismus*, Moll, p. 168, *et seq.* With regard to this question, Van Renterghem and Van Eeden stated at the International Congress on Hypnotism at Paris in August 1889,—“In the majority of cases it is not difficult to ascertain scientifically the absence of all simulation or of intention on the part of the patient with respect to the phenomena presented (during hypnosis). However, we cannot produce absolute proof of the point in question. The anæsthesia, the catalepsy, may serve to convince the incredulous, but they are not incontestable proofs. Free will must be taken into account, and the sceptic crediting this acquiescence of the patient attributes to it the phenomena developed. This is a question of but little moment from our point of view. *Our sole desire is to cure our patients!* You could easily argue that the cure thus obtained might itself be only simulation. But such simulation is impossible. Is it impossible, for instance, for a patient to simulate the cure of cholera, asthma, incontinence of urine? A melancholic or a neurasthenic can easily simulate amelioration should he wish. Granting such a possibility, what matter? It is still evident that this result is but the beginning of the cure. Surely, when the patients cease to complain, no longer desire to pose as invalids, this constitutes the suppression of the most disagreeable and tenacious of symptoms in this class of cases. Neuro-muscular hyperexcitability—phenomena which do not allow of simulation, have never been observed by us unless produced by suggestion (during hypnosis).”

revival of hypnotism of late years; popular works on the subject have been published. Scientific interest in it has been reawakened in connexion with recent physiological discoveries, and I have heard of hypnotic experiments having been introduced as a drawing-room entertainment. It is well, therefore, that it should be generally understood that hypnotism is not, as is sometimes imagined, a state of mental exaltation in which, or through which, glimpses may be obtained of an unseen universe, but a morbid condition tending towards mental enfeeblement and nervous degradation. I can at once recall three cases of insanity which have fallen under my observation, in which the mental derangement was brought on by mesmeric experiments operating upon persons of delicate organization; and I have no doubt that, were I to search my experience, I might bring a much more serious indictment against mesmerism or hypnotism as a cause of disease. My belief is that hypnotism is demoralising and dangerous to those who practise it, and that the amount of instruction to be derived from it is infinitesimal. It ought never to be resorted to for amusement or for the gratification of curiosity, and its employment for scientific purposes should be as guarded and economical as other experiments on living animals. Were it widely recognised that hypnotism is a depraved state of the brain and nervous system, and that only a small percentage of Englishmen and Englishwomen, and these certainly not the best of their race, are capable of being hypnotised, hysterical girls, effeminate youths, and credulous adults would be less prone to dabble in its tainted mysteries.”¹

When the Paris Académie des Sciences appointed a commission to investigate the subject of hypnotism in 1882, Milne-Edwards, the president, read before the Académie a paper characterizing hypnotic experiments as dangerous to a condition of health already weakened by disease. Professor Harting of Utrecht told Milne-Edwards that six fowls which he had often hypnotised all died of paralysis, so that Milne-Edwards is of the opinion that experiments of this nature, capable of producing serious lesions of the nervous centres, ought not to be made on the human subject without the greatest caution.² Charcot strongly objected to this opinion.³

¹ *British Medical Journal*, 1881, vol. ii. p. 378.

² *Ibid.*, 1888, vol. i. p. 232.

³ *Ibid.*, 551.

The upper Sanitary Council of Italy, after summoning to its aid some of the leading Italian physiologists and psychologists in 1886, passed a resolution to the effect that, "for the protection of the liberty of every person, it is essential to prevent experiments which, while abolishing the consciousness of actions, produce morbid psychical effects on predisposed persons, and render them subject to the will of others." The Council further expressed the opinion "that public displays of hypnotism must produce great disturbance on the nervous susceptibilities of the spectators, and maintains that physiological and clinical experience offer decisive proof of this assertion."¹

The *Journal de médecine de Bordeaux* publishes some facts concerning a case of hypnotism treated by Dr Pitres. The patient was one of those experimented on by Dr Gonetto in his public demonstrations at Bordeaux. This patient subsequently became subject to spontaneous attacks of sleep, during one of which he attempted to commit suicide. Dr Pitres treated him by cerebral electrification, and prescribed complete intellectual repose and prolonged baths. This case affords strong evidence of the dangers attending hypnotic experiments by inexperienced and ignorant persons. Under Dr Pitres's treatment the patient is recovering; the periods of sleep are shorter, and occur less frequently.²

Referring to an exhibition in Paris, in which a hypnotised woman is made to expose herself to the most serious risks in a den of lions, the *British Medical Journal* says,—“We have frequently urged that the phenomena of hypnotism are of such a nature, and are attended by such disastrous results to the subjects, that they are quite unsuited to be made matter for public amusement. We venture to hope that, should this exhibition find its way to England, it will be promptly checked, in the interest alike of both the ‘subject’ and the public, whose minds cannot fail to be degraded by such unhealthy excitement.”³

I may next notice that in 1887 Charcot himself publishes in the *Progrès Médical* a letter to Dr Melotti, in which he fully concurs with the official interdiction of public exhibitions of hyp-

¹ *British Medical Journal*, 1886, vol. i. p. 1225.

² *Ibid.*, 1887, vol. ii. p. 636.

³ *Ibid.*, 1887, vol. i. p. 1121.

notism. "It is clear," says he, "that they are not free from prejudicial effects. In the hands of amateurs it is not possible to point out the indications or contra-indications of cases in which these may be participated in. This, however, is not all. The vulgar propagation of hypnotism in a more or less serious degree may follow in the assistance of these séances." Instances of this have occurred recently in Turin, Milan, and other cities. "Hypnotism," Charcot further observes, "is closely allied to hysteria, and may in the same manner become contagious or epidemic. Medicine alone can discover the therapeutic and physiological applications of hypnotism."¹

Dr S. L. Trivus of St Petersburg relates a case in which a young man of 25, after having been hypnotised for the sake of experiment and subsequently awakened, could not return to his normal state for several hours. When left alone he was seized with a kind of hypnosis, and on his way home fell into a deep swoon in the street.²

In Belgium the subject of hypnotism has also created much interest,—so much so, indeed, that a Committee of the Belgian Academy of Medicine was charged with the task of investigating and reporting upon hypnotic experiments. The Committee has come to the conclusion that "they are dangerous, both morally and physically, and recommends the prohibition of them."³

In New York last year (1888) a discussion took place on the subject of hypnotism at the Academy of Medicine, and the conclusion was arrived at that, "however scientifically the subject may be treated, it is open to abuse, and its introduction into general therapeutics might be disastrous."

In so far as I know, these are all, or nearly all, the expressions of opinion which have been published in this country in recent years with regard to the subject in question. And I cannot think them of very great value. As will be noticed, they are chiefly from Continental sources, and the one or two independent views which I have quoted are given by men in this country who have had little or no experience of hypnotism. It will therefore be necessary to turn once more to the writings of

¹ *Provincial Medical Journal*, 1887, p. 463.

² *Vratch*, No. 31, 1887, p. 607.

³ *British Medical Journal*, 1888, vol. i. p. 567.

Continental observers, and to seek for their expressions of opinion upon which to base a more satisfactory view of the whole subject.

It has been said by various authorities that hypnotism may exert an injurious or even irretrievable injury in many ways. Some opine that it may produce grave disorders of the nervous system, such as paralysis; others state that it will rob the individuals of their will-power, that it may convert a strong-minded person into a weak, vacillating fool. Others, again, believe that hypnotism greatly damages the intellectual powers, and others that insanity may be produced by its repeated exhibitions. Some there are who say that persons may be induced to commit crime which is instigated by the hypnotiser, and very many writers express the opinion that a person once having been hypnotised is liable to fall an easy prey to any charlatan he may come in contact with. Apart from these various charges which have been brought against hypnotism, we must remember those cases in which it is said that during the hypnotic sleep grave crimes against the person have been committed. It would be, I think, unnatural were not the power of hypnotism overrated by the laity, and it is, I suppose, as natural that scientific men should view it with suspicion. For these reasons I will endeavour to offer as much evidence as I can with regard to the possible, I do not say probable, injurious effects which hypnotism may produce.

Baierlacher writes as follows:—"No unbiassed observer would deny that all kinds of mischief may be wrought by hypnotism, for the prevention of which legal regulations are necessary to forbid any save professional men to practise the art. It is true that thefts are committed, notwithstanding that stealing is forbidden and punished, and with little doubt we shall live to see many evils brought about by hypnotism. But on this account should we be justified in decrying a highly important therapeutic agent? I think not. In this connexion I am convinced that I must agree with Bernheim and Forel's aphorism—'Hypnotic suggestion used for therapeutic purposes in the hands of an experienced doctor is absolutely free from danger.'"¹

I will now turn to Bernheim's opinions and give a summary

¹ *Die Suggestions Therapie*, Stuttgart, 1889, p. 30.

of them. He has no hesitation in asserting that, according to his experience, hypnotism when well managed can do no possible harm. It does not interfere with the functions of organic life, nor are respiration and circulation affected in persons whose minds are free from fear, and even should nervous manifestations present themselves, such as muscular twitchings, shortness of breath, discomfort, and the acceleration of the pulse, they always disappear at a second sitting when the patient has gained confidence. In all his experience Bernheim has never seen any harm done by hypnotism induced by the suggestive method. He does not deny the possibility of some subjects preserving a disposition to sleep spontaneously after repeated sittings. This, however, he states, can be invariably avoided by the operator forbidding the patient to sleep save at proper times. He acknowledges, too, that there are individuals who possess such a susceptibility to hypnotism that they are in real danger should they come into contact with an unscrupulous operator, and he says that moralists are certainly justified in calling attention to this danger, and that they are right to condemn a practice which may rob a man of his free will without the power of resistance on his part. "They would," says he, "be a thousand times right if the remedy were not side by side with the evil." All that is necessary is for the operator to say to the patient, "Nobody will be able to hypnotise you in order to relieve you unless it be your physician." And he adds a remarkable case to exemplify the utility of such a procedure. He says,—“One day I tried to hypnotise an excellent somnambulist whom I had already hypnotised several times. I could not succeed. I called M. Liebault to aid me. He hypnotised her in a few seconds. I then asked her why I had not succeeded. She told me that, several months before, M. Beaumis had suggested during sleep that M. Liebault and himself were the only ones who could hypnotise her. This idea, written in her mind and of which she was not conscious in her waking condition, had forewarned her against me. Thus the danger of too great susceptibility to suggestion may be forestalled by suggestion itself.”

Referring to the objection that hypnotism may do grave harm to the mental faculties, even if used cautiously and with a therapeutic end in view,—that, for instance, the mind may be dulled, the intelligence demoralized, mental activity diminished, and a

condition of intellectual torpor induced,—he states that experience will alone be able to answer the question. He has never seen any harm done himself, and believes that the hypnotic sleep in itself is as beneficial and as free from harm as natural sleep. Bernheim would not like to state absolutely that certain delicate brains predisposed to mental alienation might not receive serious harm from inopportune and awkward experiments from either hypnotic or post-hypnotic hallucinations. He has personally seen no harm ensue, but he thinks that in such cases experiments are dangerous, and should only be performed prudently and with great reserve. Bernheim fully realizes the dangers which may result after many experiments have been performed upon an individual, and he definitely states that, unless the operator has guarded against it, such individuals may be susceptible to hallucinations and suggestions at the hands of any one who knows how to force them upon them; but he goes on to say,—“Must we proscribe a thing which may be efficacious because the abuse of it is injurious? No one proscribes wine, alcohol, opium, quinine, because the immoderate or intemperate use of these substances may bring about accidents. Doubtless suggestion used by dishonest or awkward men is a dangerous practice. Law can and should intervene to suppress its abuse.”¹

Turning to Moll, we find that he quite appreciates the dangers of hypnotism, and also the objections which have been raised against its use, but he plainly states that no new method of treatment of any value has at once gained for itself universal approval. His expression of opinion agrees with that which I myself hold, and to which I gave expression at the commencement of this paper. He acknowledges that the possible dangers of hypnotism should be looked in the face, and he remarks that there are many drugs employed in everyday practice which, if not used with care, might act deleteriously; he thinks that in the use of any active drug three questions require to be answered with reference to its possible dangers: 1. Are we acquainted with the conditions in which danger may occur? 2. Do we recognise the dangers, and, recognising them, can we prevent them? 3. If we do not know the dangers or how to avoid them, is the benefit which we expect for

¹ *Suggestive Therapeutics*, Bernheim, 1889, p. 412, *et seq.*

the patient sufficient to justify the risk incurred? With regard to hypnotism, he maintains that the questions above propounded may be answered thus: We know the conditions completely under which hypnotism may act injuriously, and we are also in possession of the power in any given case to use the proper and harmless methods by which these conditions, and therefore the dangers of hypnotism, may be avoided. We cannot make this assertion with regard to many drugs. He believes "that any little inconvenience which hypnotism may at first cause is not to be compared with the benefits it confers."

Moll goes on to give in detail the various dangers which have been brought forward as possibly ensuing after hypnotism. We need not follow him very closely, although all he has written deserves attention. I will only refer to a few points.

It is stated that a general nervousness may follow hypnotism, that nervous people may become more nervous, or that nervousness may be produced in otherwise healthy people. This Moll admits, but he points out that in those cases in which these accidents have happened they have almost invariably been caused by the patient being hypnotised through fixing of the eyes and not through suggestion, or by the operator being ignorant of the subject. He holds, and I suppose all would agree with his opinion, that if a man professes to be able to hypnotise he should avoid faulty methods, as he would avoid making a false passage in passing a catheter. He gives three rules for the avoidance of any nervous phenomena following hypnotism: 1. Avoid as far as possible all long-continued stimulation of the senses. 2. Lessen as far as possible all suggestions tending to psychical stimulation. 3. Completely neutralize the suggestions that have been made before waking the patient.

Referring to another danger laid to the charge of hypnotism, namely, that of inducing hysterical convulsions, Moll says he must absolutely deny it—admitting, however, that hystero-epileptic patients may be thrown into convulsions during hypnotism. He considers that there is not a single case on record in which hypnotism has induced hysterical convulsions in any ordinary person, provided that it has been induced in a proper manner. He goes on to allow that occasionally certain slight inconveniences occur after the hypnotic sleep, such as drowsiness, lassitude, a heaviness

in the limbs, etc. He thinks that these conditions are induced by auto-suggestion, and he justly remarks that they may be all prevented. He is perfectly willing to admit that the real and great danger connected with hypnotism is the strong possibility of increasing a patient's liability to hypnotic influence, as well as rendering him exceedingly prone to be affected by suggestions during the waking stage—that is to say, hypnotic sleep may be induced in such a person either against his will or without his knowledge, or in other cases he may be exceedingly prone to act upon a stranger's suggestion even although hypnosis is not induced. He agrees with Bernheim in saying that this condition may be absolutely prevented by means of suggestion before awakening, and he attributes its occurrence mainly to the use of the method of hypnotising by fixing the eyes.¹

With regard to the dangers of hypnotism, Professor Obersteiner of Vienna says:—"I have repeatedly observed that many susceptible persons are unwell for a considerable time, it may be several days, after a single hypnotic sitting. Their nervous system is exhausted, and they are prostrated. Should they be often hypnotised, well-marked hysteria may be induced if they be predisposed to it. Many slightly nervous women may soon present a most typical hysterical condition after being repeatedly hypnotised." With this view an anonymous writer agrees, and maintains that if this can happen in grown-up people, how much more easily can children be affected.²

In referring to the possible dangers of hypnotism, especially with regard to medical jurisprudence, Forel is of opinion that it is far easier for an evil-disposed person to do harm to a hypnotised subject, by means of indirect and cunning suggestions, than by committing outrages upon him. He believes it to be possible for a hypnotised person to be murdered, to be robbed, or to be raped, just as it is possible for the same crimes to be committed on an insensible, idiotic, or apparently dead person, but it does not follow that such a crime would not be discovered. To this, however, we must refer later on. Dealing with the possibility of hypnotised persons being influenced to commit crimes, or to perform wrong actions on account of hypnotic suggestions, he calls

¹ *Der Hypnotismus*, Moll, 1889, p. 203, *et seq.*

² *Der Hypnotismus in der Pädagogik*, Berlin, 1888, p. 6.

attention to certain facts which should always be kept in view, namely, that individuals are influenced severally in different degrees, and that the individual factor of the character and the training received must be taken into account; and he holds, rightly I think, that each case must be judged on its own merits. It is necessary in dealing with this subject to consider in any given case—first, the individual degree to which the patient reacts to suggestions; second, the permanence of the impression produced by a suggestion upon the brain of the hypnotised person; third, the degree of hypnotic education the subject has received; fourth, the depth of the sleep in connexion with the loss of the power of resistance to suggestions; fifth, the psychical power of the operator, and his ability to produce in the patient vivid and effective suggestions; sixth, the normal individuality of the hypnotised person, taking into consideration the degree of his ethical and æsthetic disposition, his power of will, and his bringing up; seventh, the psychical condition of the person when hypnotised. The sixth point referred to is most important, because a person possessing loose morals will be, *ceteris paribus*, more liable to be acted upon by a criminal suggestion than a person whose moral sense is strongly developed.¹

We have, I think, seen that the dangers which may result from hypnotism have been fully realized upon the Continent, but from what I have written it will also be noticed that with proper precautions these dangers are reduced to a minimum; and I do not think it can be said—at any rate, with our present knowledge of the subject—that the dangers are greater than are at times involved either by ordinary therapeutic treatment or operative procedure. It will certainly be allowed that surgeons are justified in sometimes performing operations the result of which it is impossible to predict with any degree of certainty.

Apart from what I may term the ordinary risks run by patients submitting to hypnotic treatment, so convinced are many physicians and scientists on the Continent of its possible use for criminal purposes, that not a few books and papers have been published drawing especial attention to this subject, and it is one which I do not feel justified in passing over in silence, as it seems to me that

¹ *Der Hypnotismus*, Forel, Stuttgart, 1889, p. 67, *et seq.*

it would be unwise for medical jurists in this country to altogether ignore a subject which may in the near future cause them no little trouble and anxiety.

In dealing with the subject of hypnotism in relation to crime, I would call attention to two books which I think well worthy of study. The one is by Karl du Prel of Munich,¹ and the other is written by De la Tourette.² Du Prel's little book deserves the greatest attention, because he is the author of *The Philosophy of Mysticism*, and is pre-eminently fitted to give an authoritative opinion on the subject. He believes that it is high time lawyers and medical jurists should commence the study of hypnotism, because he is convinced that new forms of crime, which will be most difficult of elucidation, will soon occupy their attention. He admits that hypnotism in its present stage of development has not had time to introduce any great revolution in social circles, but he is assured that the time is at hand when criminals will seek to utilize hypnotic power for their nefarious ends. He also makes the suggestion that it may be justifiable for the law to invoke the aid of hypnotism for the detection of crime. Into this I need not follow him.

Just to show how hypnotism could be used for detecting crime, I may relate that a somnambulist was in the prison at Blois. A packet was given her containing a piece of a necktie. She immediately threw it from her with horror, and said that it had belonged to a suicide. This was correct. She then went on to describe accurately a murder which the man who had committed suicide had perpetrated. In her description she mentioned a scythe (or sickle). Nothing was known to the authorities of this, so she was further questioned about it. She then described how the murderer had thrown it into a swamp, and indicated its position. A policeman was sent to look for it, and found it in the place she had named. The woman, being a prisoner herself, had had no means of knowing anything about the occurrence.³

On the 15th of February 1889 Herr Oskar Dalmar of Munich

¹ *Das Hypnotische Verbrechen und seine Entdeckung*, Karl du Prel, München, 1889.

² *Der Hypnotismus und die verwandten Zustände, vom Standpunkte der gerichtlichen Medicin*, De la Tourette, Hamburg, 1889. (The original is in French.)

³ *Revue Philosophique*, February 1889.

lost a favourite dog. He advertised for it without success. He therefore sent to Frau Regina Narr, a somnambulist, who described how the dog had been lost in the market, had been caught in the Blumenstrasse, and was then in the first story of the corner house of that street. This turned out to be the case.¹ Numbers of like cases could be given, but they are all too long for quotation.

Binet and Féré hold that "there is reason for condemning an inquiry by means of hypnotism. It has been suggested that a suspected or accused person might be hypnotised against his will in order to obtain from him admissions or information respecting the facts of the accusation. This process, which resembles that of torture, would have the same danger of leading a suspected person to confess a crime of which he is not really guilty."² It is, however, true, as Du Prel states, that secrets can be discovered during the hypnotic sleep, and so in an extreme case it might perhaps be justifiably employed. What I want to show, however, is that he considers it certain "that a cunning criminal armed with a knowledge of hypnotism can not only render more easy his own deeds, but also utilize an innocent person as his tool. And more than this, he can, as it were, put an intellectual bar to the discovery of his intellectual feat." So clearly indeed has this been shown, that it has been said that the discovery of a crime committed under such circumstances would be a matter of impossibility. Fortunately, however, such is not the case. It would be difficult—very, but not impossible, for a scientific jurist would be able to elucidate the mystery. Du Prel goes on to explain that just as it is possible for an unenlightened public to be deceived by means of hypnotism, so it is quite easy for the law itself to be deceived. He points out that want of knowledge might even lead to the commission of a judicial murder, and one cannot help thinking that he is justified when he says that a knowledge of hypnotism and somnambulism throws a very clear light upon many of the trials for witchcraft in the Middle Ages. This would be a most interesting subject for investigation, but space forbids it.

Before going further, it is necessary to premise that no one sug-

¹ *Das hypnotische Verbrechen*, pp. 90-92.

² *Animal Magnetism*, p. 375. Binet and Féré, 1887.

gests that hypnotism can be utilized upon *many* persons for criminal purposes. It is only the few comparatively, those who are capable of being placed in the deepest mesmeric sleep, that could be so abused. Such an individual is under the complete power of the operator, and not only can the latter compel him at the time to commit whatever action he may wish, but, as I have before explained, he can compel him to do actions at some future period, it may be hours, days, or weeks after awakening.

A few instances may render this clear. It is possible, for instance, for a student who is well prepared for an examination to be hypnotised, and during sleep he may be told that on appearing for his examination he should forget all his work. Or again, it is quite possible to suggest to a person that he should commit a murder, and at the same time the suggestion may be given that the subject should forget who suggested the idea to him. This has been done experimentally by Liégeois.¹ In this experiment a Mrs G. was told to kill a Mr M. A revolver was given her, and at the appointed time she stepped up to him and, as she thought, shot him. Taken before a police commissioner, she acknowledged the crime, emphatically denied that she had acted under the influence of any suggestion, and declared herself to be perfectly ready to suffer for her deed, being convinced that she saw Mr M.'s body lying bleeding before her.

It is also necessary to remember that when an hypnotic suggestion of a criminal character is carried out, it is done with the greatest coolness. "Hurried on by irresistible force, the subject feels none of the doubts of the criminal who acts spontaneously. He behaves with a tranquillity and security which would in such a case insure the success of his crime."² He appears to possess increased courage and exceeding cunning, and to act with surpassing calmness. It is true, as I mentioned before, that most individuals will resist criminal or immoral suggestions, but it is quite possible for a clever hypnotist in time to break down this resistance, and in some cases it is stated that good somnambulists may be easily rendered susceptible to suggestions, not when prepared for them, but, as it were, by chance,—in church, in the theatre,

¹ *De la suggestion et du somnambulisme avec le jurisprudence et la médecine légale.* Paris, 1889, pp. 134–136.

² *Animal Magnetism*, p. 317

at a dinner, or in a railway train.¹ Liégeois details three cases in which perfectly innocent people were condemned because the judges did not understand hypnotism.

Referring to what should be done in order to prevent crimes due to hypnotism, and also to discover them if committed, Du Prel says that the first point is to get the public to distinctly understand that every one who permits himself to be hypnotised runs a certain amount of danger, and the next is to prohibit hypnotism unless practised with proper precautions. With regard to the discovery of crimes due to hypnotism, a few condensed quotations from Du Prel may be allowed:—"All crimes," he says, "committed under hypnotic influence, even although the hypnotiser be the most cunning and knowing knave imaginable, and even if the crimes be most warily devised, are always liable to subsequent investigation, by which, at least, they may be discovered and the delinquent brought to punishment; but, for this to be accomplished, lawyers must understand hypnotism." The greatest difficulty in discovering such crimes lies in the loss of memory which obtains on awaking from a deep hypnotic sleep. Such loss of memory may indeed in most cases be insured. It should be remembered that, as Binet and Féré point out,² "it is impossible to lay down an absolute rule as to oblivion on awaking; there is, in fact, every variety of case, from the most profound oblivion to the most lucid recollection, and these are all entitled to careful consideration from the medico-legal point of view." Oblivion is complete when the operator has been careful to suggest to the hypnotised subject that he should remember absolutely nothing, and this oblivion is more profound when the subject has not been recalled directly to the waking state. The amnesia is often only partial when the subject is awakened immediately after the occurrence of a given suggestion. In this case a more or less vivid recollection of what has happened may remain. I may quote a case here from these authors which will show that this want of memory is even possible when the subject has received an injury or shock of which the effects are painful and more or less injurious:—"In the course of an experiment, one of our subjects, who was in a state of lethargy, fell down and

¹ Liégeois, pp. 127, 418.

² *Animal Magnetism*, p. 367.

knocked her head violently against the floor. She was not awakened by this excitement, nor for some time afterwards, and she was then awakened by breathing on her face. On coming to herself, the subject was astonished by the pain in her head; she had the sensation of a violent blow or shock, and could not understand whence it came. We are therefore justified in the assertion, that a subject of profound hypnotism may undergo all sorts of violence without retaining any recollection or consciousness of it, unless the violence has produced permanent lesions, such as the attrition of the tissues resulting from a violent shock, etc. We even think it possible that a subject might be violated in the hypnotic state, in which case she would be unable to offer any resistance. It is evident, therefore, that when an operator has insured the subject awaking amnæsic, the latter is unable to betray the real criminal; indeed, in many cases he may not know him, and, what is worse, may calmly confess to the crime, and so shield the guilty person. The medical jurist must remember that, though in a normal state the subject is oblivious to what has been suggested to him, yet place him once more in the hypnotic sleep, and all will become clear. A "memory-bridge" (*Erinnerungsbrücke*) is thus built, bridging over the period during which irresponsible action may have taken place. Even in those cases where it is possible for the subject to be so influenced as to shield the culprit, it is impossible for the criminal hypnotist to place a bar on all chances of discovery; for, although it may be that the subject will stoutly deny everything to direct questions, yet indirect questions or suggestions made in a roundabout way will usually reveal the whole nefarious transaction. Further than this, it has been proved experimentally, over and over again, that the strong desire which the subject may have to conceal the real misdoer can be of itself utilized to lead to his betrayal. All that is necessary in such a case is to suggest to the subject that the criminal is in danger, and this will induce him to do all he can to try and mislead justice, and so, by writing or otherwise warning the criminal, justice will obtain the necessary clue. By this indirect method of investigation we possess a sure and certain means of upsetting the barrier, the fact of loss of memory.¹

¹ Liégeois, pp. 686-690.

An experimental case may here be quoted by way of illustration. Liégeois suggested to a lady that Mr O. had spoken slightly of her, and that she was to kill him. She was told that she was not to mention who had given her this suggestion, but to believe that she acted from her own impulse, and, if needful, take an oath to that effect. This order was obeyed post-hypnotically, and the lady was convinced of her crime. Liebault subsequently hypnotised her, but even then, when asleep, she denied that she had received any suggestion to the crime. Indirectly, however, she was induced to betray the operator, for Liebault said to her,—“When the person who gave you the suggestion enters the room you are to sleep for two minutes, and after awakening it will be impossible for you to remove your eyes from him until I say, ‘Enough.’” I need not continue the quotation; suffice it to say, that all happened as was predicted, the lady even trying to screen Liégeois from discovery.¹

Already on the Continent some cases have occurred in which men who have committed a crime have hypnotised a person, and compelled him to confess to a crime he has never committed. It is also necessary to remember that a criminal who is a somnambulist may use auto-suggestion, and so hypnotise himself in order to carry out his misdeeds more successfully; and it can certainly never be an excuse that a person is innocent because he has permitted himself to be hypnotised for the purpose of committing crime. Even in those cases in which a person has been hypnotised without consent, and although no moral responsibility has been incurred for the crime he may have committed owing to suggestion, I thoroughly agree with Binet and Féré in thinking that such “hypnotic criminals” ought to be treated like insane criminals. Tarde also shares this opinion.²

It is only fair to mention, that although perhaps the majority of authors agree in allowing that crimes due to hypnotism may be easily committed, yet De la Tourette, whilst admitting the possibility, does not think that they can be so easily carried out as Liégeois and others believe. He holds that although it is quite possible for these experiments to be made in the laboratory, where a dagger has a sheath and where a pistol is only fired in the imagi-

¹ *Das hypnotische Verbrechen*, Du Prel, pp. 39, 40.

² *Animal Magnetism*, p. 376; and Alcan, *La criminalité comparée*, p. 142.

nation of the subject, yet that in ordinary life the hypnotist who had instigated the crime would certainly be detected. He thinks that the way in which the subject would act in public without the least precaution would invariably lead to his arrest, and considers that it would be comparatively easy to prove at the trial that the subject had not acted on his own initiative.¹

I fear I have dwelt rather too long upon this subject, but I feel that it is one of some interest and importance, and before passing on I have still to refer to three points,—First, to the possibility of crimes being committed upon a person during the hypnotic sleep; secondly, to the possibility of false charges being brought against individuals who practise hypnotism; and, thirdly, to the fact that persons may state as an excuse for some misdeed that they have been hypnotised when such has not been the case.

With regard to crimes committed upon the person when in a hypnotic condition, the possibility varies with the stage of hypnotic sleep in which the individual is at the time. In a state of lethargy anything is possible, the person being absolutely unconscious; but when in the somnambulistic state the individual may know what is being done, and may try, and sometimes successfully, to resist. It will probably be sufficient if I very briefly mention several interesting cases which have been thoroughly investigated, and to which those of my readers who are interested in the subject may refer. The first is the case of a girl who went to be treated by a hypnotist in Marseilles in 1858. After a few sittings she was raped when unconscious, and Tardieu, who investigated the case from the medico-legal point of view, believed her statements.²

Another even more remarkable case is that in which a Rouen dentist committed the same crime. It is the more notable because the girl's mother was absolutely in the room at the time and was ignorant of what had taken place. In this case, it is true, the girl was nervous and hysterical, and she had evidently been placed in a lethargy. The result, however, was that she subsequently had well-marked hysterical attacks with convulsions.³

¹ *Der Hypnotismus*, p. 379, et seq.

² *Gerichtliche Medicinische Studie ueber Sittenverbrechen*, 7th ed., p. 9. Paris, 1878.

³ *Der Hypnotismus*, De la Tourette, p. 336.

This shows how, not only may a crime be committed against the person, but hypnotism may damage the health of an individual perhaps permanently.

Another case occurred in 1882. A girl wrote to a clergyman, asking him to get her into a hospital for her confinement, and stating in the letter that a young man had hypnotised and then taken advantage of her. In this case it is not very clear what was her exact condition at the time, as she was able to describe part of the occurrence. Ledame investigated the case, and believed her statements to be true.¹

Another case, in which a beggar named Castellan not only ravished but eloped with a girl, occurred in March 1865. The case is well worthy of study, because it shows the distinction between the lethargic and the somnambulistic states. It was during the somnambulistic state that the man was able to compel the girl to follow him, which she did for three days. It is also interesting, because it shows that sooner or later the hypnotist loses his power, and his victim may escape.²

Years ago a case of the same kind, although not with the same grave accompaniments, occurred in India, and was investigated by Esdaile.³ A barber had hypnotised a boy, and made him follow him. At the trial Esdaile experimented in open court, and showed how he could influence persons in the same way. In referring to this case Esdaile remarked, "I hope the day is not far off when public opinion will be so strong that hypnotism will only be permitted to be used for the purposes of healing or in philosophical research."

Edinburgh readers may possibly remember a case which is detailed by Dyce in the *Philosophical Transactions*. It was a very revolting one, and the unfortunate subject remembered all that had happened in a second state of somnambulism. The case, however, appears to have been one of natural somnambulism.

Apart from direct crimes against the person, it is quite possible for individuals when hypnotised to be compelled to sign cheques or even to commit forgery, and the description which Walter Besant has given in *Herr Paulus* is well borne out by facts.

Various cases which have occurred on the Continent prove that

¹ *Der Hypnotismus*, p. 345, *et seq.*

² *Ibid.*, p. 351, *et seq.*

³ Du Potet, *op. cit.*, p. 613 ; and *Der Hypnotismus*, p. 358.

doctors practising hypnotism run the risk of having false charges made against them, and it therefore necessitates their acting with excessive caution. Sometimes persons have gone to be hypnotised solely for the purpose of blackmailing the doctor, or of having an excuse for the commission of some crime. When such accusations are made they should not be readily believed, and the accuser should be made to prove for what reason hypnotism was permitted, for a person who submits to the procedure must necessarily, to a very large extent, be held responsible for the procedure. Here, again, I think that the matter does not to any appreciable extent differ from what happens in ordinary medical or surgical practice. When an operation is performed, the patient having consented to it, the doctor, if he uses ordinary care, is not responsible for the result. The same thing applies when hypnotism is justifiably utilized.

Individuals may state that they have been hypnotised in order to shield themselves from the results of their misdeeds. Such cases have occurred, and it requires considerable knowledge in order to investigate them properly; it is necessary to prove that such a person is capable of being hypnotised before believing any statements of this nature. It should always be borne in mind, too, that in all cases dealing with crimes, and in confessions made by persons who have been really hypnotised, circumstantial evidence must be produced either to confirm or to disprove their statements, as such is the power which a hypnotist may possess over the subject, that in many cases the most circumstantial accounts of mythical occurrences are given, whereas, on the other hand, a crime may really have been committed, and the unfortunate individual may weave concerning it a tissue of falsehoods explaining the reason for its committal, and in most cases shielding the instigator, and the story becomes extremely difficult to unravel.

The nature of the legislative precautions which would serve as a protection against these various dangers is very difficult to suggest, but precedents exist in the Acts regulating the sale of poisons, by which the public is guarded from a very subtle and secret mode of committing crime without undue restriction on medical science. The recent Act concerning explosives provides against a species of crime if possible even more hard to detect, and the laws relating to vivisection guard against dangers and

abuses akin to some which may be incident to hypnotism. In the policy and methods of these Acts the key may be found to legislation which would obviate many of the dangers of hypnotism.

It is now time to refer to the therapeutics of hypnotism, or suggestive therapeutics. The subject may be divided into two parts—1. The alleviation or cure of various diseases by means of suggestions made to a hypnotised person, or of post-hypnotic suggestions; 2. The use of hypnotism in surgical operations, or to diminish the pains of parturient women. The last part will occupy little space, and I will notice it first.

It is an old story now that surgical operations can be performed painlessly upon a hypnotised person, and, as I previously mentioned, it is probable that, had chloroform not been discovered as an anæsthetic, hypnotism would be in a very different position now from what it is. As it is, it will most likely be rarely, if ever, used in operative surgery, partly because the anæsthetics in vogue render good service, partly because it is not always possible without numerous attempts to render a person so deeply hypnotised as to be insensible to pain, and partly, too, from the mere fact that the expectance of the operation in many cases renders any attempt to hypnotise futile. There are, however, some cases in which, on account of disease of either heart or lungs rendering the administration of chloroform or ether inadvisable, it may be worth while to have recourse to hypnotism. It is needless to give references to operations which have been performed upon patients during hypnotic sleep; they have been detailed by Esdaile, Elliotson, Lièbault, and many other writers.¹

I am not sure, however, that in obstetric practice hypnotism may not have a future before it. In looking over the literature on the subject there are, it is true, not very many cases on record, and, naturally, some of them are failures, yet we do find certain cases in which women have been hypnotised, and labour has gone on to a successful issue quite painlessly. As a matter of fact, it seems that it is difficult, although possible, to hypnotise a woman for the first time after labour has commenced; but, especially if the woman has been hypnotised several times previously, there appears to be no doubt that the method may be employed successfully. A case is recorded by Pritzel of a woman (primipara) who experienced no

¹ See Appendix A.

pain during parturition under the influence of hypnotism. She had, however, been previously hypnotised several times.¹

Wagner relates three cases. The first, that of a Mrs J., a perfectly healthy woman. Before labour he hypnotised her three times. Labour commenced at 11 A.M. "Pain steadily increased in severity, and at 2 P.M. I produced hypnotic sleep for forty minutes. While asleep the pains became stronger, the abdominal muscles contracted well, the patient helping herself as much as when awake. While asleep there were some fifteen or sixteen strong pains; the pulse was regular and strong, and the respiration normal. On being awakened, the pains came less frequently, and were not so severe, about the same as before sleep, for an hour. Then I produced sleep again during severe pain. Asleep the pains became more severe and expulsive. In the severe pains the patient moaned, pinched her hands, and strained as if awake, but when awakened she said she had felt no pain. The vertex was now at the vulva, and the patient refused to be put to sleep again, owing to the fault found by the 'old women' who were there, and who did not believe in 'these new-fangled notions.' The child was born the third pain after awakening the sleeper. The last pains before she was aroused would almost awaken her; the eyes would open, but presented a vacant stare of waking somnambulism, and would close by making passes down over them. She would stop moaning on being told that she had no pain. Three or four pains were all she had that seemed partly to arouse her. From the fact that the uterus was somewhat tardy in contracting after awakening, I was afraid to attempt the removal of the placenta while she slept, lest post-partum hæmorrhage should occur. Accordingly in the two cases following I left the expulsion of the placenta to the good offices of Nature. Cases 20 and 21 were that of a primipara and that of a multipara. In these cases I noticed the same phenomena as in the above. The abdominal muscles contracted, and the patients helped themselves as much as if they had been awake. I awakened one once and the other twice before delivery. As soon as the child was born I awakened the sleeper, fearing to remove the placenta, as the whole procedure was somewhat of an innovation. I do not really think that the uterus would relax,

¹ *Wien. Med. Wochensch.*, 7th November 1885.

but I was content to wait for older practitioners to enter the same field and give us younger men some precedent to cite in view of accident."¹

Moll, in referring to this subject, believes that hypnotism may be useful in labour; and, summarising the writings of Lafontaine, Mesnet,² Secheyron, Auvard, Thomas, and Varnier, says: "The results obtained were not unfavourable; regular and strong uterine contractions took place, which could often be influenced by suggestion, and were rendered painless."

Dr de Grandchamps gives the case of a young woman, which it may be of interest to quote.

E. B. was 17 years of age, and by occupation a washerwoman. She entered the Hospital de la Charité, Paris, on 29th December 1888, as on account of her condition she was unable to continue regular work. She was not in the slightest degree hysterical, and had never presented any nervous affection. Her parents were thoroughly healthy, as also her three brothers and three sisters. None of the family had ever suffered from any nervous complaint. E. B. had suffered from privation, and was pale, thin, and anæmic, but had no organic disease, and was possessed of a good constitution. She had never been hypnotised.

Knowing that one of the principal characteristics of the hypnotic state was insensibility on the part of patients to pain, Dr de Grandchamps determined to try to save E. B. from pain during labour. He therefore hypnotised her several times previously, sending her to sleep, without the least difficulty, by means of rotating mirrors, when she presented very completely the three principal characteristics of the condition of fascination—anaesthesia, catalepsy, and suggestibility. She was hypnotised two or three times a week, with the effect of greatly improving her condition. Her colour and good looks returned, and her appetite and sleep became excellent. Labour took place on 1st May. When the doctor arrived he found the period of expulsion commencing. Up till this point E. B. was suffering the usual pain normally experienced, but in the interval of two pains the doctor effectually

¹ Wagner, *New York Medical Journal*, 18th May 1889, p. 542, *et seq.*

² *Der Hypnotismus*, Moll, p. 225; *Revue de l'Hypnotisme*, August 1887, *Frauenarzt*, December 1887; see also Dumont Pallier's case, 26th February 1887; *Société de Biologie*, and *Der Hypnotismus in Der Geburtshilfe*, Sallis, 1888.

hypnotised her by fascination. He then suggested that she should vigorously help on the contractions herself, but not feel the pain, with the result that from this time expulsive efforts were more energetic, but the patient ceased crying out. Dr de Grandchamps suggested that the patient should have a desire to bear down every minute, after which she made an effort to that effect each minute, and then had a period of repose. This methodical and regular action soon brought the head to the vulva. Fearing a too speedy delivery, Dr de Grandchamps suggested to the patient to stop bearing down. She at once ceased doing so, and the head quietly presented, and the child was born without any effort on her part. The placenta followed in the normal manner. Everything being over, the mother awoke in about a quarter of an hour, absolutely unconscious of all that had happened since the doctor's arrival. She was greatly astonished when shown the child in the cradle, as she had been perfectly free from pain. All went on well with her afterwards, and both mother and child left the hospital at the usual time and in the best condition. The mother, an excellent nurse, returned several times to express her gratitude and satisfaction. All the doctors present were satisfied as to the superiority of this method of treatment in contrast with anæsthesia produced by the usual means.

It is necessary to remark that the action which the rotating mirrors have upon the patient is much less marked than that caused by the usual methods of hypnotising, and it does not produce profound hypnosis—that is to say, the usual conditions described by writers as lethargy and somnambulism are not produced. The method is free from danger, and its only drawback is that it is necessary to employ it several times before the onset of labour, as one cannot be always sure of it affecting the patient at once.¹

I must not quote more cases with regard to this interesting subject; suffice it to say, that Sallis recommends hypnotism not only to relieve labour pains, but also as exceedingly useful in uterine inertia; and Foy admits that in cases where heart and lung troubles preclude the ordinary anæsthetics, hypnotism may fairly claim a trial; he relates a case in which it was employed upon a

¹ *Revue d'Hypnologie*. Paris, January 1890.

very hysterical woman, where it not only diminished the pains of labour, but also protected the lives of both mother and child, which were endangered by the patient's acts.¹

I now pass on to the alleviation or cure of various diseases by means of suggestions made to a hypnotised person, and by means of post-hypnotic suggestions. Braid, in 1843, wrote:—"This power can be beneficially directed to the cure of a variety of diseases which are most intractable or altogether incurable by ordinary treatment."² But Lièbault, in 1866, was the first to recognise the fact that the cures or alleviations attained were due to the suggestions which he made to patients during hypnotic sleep. It was not, however, until Bernheim took up the matter in 1882 that records of cases were published in sufficient number and related with sufficient scientific accuracy to enable us to form a just estimate as to the value of hypnotism. It may be as well to state at once, that though, as the sequel will show, numerous cases can be cured promptly—that is to say, after one hypnotisation—yet probably in the majority of cases several operations are required before cure or alleviation is attained, and, indeed, in not a few cases where brilliant results have followed hypnotic treatment that treatment has been continued for weeks, or even months, before indubitable results have been obtained. No one, I suppose, claims for hypnotism that it is a panacea for all the ills that flesh is heir to, yet it seems to me that on reviewing the field in which it has been successfully employed it must be admitted that it should occupy a place in our therapeutic methods.

It has been said by those who object to hypnotism, and truly, that throughout the ages the cure of some diseases has been attained by means of charms, or by sudden emotions, or by the mere individuality or will power of the attendant physician. But it does not appear that such cures have been obtained in anything like the proportion which can be justifiably claimed by hypnotism. I have thought it well, before detailing some illustrative cases, to introduce a table giving the results of 564 cases which have been treated by means of hypnotism, and in arranging these cases I have followed the classifications given by Bernheim.

Total number of cases treated, 564; of which 240 were cured

¹ *British Medical Journal*, 1888, vol. i. p. 962.

² *Neurypnology*.

200 greatly benefited; 72 cases were failures, and 52 patients retired after two or three sittings. Roughly speaking, as far as one can get figures to base an opinion upon, 60 per cent. of the cases are cured, 30 per cent. are improved, and only 10 per cent. are failures. I could have added to this list considerably had I taken all the isolated cases which occur scattered throughout the literature of the subject, but I felt it better to restrict the inquiry to the publications of well-known men. The table will, however, give an idea as to the description of cases which are most likely to be benefited by hypnotism, and will show, I think, that men of eminence have really proved that some good at any rate is to be obtained from this method of treatment. I have been careful, too, to refer alone to those who will be acknowledged by all as men who are well qualified by extensive experience to give correct statistics.

It will be seen from the following table that one cannot claim for hypnotism that it cures organic disease, but in organic disease it is often useful because of its action in removing, or at any rate alleviating, either pain or sleeplessness, or some other distressing symptom. I shall now proceed to relate as briefly as possible a few records illustrating successful hypnotic treatment of cases falling under the classification in my table, with a few remarks in passing as to the advantages or disadvantages likely to be obtained in the various categories of disease.

With regard to the function of menstruation, it certainly seems to be an undoubted fact that great good can be accomplished by the practice of hypnotism, and this is demonstrated by the results obtained both in the north and south of Europe. Amenorrhœa, menorrhagia, and dysmenorrhœa have all been markedly influenced by the suggestive treatment. Most men who are called upon to treat these various disorders will probably allow that they often wish they had another string to their bow. Hypnotism gives it, and case after case might be quoted where the procedure has been attended with signal success,—success which drugs could not, at least so far have not, yielded. The other day I was talking over this subject with one of our leading gynæcologists, and after I had related some cases which had come under my observation, he, like Dr Yellowlees at the last meeting of the British Association, said he was astonished! He was far from being inclined to admit that

hypnotism could do what I believed it could. I hardly wonder at his disbelief, for unless such cases have been seen they have a certain Münchhausen-like flavour about them. But for facts. Let us see what Forel says.¹ I abstract a case of his.

	No. of Cases.	Cured.	Im-proved.	Failed.	Retired.
Organic Diseases of the Nervous System,	10 B. 29 R. 1 T.	7 B. 1 R. 1 T.	2 B. 13 R. ...	1 B. 10 R. ...	... 5 R. ¹ ...
Hysterical Diseases,	17 B. 40 R. 18 B.	16 B. 9 R. 17 B.	... 24 R. 1 B.	1 B. 3 R. ...	... 4 R. ¹ ...
Neuropathic Affections,	164 R. 1 W. 1 T.	47 R. 1 W. 1 T.	76 R.	22 R.	19 R. ¹
Various Neuroses,	15 B. 4 T.	14 B. 4 T.	1 B. ...	... ...	... ...
Dynamic Pareses and Paralyses,	3 B. 1 T.	3 B. 1 T.	... ...	... ...	... ...
Gastro-intestinal Affections,	4 B. 1 T.	1 B. 1 T.	3 B. ...	... ...	... ...
Various Painful Affections,	12 B. 17 R. 2 T.	12 B. 2 R. 2 T.	... 6 R. ...	... 7 R. ...	... 2 R. ¹ ...
Rheumatic Affections,	19 B. 27 R. 5 B.	17 B. 7 R. 4 B.	2 B. 14 R. 1 B.	... 2 R. ...	... 4 R. ¹ ...
Neuralgias,	68 R.	17 R.	30 R.	10 R.	11 R. ¹
Amenorrhœa,	13 V.	13 V.	...	...	...
Dysmenorrhœa,	6 V. 1 T.	6 V. 1 T.	... ...	... ...	... ...
Menorrhagia,	8 V. 1 F.	8 V. 1 F.	... ...	... ...	... ...
Irregular Menstruation,	5 V.	5 V.	...	...	...
Mental Diseases,	60 R.	10 R.	27 R.	16 R.	7 R. ¹
Labour,	3 W. 1 P.	3 W. 1 P.	... ...	... ...	... ...

B., Bernheim; R., Van Renterghem and Van Eeden; T., Tuckey; W., Wagner; V., Various authors, periodic literature. The R.¹ refers to 52 cases in the practice of Van Renterghem and Van Eeden. These cases should, perhaps, hardly be noted, as the patients gave up the treatment after one or two sittings.

A servant maid suffered from profuse menstruation in the summer of 1888, and notwithstanding energetic treatment, she got worse. The discharge occurred at intervals of fourteen days, and lasted for

¹ *Der Hypnotismus, seine Bedeutung und seine Handhabung*, Stuttgart, 1889, p. 65.

eight. She looked like a corpse, so anæmic had she become. Her appetite was lost; so was her sleep. One evening she was brought to Forel. For four days she had been losing excessively. He readily hypnotised her, suggested to her that the discharge should cease, that she should go home and sleep well and eat plenty of food. At once the flow was stopped, and at the next sitting he suggested to her not to be unwell for four weeks, and that then the period was only to continue for two and a half days. All went well; her appetite returned; she slept well; and for twenty-seven days she suffered no loss. Her next period occurred one day before he had suggested, but it only lasted two days and was moderate in amount. She was cured, and subsequently only menstruated every four weeks, and then but moderately.

Another case is given by Bernheim. "Mrs H., aged 35, suffers from profuse menstruation every eleven or fifteen days. This condition has obtained for the last two years. The discharge is very profuse, and lasts for five or six days. It is sometimes accompanied by very sharp cramps. For two or three days before each period she is irritable and nervous, and cannot bear her children about her. These symptoms disappear with the menstruation." After detailing the treatment, Bernheim sums up by saying:—"A woman who menstruated profusely for five or six days every eleven or fifteen days, and who never had an interval of more than twenty-one days between her periods, under the influence of hypnotic suggestion came to menstruate successively on the 26th, 24th, 25th, 26th, 24th, 27th, and 29th days, and since regularly two days either before or after the 28th or 29th day, and, be it noted, the period came on painlessly and no symptoms accompanied the discharge."¹

Next, with regard to retarded menstruation, we find that the same author relates a case of Mdlle. C., aged 25. She saw him on November 17th. She was not pregnant. Her last period was on the 7th of October, and for some days she complained of constriction about the waist and swelling. She ate more than usual, and her digestion was very good. She was hypnotised and told to menstruate on the 30th, and on the 30th she came back and said that the menses appeared in the morning without

¹ *Suggestive Therapeutics*, Bernheim, p. 404.

any pain. She was then told that the next period was to occur on the 28th of December, and so it did without either pain or discomfort.¹

Other cases of amenorrhœa cured by suggestion are related by Voisin and others.²

Another point to which I wish to call attention is, as to whether hypnotism can be, and ought to be used in the education of children. It has been said by various writers—Bérillon, Hément,³ Durand,⁴ Ladame,⁵ Voisin, Lièbault, and Bernheim, amongst others, that hypnotic suggestions can be utilized with advantage in the education of children, and that they can be rendered quicker and sharper in attaining knowledge; that idle or lazy children can be changed into industrious students; but more than all this, that what one may term vicious or incorrigible children may likewise have their characters changed, and instead of being allowed to grow up a curse to themselves and to their companions, they may be transformed into useful members of society. Obersteiner of Vienna, Desjardines, and others, including an anonymous author of a pamphlet on the subject,⁶ strenuously oppose the idea, not perhaps because they doubt the possibility of it, but more because they fear the harm that might be done to the young nervous system by such procedures. Moll calls attention to the fact, that what has been written on this subject has been greatly misunderstood, and that many have thought that authors have advocated the introduction of hypnotism into general school use. Nothing of the kind is really intended. What is meant is, on the one hand, to treat many bad habits as one would treat disease; and on the other, to treat depraved young persons by special hypnotic procedures. He also refutes the ideas which have been expressed by Blum, Seeligmüller, and others, that by hypnotising children they would be turned into mere machines, and all "freewill" set aside. What is aimed at, says he, is to give the child a strong bias for good. As in education conscious will is directed into a definite

¹ *Suggestive Therapeutics*, Bernheim, p. 399.

² *Annales Médico-Psychologiques*, March 1887.

³ Congress at Nancy, 1886.

⁴ *Revue de l'Hypnotisme*, Nov. 1886.

⁵ *Ibid.*

⁶ *Der Hypnotismus in der Pädagogik*. Berlin, 1888.

path, so is also the case in hypnotism, for without consciousness hypnotic suggestion is impossible.¹

I will quote one or two cases to show what may be done in this connexion, and leave them to tell their own tale. Lièbault says, "A boy who at school had habitually been at the bottom of his form was by this treatment so incited to work that he soon occupied a place at the other end. Another child, seven years of age, so obtuse as to be almost an idiot, was so benefited by suggestion that in three months he could read, write, and do the first four rules of arithmetic."² The following case of moral depravity in a boy cured by suggestion I will quote in full. On 9th June 1888, M. F., a youth aged sixteen, was brought to Dr Voisin at the Salpêtrière. From the age of six or seven he had been incorrigible. Not only did he tell lies, steal, play truant, and behave ill generally, but he also tried to corrupt all the children with whom he came in contact. He became worse and worse as he grew older, and was turned out of several institutions into which his mother had procured his admission. (Dr Voisin describes some of his vices, which are unfit for repetition, and which prove the youth to have been utterly depraved and bad.) On examination he was found to have an internal squint of the left eye, nystagmus, and haziness of the cornea. The tongue deviated to the left. Otherwise he was well-made and healthy. He read with difficulty, and was very ignorant, though his memory and power of observation were sufficiently good. Dr Voisin endeavoured to hypnotise him, but was not successful until the third séance. Once asleep, suggestions of moral reform were made. He began to improve at once, and by 6th July the youth was absolutely transformed. The wish to do evil first disappeared, and was then replaced by a desire to do right. His insubordination and disobedience had given place to a wish to please his mother. He expressed to Dr Voisin the happiness he felt at being thus changed. He saw the doctor again on 6th October, six weeks after the discontinuance of the treatment, and the cure was maintained.³

A case which Bernheim relates of anorexia, insubordination, and

¹ *Der Hypnotismus*, Moll, p. 226; see also p. 160.

² *Psycho-Therapeutics*, Tuckey, p. 64. Lièbault, *op. cit.*, p. 357.

³ *Psycho-Therapeutics*, Tuckey, p. 361. For details see Voisin, *Revue de l'Hypnotisme*, Nov. 1888.

indolence in a child, with rapid physical and moral improvement caused by suggestion, is too long to quote, but is remarkable. Bernheim says of it, "This fact of rapid moral improvement of character transformation obtained by suggestion shows that the application of hypnotism to pedagogy is not an illusion. Have we interfered with this child's liberty of action because we have suppressed his bad instincts?"¹

Du Prel also refers to a boy who was an incorrigible thief, and who, when hypnotised, confessed and told where he had hidden the stolen goods. He prophesies that the time will come when hypnotism will be used to lead youths of bad character into paths of rectitude.² Forel, in referring to this same point, makes some very wise remarks. He holds that in dealing with such children or young persons the treatment should be like the medicinal treatment of symptoms. Bad habits may be eradicated by means of hypnotism used as a therapeutic agent. The physician should seek to obtain a definite effect, and when that effect is attained the treatment should be discontinued and not carried on *ad infinitum*. He keeps his mind open as to the advisability or not of using hypnotism in the training of ordinary children. He points out very forcibly that the influence of teachers and environment exercises a most marked effect upon the taught, and that wise training consists in giving the child suggestions which it unconsciously appropriates and then acts upon. In hypnotism this process is carried to an extreme point, from the fact that during hypnotic sleep all influences other than the suggestions made are shut out.³ Sallis allows that bad habits can be cured, but does not approve of the general use of hypnotism for educational purposes.⁴

I regard this whole question as being a very important and interesting one, and although I cannot help being inclined to regard the use of hypnotism in general education dangerous, it seems to me that there are classes of children who could with

¹ *Suggestive Therapeutics*, Bernheim, pp. 320, 321. Voisin's papers in the *Revue de l'Hypnotisme*, 1886-87, should be consulted by those interested in this subject.

² *Das Hypnotische Verbrechen*, p. 47; and Du Potet, *Journal du Magnetism*, iii. p. 233.

³ *Der Hypnotismus*, Forel, pp. 50, 51.

⁴ *Ueber Hypnotischen Suggestionen*, Sallis, 1888, p. 40.

safety be subjected to the trial of such a means of training or cure, call it what one will. If one may trust the experience of writers on this subject, there seems to be a wide and wonderful field of usefulness for hypnotism in this direction.

I must now pass on to another class of cases which is also of great importance, namely, dipsomania, morphinomania, opium eating, and chloral drinking, etc., and the use of hypnotism in regard to them. Every one will appreciate the difficulty of treating such morbid habits, and it is only to be expected that hypnotism may be tasked to the utmost in combating them. Yet success has been attained. Dipsomania has been successfully dealt with by Van Eeden, Forel, Fontan, Hösslin, Ladame, Voisin, Widmer, and Wetterstrand. Forel relates a noteworthy case, in which a man, aged 70, who suffered from chronic alcoholism, was completely cured. Twice, ten years ago, he had cut his throat when suffering from delirium tremens, and from 1879 to 1887 he was confined in the lunatic asylum of Burghölzli as a confirmed drunkard and scamp. He used every chance to get drunk, and, when drunk, he had hallucinations, and was dangerous both to himself and his companions. He was always creating disturbances in the asylum. He suffered from severe lumbago, which almost rendered him incapable of doing any work. Forel had long given him up as incurable, but in 1887 he hypnotised him. The result was that, after a few sittings, he was receptive of suggestions. The constant disturbances he had instigated ended as if by magic, and of his own initiative he requested that no wine should be given him (being considered incurable, a small quantity had been allowed him). Soon after the lumbago left him (it has not returned, March 1889), and his craving for alcohol disappeared. After the middle of 1888 he was permitted, even with money in his pocket, to go freely into the town, and he has never taken anything but coffee or water. He is now a very energetic member of the teetotal society, and he does not even require anti-alcoholic suggestions. Forel says that this case belongs to the best results obtainable, but that like results can be obtained in most patients in whom one can induce an ordinary degree of somnambulism.¹

I have not space to quote other cases of a like nature, but

¹ *Der Hypnotismus*, Forel. Stuttgart, 1889.

some very interesting ones are placed on record. In all cases the treatment is carried out by instilling into the mind of a patient during hypnosis a disgust for alcohol, and by requiring him to promise faithfully never to touch it. It cannot be said that cases of this nature can be all cured with equal rapidity, for, in some cases, although, perhaps, good results will be obtained after two or three weeks' treatment, yet it has been found necessary to repeat the suggestions in many cases for once a month for a year to prevent the possibility of a relapse.¹

By means of hypnotism Voisin cured in a month a person, aged 28, who injected a gramme of morphia daily;² but it is unnecessary to quote other cases of this nature.

Most men who have used hypnotic suggestion have been very successful in treating insomnia. It is found in almost every case even where a patient is only slightly susceptible to hypnotic suggestion, that sleep can be induced on the first occasion. And in cases of a most intractable character, two or three séances are found to result in a perfect cure. This method is likely to render service in many such cases—as, for instance, after surgical operations, or, again, in incurable organic diseases, where want of sleep is a most troublesome symptom to combat by ordinary drugs, and where it is an intense relief to the patient to have this distressing symptom removed.

Pain, either as a symptom of disease or dependent upon rheumatism or neuralgia, is often benefited in a most marvellous manner by a resort to hypnotism. Very numerous cases are on record to prove this point by all authors dealing with suggestive therapeutics. In many cases a single hypnotic séance is all that is required to effect cure, but even the most severe and apparently intractable cases will readily yield after several sittings. One or two examples may be given. Tuckey quotes a case in which Dr Liégeois cured a woman, aged 28, who had suffered from migraine for four years. She had daily attacks of sick headache. Her health was deteriorating in consequence, and life had no attraction for her. She was easily hypnotised, and told that the afternoon should pass without an attack of pain. She returned in the

¹ See *Psycho-Therapeutics*, Tuckey, p. 64. *British Medical Journal*, vol. ii., 1889, p. 649.

² *Ueber Hypnotische Suggestionen*, Sallis, p. 32.

evening, not having experienced pain, was again hypnotised, and suggestion was made that there should be no pain next morning, nor henceforth. For a year after, until the time that the case was reported, she had continued free from her trouble.¹ Bernheim relates a case of sciatica in a young man, aged 22. He had suffered from severe pain for three days. He was cured by a single suggestion, and the pain did not return.²

Most authors relate cases of the cure of rheumatic pains, both muscular and articular. Thus Bernheim gives nineteen cases, of which all were cured—such as rheumatic paralysis of the right forearm, pleurodynia and lumbar pain, chronic articular rheumatism (wrists and insteps), gonorrhœal rheumatism, etc. It is needless to detail these cases.

Neuropathic affections may also be cured, as, for instance, nervous aphonia, post-epileptic tremors, girdle-pain, and pain of the right groin with difficulty in walking for twenty months, vertigo, moral depression connected with cardiac disease, insomnia through habit, etc.; and various neuroses, such as general chorea, obstinate writer's cramp, choreic movements, and nocturnal incontinence of urine, have been cured in numbers of cases. Some cases of asthma are also cured, or at any rate greatly benefited, as are persons suffering from chlorosis. Indeed, one may say that nearly half of such cases are cured completely, and in the remainder it is found that the palpitation, hæmic murmurs, and vomiting at any rate are cured.

With regard to gastro-intestinal complaints, it appears that much good also can be accomplished by means of hypnotism. Appetite may be restored, pains which accompany various forms of dyspepsia removed, and in some cases even the dyspepsia itself may be cured. Constipation can be remedied by the suggestion that the patient's bowels should act at a given time; and in regard to diarrhœa, it too is often cured, unless it is caused by intestinal catarrh.

Passing on to hysteria, we find that both hysterical men and women can be cured by hypnotism. It must, however, be mentioned that there is a difference of opinion to be met with among Continental writers upon the subject; but after careful examination of their opinions, it appears to me that the facts of the case may be summed up as follows:—Hysterical patients certainly run

¹ *Psycho-Therapeutics*, p. 62. *Revue de l'Hypnotisme*, September 1888.

² *Suggestive Therapeutics*, p. 319.

a chance of having their cases rendered worse instead of better by hypnotic procedure to a greater extent than any other class of patients, but at the same time it much depends on the methods employed in hypnotising them. If hypnotic suggestion, as practised by the Nancy School, is carried out pure and simple, and the patients are not used either for demonstration purposes or for the purposes of experiment, hypnotism benefits or cures them; but should they be hypnotised by fascination or Braidism, the state of matters is not favourable; and should they be used for demonstrations, it will be found that in many cases they sink into a hopelessly incurable condition. The greatest care has to be taken in treating such cases, and a considerable knowledge of the art of hypnotising should be obtained before venturing to utilize it in this class of affections. When hysterical patients, however, are carefully and judiciously hypnotised, it is found that in a great number of cases the results are very surprising. Often a single sitting is sufficient to cure the patient, though in very severe cases weeks and months may pass before permanent relief is obtained. Curiously enough, hysterical aphonia, which is as a rule cured after one or two sittings, proves sometimes very intractable, and I have seen cases which have not been cured for six or eight months.

It would take up too much space to relate details of cases in full, but I may append the headings of several of Bernheim's cases, to which readers may refer for full details.

Case 1.—Mrs X., 26, violent hysterical paroxysms, dating back one year. Complete cure from the time of first suggestion.¹ To this case the author adds: "Definite cure took place after the first séance. This is not usual; it is often necessary to follow up the disease for several weeks, in order to eradicate the symptoms and prevent the occurrence of relapses."

Case 2.—Hysteria, dating back fourteen months, convulsive crises, vomiting, sensitivo-sensorial hemianæsthesia, lameness caused by pain. Cure of the anæsthesia and lameness in a few days. Total cure in seven or eight weeks.

Case 3.—Hysteria, dating back fourteen months; convulsive paroxysms, pain, vertigo, and insomnia. Cured in thirty-five days by means of suggestion.

¹ *Suggestive Therapeutics*, Bernheim, p. 284, *et seq.*

Case 4.—Hysteria, dating back seven or eight months; convulsive attacks, vomiting, insomnia. Cure after the first séance. Relapse at the end of three weeks. Crises, sensitivo-sensorial hemianæsthesia, pain. Symptoms (at first) resist suggestion. Cure in three weeks.

Case 5.—Hysteria, dating back six weeks; convulsive paroxysms, left sensitivo-sensorial hemianæsthesia, vomiting, pains. Immediate effects of suggestion. Reappearance of symptoms. Cure in six or eight weeks. Relapse in eight months. Cure in three weeks by suggestion.

Case 6.—Reappearance of hysteria eight months ago, in consequence of a miscarriage, with pelvic peritonitis; sensitivo-sensorial hemianæsthesia, pain, globus, palpitation. Transient effect of suggestion at first. Complete cure in twelve days.

Van Renterghem and Van Eeden relate a case of intermittent fever, which had resisted for weeks both quinine and arsenic, cured by hypnotism (*Clinique de Psycho-Thérapie de Suggestive*, p. 91), and both these physicians, Lièbault, and others, have cured inveterate smokers.

Epilepsy has been treated for many years by hypnotism. In 1666 I find that Valentine Greatrakes cured a great number of cases, and the success with which he treated them is testified to by Boyle, the President of the Royal Society, as well as the Bishop of Surrey. It seems that Gassner in 1750 had great success in his treatment of cases of a like nature; and Dr Inglis of Halifax has also been successful; he relates a good case of a girl, 11 years old, whom he cured.¹

Coming to more recent times, we find that epilepsy has been treated with varying success. Lièbault recommends that suggestions should be made between the attacks, and says that in many cases he has obtained good results. So, too, has Bernheim.²

¹ *Archiv für den Thierischen Magnetismus*, Leipzig; *Études cliniques sur la grande Hysterie ou Hystero-Epilepsie*; *Human Magnetism*, W. Newman, 1845; *Versucht über Geistersehen*, Schopenhauer; *Psycho-physiological Researches in the Dynamics of Magnetism, etc., in their Relation to Vital Force*, translated from the German by John Ashburne, M.D., 1853.

² *Suggestive Therapeutics*, p. 244; *Der moderne Hypnotismus*, Seeligmüller; *Deutsche Medicinische Wochenschrift*, 1888; *Lancet*, 1879; *British Medical Journal*, 1879-80.

Renterghem and Van Eeden have also treated six cases, four of which were cured ; two, however, were unsuccessful.¹

Most authors say that it is by no means easy to hypnotise persons suffering from insanity ; yet it would not be advisable to state definitely that insanity is a bar to hypnotic treatment, for Voisin and others have, after great trouble it is true, been successful in treating a great number of insane persons. Voisin says that in treating patients suffering from insanity it is advisable to avoid inducing the cataleptic state, and only those cases are to be treated in which suggestions can be made. The same author has, he states, cured persons suffering from hallucinations, delusions, disturbances of special and general sensation, as well as others afflicted by suicidal ideas, and acute and furious mania have disappeared under the use of hypnotism.² These statements have been confirmed by Dr Robertson, who has visited Voisin's Asylum ; and one or two other speakers at the British Medical Association's meeting, when Voisin read his paper, concurred as to the possibility of treating insane patients, but drew attention to the fact that great labour was involved in such treatment. Moll, in referring to this subject, indicates the difficulty which is experienced in readily hypnotising the insane ; but both he, Forel, Burckhardt, Séglas, Dufour, and Pons, all believe that many cases of insanity, especially melancholia and mania, are amenable to hypnotic suggestion.³

Van Renterghem and Van Eeden give thirty-six cases treated by them, of which twenty were notably benefited.⁴

¹ *De la Suggestion et de ses applications à la pédagogie*, par le Dr Edg. Bérillon, 8vo, 1888, Paris, 40 bis. Rue de Rivoli ; "De la Nécessité d'interdire les séances publiques d'Hypnotisme," par le Dr Guermouprez, *Revue d'Hypnotisme*, p. 8, 1888 ; *Bibliographie des modernen Hypnotismus*, Max Dessoir, Berlin, 1888 (801 works mentioned, written by 481 authors, and references to 207 periodicals) ; "Traitement des maladies mentales par la suggestion hypnotique," *Ann. méd. psychol.*, ser. 7, vol. iv. pp. 238-254, Paris, 1886 ; "Contribution à l'étude d'hypnotisme," *Jour. Soc. de Méd. et Pharm. de l'Isère*, vol. x. pp. 193-207.

² *British Medical Journal*, vol. ii., 1889, p. 649.

³ *Archiv de Neurolog.*, vol. x. pp. 376-395 ; "Hypnotisme et Folie," Garnier, *France Médicale*, vol. i. p. 554, Paris, 1886 ; "De l'hypnotisme jendrassik," *Archiv de Neurolog.*, vol. ii. pp. 362-380, and vol. xii. p. 53, Paris, 1886 ; "Guérison par l'hypnotisme de Déliré alcoolique," *Revue de l'hypnotisme*, Bremaud, vol. ii. p. 19, Paris, 1887 ; "Guérison par l'hypnotisme d'une manie des nouvelles accouchées," *Revue de l'hypnotisme*, p. 16, Paris, 1887 ; "Traitement Hypnotique chez les aliénés," *Marseilles Médicale*, vol. xxiii. p. 619, 1886.

⁴ *Psycho-therapeutics*, 1889.

On the whole, our present knowledge of this intricate and most interesting subject does not warrant our stating that hypnotism can be utilized in treating the majority of insane persons; but from what has been done in the past we may conclude that, if physicians in charge of the insane have time and patience, considerable benefit may be obtained from hypnotism; and as we learn more both of hypnotism and of psychology, it may well be that the therapeutic uses of hypnotism will become of more value in this direction. The time required to hypnotise insane persons is at present the great drawback to its more extended use.

It is time now to pass from the foregoing practical considerations and facts in order to briefly examine some of the theories which are put forward to explain them.

Hypnotism is of such a nature that many do not believe in it at all, and others, for whom the facts are too strong to be utterly denied, require the definite exposition of a theory by which to explain them. This is all very well; we all want to know how a thing can happen before readily believing that it has happened, and therefore it would be well could we with any certainty explain how the facts recognised as happening during hypnotic sleep are or could be produced. It must be admitted that at present we labour under a great drawback with regard to hypnotism. We know what happens, or at least we may appreciate the results obtained, but the exact *modus operandi* in which they are attained is far from being known or even perhaps being conceivable. The difficulties which surround the investigation of the why and wherefore of hypnotism are great, but at the same time there is every cause why an explanation should be sought, and it will not do to throw aside its investigation because of its difficulty or of the need there is of investigating at the same time the borderland between the material and the spiritual worlds. In many ways the investigation of hypnotism is only on a par with the investigation of many other subjects. What is, for instance, electricity? We do not know, but therefore we do not deny that it exists, because it must exist; it has a force which we can see, feel, and utilize. We have not yet arrived at a point where we can say that no new laws exist, nor where we can say that our present methods of investigation are the only ones which can be employed. We cannot now-a-days afford to interpret new facts by old ideas.

The law of gravity is no less true because the law of magnetic attraction has been discovered, and it must be true that with greater knowledge new methods of investigation must claim our attention as progress in knowledge advances. As Bacon said—"No perfect discovery can be made upon a flat or a level, neither is it possible to discover the more remote and deeper parts of any science if you stand but upon the level of the same science and ascend not to a higher level."¹ Or as Du Prel puts it—"True progress is always in the depth, whereas every generation imagines that it leaves to its successors only the task of extension on the same level."² "Trusting the illusion of the senses by which sun, planets, and fixed stars seem to rise in the east and set in the west, the old Greeks set astronomy the task of explaining these apparent movements on the supposition that they were the true ones; this task proved continually more difficult; more and more cycles and epi-cycles seemed requisite to account for the observations, but it was always believed that the method was the right one, and that future generations had only to labour further on on the same level; but when the thought of Copernicus—anticipated (as we now know) in the teaching of Pythagoras and the Kabbala—exposed the sense illusion in which human understanding lay imprisoned, then it became also clear that success was not to be expected from further labour on the flat; a new vertical path of progress was laid down." I relate this instance because of its analogy to hypnotism. The ancients, in all probability, knew far more than we do now of the mind and perhaps of the soul too, and many would find it easy to explain the whole mysteries connected with hypnotism in relation to mind and matter by the well-known "seven principles." Be this as it may, it is probably unnecessary to ask for an unprejudiced and unbiassed study of the phenomena of hypnotism.

Du Prel's views may be stated somewhat as follows:—He imagines the mind as composed of two circles—the inner, the organic threshold of sensibility; the other exceeding the faculties of the normal, or inorganic, consciousness. In biological processes the psycho-physical threshold of sensibility has been continually movable, and so in the succession of life forms there has been, not

¹ *Advancement of Learning*, i. 5.

² *Philosophy of Mysticism*, vol. i. p. 3.

only a differentiation of the organs of sense, but also an exaltation of consciousness. A displacement of the threshold of sensibility is common to the biological process. As one ascends higher in the scale greater powers of consciousness are possessed, and in each species it is possible to displace forwards to a limited extent the threshold of consciousness. In other words, the mind or the intelligence of an individual belonging to a species may have its intelligence intensified or elevated to a slightly higher degree. Animals, such as the horse, dog, or elephant, possess high intelligence or instinct in their wild state, but it must be admitted that when caught and trained by man something is added or developed in them, so that their knowledge and intelligence is markedly augmented. Possibly it may be allowed that man is at present the highest type of being inhabiting the world, yet it will also be admitted by all students of anthropology that a great difference exists amongst the various races of mankind, even amongst the various classes which compose the most civilized community. This being the case, are we to conclude that the final development of the intelligence has been reached? May we not rather suppose that a power exists which is capable of still further increasing mental capacity? In most persons man's place in Nature is limited by his five senses. This limitation acted in a more restricted sense centuries ago. Now, however, all-world communications having been introduced, and the sciences having made such enormous progress, man's position appears to have reached a higher level, and it is almost impossible to conceive that a full stop must be made now, and that progress must be barred by an immutable law. This has in past ages often enough been thought to be the case, yet the belief then entertained has proved fallacious, and so it almost certainly will again. I have just said that man's knowledge is limited by his five senses, but many of the most profound thinkers of this and past ages have believed, and not without proof, that there is a sixth sense which is possessed, although in the majority of cases it remains latent. If this be the case, doubtless progress in the future will be enormous, and there are many who believe that in hypnotism we possess a means of investigation which, if used aright, will lead to marvellous results in this connexion. If I felt capable of enlarging upon this subject, which I do not, this is not the place to do so, and even now I fear my readers will think I

have overstepped my limits. Still I must further mention that Du Prel imagines that man possesses, as it were, two intelligences—one intimately bound up with and limited by the body, capable of acting and receiving impressions alone through the body; and one, though in intimate relation with the foregoing, which is the real ego, and capable of entering into other relations of a more ghostly or ethereal nature. He thinks that ordinary dreams occurring on going to sleep and awaking therefrom are simply phantasms, of the earth, earthy, and that a confused recollection of these phantasms is the dream all of us know so well. He thinks, however, that between these two states of semi-oblivion deep sleep occurs, in which the real ego is cut off from the five senses and the knowledge conveyed directly by them, and is free to live, as it were, a life of its own, during which its intellectual functions are active, and when it is possible for it to attain knowledge unattainable in the ordinary way. In real somnambulance what takes place intellectually is unknown to the common intelligence, but we know that it is possible for a somnambulist to see, to talk, to write, and, in fact, to possess heightened sensibilities whereby acts impossible during waking hours may be performed with certainty and ease. By means of hypnotism many maintain that it is possible to lift the veil and to investigate this higher intelligence or real ego, and some of the facts I have previously related may possibly prove this to be the case. At any rate, a person during a deep hypnotic sleep acts as a natural somnambulist acts.

I now proceed to quote very briefly the opinions held by other authorities in regard to the hypnotic condition.

In a paper which Preyer of Jena read in 1880 he dealt with sleep and hypnotism, and thought that sleep was due to the formation in brain and muscle of certain products termed by him *Ermüdungsstoffe* (fatigue-products), which products he believes to be easily oxidisable. "They accelerate the dissociation of the oxygen and hæmoglobin in the capillaries of the brain and muscles; sleep then ensues, and the tissues which most depend upon the regular supply of oxygen, viz., the gray substance of the hemispheres and the muscles, are the first to be affected by the accumulation of *Ermüdungsstoffe*." He goes on to state his belief in the reality of hypnotism, and explains its production as follows:—"If by strong and sudden stimulation attention be forcibly concentrated

on one impression, as in fright, then catalepsy is the consequence in both man and in animals. If the will direct consciousness to a certain point without any excitement, it will in many cases lose its power, and hypnotism is the consequence—abulia. Possibly this occurs because the oxygen of the arterial blood in the brain has so quickly been used up that there is not enough left to keep the gray matter of the hemispheres awake. The nervous cells are separated from each other by inactive regions, and, as in natural sleep, only certain centres remain active; for example, the respiratory and other co-ordinating centres. Here, then, is a *terra incognita* ready to be explored.¹

With reference to Preyer's theories of sleep I may also mention Lauder Brunton's views as expressed in his Croonian Lectures on the relationship between chemical structure and physiological action.² "The cells of living organisms (also) break down albuminous matter in the course of the functional activity, and alkaloids are formed in the healthy body, to which the name of leucomaines has been given. An interesting observation has been made by Bouchard, to the effect that the alkaloids formed during sleep have a stimulating action, so that when they accumulate to a certain extent they tend to excite the nervous system and make the person awake. Those, on the other hand, which are formed during the waking hours have a depressant action, and tend to bring about a condition of sleep. There is thus a sort of self regulation in the processes of life by which waking and sleeping are alternately ensured."

"In healthy sleep the person becomes unconscious of the external world; voluntary action ceases, and even the automatic centres for respiration and circulation act less energetically, so that the breathing becomes slow, the pulse quiet, and the vessels tend to dilate. . . . This condition of the vessels has been regarded by some as a cause of sleep rather than its consequence, for the two principles to explain sleep are—first, that it depends upon anæmia of the brain, and, secondly, that it is due to an exhausted or inactive condition of the brain cells. In all probability the truth is that it depends upon the condition of the brain cells, but this is so much influenced by the circulation that frequently the

¹ *British Medical Journal*, September 4, 1880, vol. ii. p. 381, *et seq.*

² *Ibid.*, 1889, vol. i. pp. 1389, 1455, *et seq.*

condition of sleeping or waking will depend entirely upon the cerebral circulation. We shall understand this more easily by referring again to Ehrlich's experiments upon oxidation and reduction in the tissues. You will remember that the gray substance of the brain is possessed of a great power of reduction, as shown by the readiness with which it reduces aniline colours after death, but during life the necessity for oxygen is so great that it retains within it a sufficient quantity of stored up oxygen to prevent such reduction taking place under ordinary circumstances; but if its functional activity be augmented by stimulation, its store of oxygen is used up, and thus it becomes ready at once to reduce. Its very activity, however, gives rise to the formation of acid products which lessen its reducing power, so that the mere supply of fresh oxygen would not be sufficient to restore it to its previous condition unless the acid were neutralized. Arterial blood supplies both these requirements, neutralizing the acid and giving off oxygen to the brain cells." Thus in some conditions of the brain simple increase in the supply of arterial blood will restore functional activity and cause wakefulness, while diminished supply will produce sleep. Food induces sleep by dilatation of abdominal vessels. "We cannot see the intestinal vessel, but we know that the abdominal vessels are thin in front, and it is almost certain that external cold will act through the abdominal walls on the intestinal vessels, and cause them to contract. Such contraction will also drive the blood to the brain, and tend to prevent sleep, but warmth to the abdomen will tend to relax them, and induce sleep. This is probably the reason why dogs before going to sleep curl themselves up, so that their abdomen is kept warm by their limbs; and men do the same thing when exposed to external cold. In cases where blood tension is high, as in chronic Bright's disease, we often find troublesome insomnia; whereas in cases of debility with low tension we often find troublesome drowsiness. One condition of the circulation is therefore a most important factor in the production of sleep, but it will, by itself, no more explain completely the insensibility of sleep than it will that of anæsthesia."

It is probable that the products of tissue waste by day and by night exert some influence. At all events Bouchard has found that the toxic substances excreted in the urine during the day have a soporific

action, while those excreted during the night have a stimulating action.

"It would thus appear that there is a sort of self-regulating mechanism in the body by which sleeping and waking are made to alternate. During the waking hours soporific products are formed, and these, gradually accumulating, will by-and-by induce sleep; while during sleep stimulating products are formed which, after a certain number of hours, will stimulate the brain to wakefulness."

"Now Voit found that during the waking hours more carbonic acid is given off, while during sleep the reverse is the case, and more oxygen is absorbed than carbonic acid eliminated. It is therefore evident that during waking the organism as a whole is an oxidising agent, while during sleep it is acting as a reducing agent."¹

Dr Cane published an interesting paper on the physiology of dreams last year, which, summarized, may be expressed as follows:—"The physiological facts he reviewed go to prove that sleep is not a condition of intelligism, but that intelligism is ever ready to receive any impression conveyed to it, and has a power of being aware that objects resemble each other. In the sleeping condition it is presented with an ever-varying procession of complex impressions, any one of which may dominate the aspect of others. These are imperfectly supplied by the nerves of hearing, sight, touch, taste, and smell. They are judged to be things which they resemble or suggest, and with the changing material supplied are continuously construed into a record of misinterpreted objects and events,—in fact the intelligism is doing what we sometimes half knowingly experience when in fog, or dust, or darkness we mistake objects for others which they seem like. We also sometimes do this with our full knowledge, when we imagine picture forms in the glowing embers, or amid fantastic rock and scenery, or mountainscenery, or in the clouds that float across the sky. We know, too, that long-forgotten names, and persons, and places will come to memory at the odour of a flower, the sound of a voice, or a strain of music such as we experienced long ago. When a great city is wrapt in the quiet of night we begin to perceive many strange sounds and sights which escaped us in the busy hum and glare of

¹ *British Medical Journal*, 1879, vol. ii. p. 346.

day. When the body is wrapped in sleep the intelligism is then free to notice the auto-suggestions which come modified by partially transmitted external stimuli, and perhaps changed by pathological conditions. In sleep the mind is not engaged with thoughts, but with molecular processes, and these processes are the great factors in the etiology of dreams, delirium, and mental diseases.

Dr Isaac Ott thinks that "the hypnotic state can be explained by sensory irritation, produced by the bisulphate of carbon, calling ganglia at the base of the brain into activity, which ganglia have an inhibitory power."

In 1882 Charcot made a series of communications to the Biological Society of Paris, which, although having reference to the phenomena due to the application of the galvanic current through the cranium of hypnotised hysterical patients, have some reference to the point now under consideration. "In such patients," he says, "there exists a state of neurotic super-excitability characterized by an aptitude of the nerves and muscles to act under the influence of a mechanical stimulus. . . . This super-excitability resides not only in the muscles and nerves, but in the motor regions of the cerebral centre; thus the galvanic current acting on one side of the cranium produces sudden muscular starts in the face and limbs of the opposite side, while the same current does not give rise to any contraction when the patient is awake. . . ."

It may be presumed that during the hypnotic lethargy there is a special excitability of certain regions of the brain. How the current passes through the bones of the cranium is a question which M. Charcot does not attempt to solve at present. The important fact is that the motor-cerebral regions are sensible to the influence of the galvanic current. M. Charcot offers his experiments to the criticism of his colleagues, suggesting only that the excitability of the dura mater may perhaps give some clue to a solution. His suggestion is based on the results of the well-known experiments of Marshall Hall, Brown-Séquard, Bochefontaine, and Duret.¹

In a paper read in 1888 by Professor Forel before the Gesellschaft der Aerzte in Zurich, he gave an account of experiments in

¹ *British Medical Journal*, 1882, vol. i. p. 276.

hypnotism on seventy-two persons. His theory is that the hypnotic sleep is simply an artificially produced sleep, modified in so far that the hypnotiser is able to influence the course of the subject's dreams,—“Any disappearance of nervous symptoms under the influence of hypnotism is to be explained exactly in the same way as the cessation of pain (for example, toothache, sciatica, etc.), which, as is well known, often follows sudden fright, etc.” In other words,—“It is to be attributed to cerebral inhibitory processes caused by intensive dreams.” “A deep-rooted morbid irritation cannot be removed by hypnotisation.”¹

Moll's ideas with regard to the production of hypnotism may be briefly summarized as follows:—We see how easily a suggestion given to a hypnotised person is received. A movement is suggested; it is at once made. An objective idea is suggested, and the necessary delusion is produced. In ordinary life suggestions are received and acted upon, but when hypnotised a person is more impressed, because the hypnotiser assures him of the expected result. The newest researches in psychology lead one to expect such a result. When a person is hypnotised there is a paralysis of inhibition produced. In other words, the person hypnotised is only capable of passive observation. He is unable to correct by other senses an impression placed before him by the hypnotiser—*e.g.*, a hypnotised person is told that he sees a dog; he believes he sees it because he cannot use his eyes to correct the imagination of a dog called to his consciousness by the spoken word. Active consciousness is inhibited; passive consciousness is awake. When out of several impressions one is chosen by the action of the will, and observation is fixed upon that one, that is an active observation; when out of several impressions one forces itself upon the consciousness to the obliteration of all others, then there is only passive consciousness.²

William James has written a highly interesting paper on “The Hidden Self.”³ In it he says,—“If there is anything which human history demonstrates, it is the slowness with which the ordinary academic and critical mind acknowledges facts to exist which present themselves as wild fancies with no stall or pigeon-hole, or as

¹ *British Medical Journal*, 1888, vol. i. p. 1031.

² Moll, *Der Hypnotismus*, p. 152, *et seq.*

³ *Scribner's Magazine*, No. 39, March 1890, vol. vii.

facts which threaten to break up the accepted system. Mystics are always right about facts; the scientists get the better in theories." He goes on to point out that it must be admitted that, in certain persons at least, the total possible consciousness may be split into parts which coexist and mutually ignore each other, and that, more remarkable still, all the objects of knowledge between them are complimentary. Give an object to one of the consciousnesses, and by the mere fact of so doing you remove it from the other or others. Barring a certain common fund of information, like the command of language, etc., what the upper self knows the under self is ignorant of, and *vice versa*. "The anæsthesias, paralyses, etc., from which hysterics seem to suffer, appear, then, to be due to the fact that the secondary personage has enriched itself by robbing the primary one of a function which the latter ought to have retained. The curative indication is evident: get at the secondary personage by hypnotism, or in whatever other way, and make him give up the eye, the skin, the arm, or whatever the affected part may be. The normal self thereupon regains possession—sees, feels, or is able to move again."

Some of James's references to hysteria and hypnotism and the recollection of the origin of a disease are well worth referring to, as they contain a hint of a method of investigation and treatment which I think of some importance. James thinks that a waking hysteric is in the same condition as a well person in a hypnotic trance, and also that the hysterical mind is the contraction of the field of consciousness,—that is to say, the hysterical person either forgets or is unable to attend to two things at once, and so may ignore an eye or a hand, may see but not hear, may speak but not feel, etc. If motor sense is lost, the patient must perforce define movements to his mind in visual terms. James thinks that the hysterical crisis may be often based upon previous experience, and he refers to the case of a patient named Lucie who had a fright when a child; she also suffered from sleep-walking, and she was once confined in a dark room for some time on account of disease of the eyes. When an attack of hysteria comes on she experiences the old fright, etc. She is hypnotised, and then explains what had happened to her when a child. James therefore suggests that much information regarding the origin of obscure diseases may be arrived at during the hypnotic state.

As a memory can be recalled, so a memory can be obliterated by hypnotism.¹

With regard to post-hypnotic suggestions, the same author believes that the second self is awake and watching for the time to act. It is, therefore, to no "automatism," in the mechanical sense, that such acts are due; a self presides over them, a "split-off," limited and buried, but yet a fully conscious self. When the moment comes for the act to be done, the subject lapses into trance again, and has no subsequent recollection of what takes place—in this moment of time fresh suggestions can be given. The author quotes one or two very interesting cases in this connexion.²

In G. J. Romanes' preface to Heidenhain's *Animal Magnetism*, he concludes that Braid's theory that the cerebral circulation was in some way altered by hypnotism can scarcely be accepted as any explanation of the cause of hypnotism, for various animals having different types of circulatory apparatus can all be hypnotised. "Inhibition, however, that principle which has such a general application to the nerve centres of various species of animals, will probably prove to be the one from which the explanation must be sought."³

Before proceeding to give Heidenhain's view with regard to the production of hypnotism, one or two quotations from his book may be given. He says,—“The sensory impression leaves behind, in the perceptive ganglion cells of the first order, material changes, which are not propagated during hypnosis to the sensorial cells of the cortex of the brain. These changes in the former region are after the awaking so increased by every small stimulus that they now pass to the liberated sensorial ganglion cells and set them in activity. The smallest strength of stimulation sufficient to produce sensation is called, after Fechner, the liminal value of stimulation.” Now in hypnotised persons the liminal value of stimulation is extraordinarily high. In the case of hypnotised

¹ *Scribner's Magazine*, March 1890.

² See also *Somnolism and Psychism*, J. W. Haddock, M.D., 1851. *Isis Revelata*, J. C. Colquhoun, 1836. *Mémoire pour servir à l'histoire et à l'établissement du magnetism animal. Manuel de l'étudiant magnetiseur*, Du Potet, Paris, 1868.

³ *Animal Magnetism*, Heidenhain, 1888, Preface, p. xi.

persons the depression of the activity of certain parts of the brain is beyond all question; the increase of reflex irritability observed in them is therefore no new physiological experience. "I am inclined to consider that the hypnotic state is nothing more than an artificially produced catalepsy." And he goes on to say that probably the cerebral cortex is not the sole part whose activity is inhibited, for otherwise the phenomena which hypnotised people present would be a repetition of those observed in animals after the removal of the cerebral cortex, but the phenomena, although there are points of resemblance, are not identical. He thinks, however, that a certain functional disturbance of the cerebral cortex takes place, which "explains why hypnotised persons neither acquire any conscious perception as the result of sensory impressions, nor spontaneously make voluntary movements. . . . Under normal circumstances movements can be not only initiated by the cerebral cortex, but also inhibited. In the hypnotised subject both powers are absent." In any case there is absence of the inhibiting power of the will, and Heidenhain first thought it was due to cerebral anæmia, but after experimenting on the subject he now holds it to be quite proved that this cannot be, owing to the flushing of the face and to Förster's ophthalmological observations, which resulted in showing that the central retinal vessels are not contracted. He was further confirmed in his opinion by the action of nitrite of amyl, which was administered to two subjects, and yet they were hypnotised more decidedly during its action than either before or after the drug had been inhaled. He finally states his belief thus,—“The hypothesis that the cause of the phenomena of hypnotism lies in the inhibition of the activity of the ganglion cells of the cerebral cortex is not a too adventurous one, the inhibition being brought about by the gentle prolonged stimulation of the sensory nerves of the face or of the auditory or optic nerves.” For the reasoning upon which his belief is based I must refer the reader to his book.¹

In referring to hypnotism, D. Hack Tuke is of opinion that Hunter's remarks, written nearly a century ago, really contain the gist of all that has been written since. He said, "I am confident

¹ *Animal Magnetism*, Heidenhain, pp. 16, 25, 40, 41, 46.

that I can fix my attention to any part until I have a sensation in that part." He clearly believes that expectant attention and the imagination are the explanation of hypnotism, although he is careful to state, "It does not follow from this explanation that imagination, expectation, and kindred states of mind, explain *all* the phenomena produced by mesmerists, nor indeed does it *necessarily* follow that the same phenomena are always due to the same cause. For our present purpose, however, we are justified in saying that certain purely psychical agencies produce certain physical results."¹

Maudsley, in writing upon this subject, expresses his belief that hypnotism, somnambulism, and allied states, are extreme instances of the operation of known laws. He considers that "the conditions of the induction of the abnormal state of consciousness seem to be —1, a nervous system that is more than usually susceptible and unstable; and, 2, the exercise of a fixed and strained attention for a short time. . . . We perceive, then, that by giving a particular strain of fixed activity to the nervous system, its ordinary functions may be suspended, and it may be made insensible, so long as the isolated activity continues to the impressions which ordinarily affect it. What is the intimate change in the nerve-element which produces this state of non-conduction between associated nerve-centres, this discontinuity of function in spite of continuity of connecting fibres, we know not. It must suffice for the present to know that a particular form of activity is capable of reaching such a pitch as to suspend or inhibit while it lasts the ordinary functions of the nervous system; and to know this, furthermore, by instances in which the supposition of a transmission of any peculiar force from the operator to the creature operated upon may be confidently rejected." In mentioning profound reverie, in which a person is unconscious of what is happening around him, Maudsley considers that "there is a tract or an area of activity lit up by consciousness while all around are darkness and inactivity." And again, in regard to the well-known fact that an acute pain notably renders us insensible to a lesser pain, he thinks "that the message sent to the central ganglion by it (the lesser

¹ *Illustrations of the Influence of the Mind upon the Body*, D. Hack Tuke, M.D., second edition, vol. i., 1884.

pain) no longer awakens any notice, for there is a local suspension or inhibition of its sensory functions in consequence of the abstraction of consciousness by a neighbouring predominant activity. . . . It might be set down as a general law, that given two nerve centres of mental function, they cannot be in equally conscious function at the same time. If the one is actively conscious, the other will be sub-conscious or not conscious at all; and if the one reaches a certain height of activity, the effect of the other will be entirely inhibitory—it will be rendered temporarily incapable of function.” He thinks that in the hypnotic state the subject is less sensible to external stimuli than in natural sleep, but more so to the stimulus exerted by the operator’s voice, and that if undivided attention is kept up to a single idea, the general activities of the brain are diminished—in fact, sleep ensues.¹

Lastly, I will briefly give Bernheim’s ideas.² He strenuously holds that all the phenomena of hypnotism are due to suggestion; that it is the influence exerted by an idea which has been suggested to, and received by, the mind which causes the hypnotic state; that this is not due to an abnormal and physiological condition, but that the same laws that govern the normal organism govern the organism which is experimentally and pathologically modified. “As a psychical organ, the brain not only intervenes to moderate reflex action, but also intervenes to correct, to interpret, to rectify impressions imperfectly transmitted by our sensory organs or suggested by an external influence” (p. 130). “The normal physiological state shows, in a rudimentary manner, phenomena analagous to those which are observed in hypnotism; that Nature does not contradict herself, and that there exists in our cerebro-spinal nervous apparatus an automatism by which we accomplish certain highly intricate acts unconsciously and involuntarily, and through which we submit to a certain extent to orders which are given us, to movements which are communicated to us, and to sensory illusions which are suggested to us. They also demonstrate that the condition of consciousness intervenes to modify or neutralize automatic action and to rectify or destroy false impressions insinuated into the nervous centres. Suppress consciousness, suppress voluntary cerebral activity, and we have somnambulism” (p. 134).

¹ *Pathology of Mind*, H. Maudsley, 1879, p. 50, *et seq.*

² *Suggestive Therapeutics*, Bernheim, 1889.

" . . . Consciousness and will are, doubtless, weakened in cases of profound sleep ; the more intense the sleep is the less the subject's spontaneity and the greater docility to suggestions ; but this profound sleep and weakness of will and consciousness are not necessary for the manifestation of suggestive phenomena."

I may summarize what follows by saying that Bernheim believes that in hypnotised subjects there is a peculiar aptitude for transforming the idea received into an act ; that there is an exaltation of ideal-motor reflex excitability which effects the unconscious transformation of the thought into movement unknown to the will, and also the exaltation of the ideo-sensorial reflex excitability which effects the unconscious transformation of the thought into sensation or into a sensory image. In fact, in hypnotism "the ideo-reflex excitability is increased in the brain, so that any idea received is immediately transformed into an act without the controlling portion of the brain, the higher centres, being able to prevent the transformation."

Space forbids me quoting any more theories with regard to the production of hypnotism. I have endeavoured above to illustrate briefly some of the various lines upon which a solution may be sought, but I think it must be confessed that at present we have insufficient grounds upon which to base any satisfactory explanation of the curiosities and mysteries of the hypnotic process. A great deal more information is desirable from psychologists and physiologists before it will be possible to go much further in the matter, and it will be necessary to define more accurately than has yet been possible what definite parts of the central nervous system are affected during hypnotism. It is also necessary to ascertain far more minutely the intimate relation between the ganglion cells in the brain itself.

I must now conclude. I am well aware that much more might be written on the subject, but I have already occupied more space than I originally intended. If what I have written serves in any way to stimulate investigation which may lead to a fuller knowledge of hypnotism, and thereby to the relief of suffering, I shall be well content.

I have to acknowledge my obligations to many authors. The titles of most of the works referred to will be found in the footnotes. I have also to thank various friends, and especially Drs Van

Renterghem and Van Eeden of Amsterdam, who most kindly allowed me to witness their methods of treatment by hypnotic suggestion.

A calm temperament, a firm will, and unlimited patience, are necessary to any one who wishes to become a successful hypnotiser.

APPENDIX.

Since writing on the use of hypnotism as an anæsthetic, I have seen the account of a most successful demonstration which was given at Leeds on March 28, 1890, by Dr Milne Bramwell, in the presence of some sixty medical men and dental surgeons.¹ The demonstration was very instructive, as it showed the power of hypnotism to produce absolute anæsthesia in very painful and severe operations, and further demonstrated the fact that the patients did as they were told during the operation, thus rendering, for instance, the extraction of teeth easy, the patient apparently intelligently following the dentist's instructions, such as to open the mouth, to spit out, etc. One case was very remarkable, as the patient was put to sleep in the following way:—Dr Bramwell sent Dr Turner a note telling him to give the patient an order which was enclosed. The order was as follows:—"Go to sleep at once by order of Dr Bramwell, and obey Mr Turner's commands.—J. Milne Bramwell." This experiment answered perfectly. Sleep was produced at once by reading the note, and was so profound that at the end of a lengthy operation, in which 16 stumps were removed, the patient awoke smiling, and insisted that no pain had been felt, and what was still more remarkable, that there was no pain in her mouth. During the whole time everything Mr Turner suggested to the patient was performed. It was observed that there was a diminished flow of saliva, that the corneal reflexes were absent, the breathing more noisy than usual, and the pulse slower. Various other painful operations were performed with perfect success, and Mr Pridgin Teale, in seconding a vote of thanks to Dr Bramwell, said,—“I feel sure that the time has now come when we shall have to recognise hypnotism as a necessary part of our studies.”

¹ *British Medical Journal*, vol. i., 1890, p. 801, and *Provincial Medical Journal*, vol. ix. p. 273.

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With the close of the chapter just referred to (*Vertebral Artery, Ligature of the*, Heath's "Dictionary of Practical Surgery," vol. II., page 786), my interest in epilepsy did not cease. Indeed, at the time the article referred to was written, most of the investigations and operations now about to be described were complete, and time alone was wanting to realise their value. Sufficient time has now elapsed to test results, and these results are so encouraging and so interesting that I do not think I should withhold them any longer from the profession.

A description of the effects of removal of the cervical ganglia of the sympathetic for epilepsy forms the chief feature of this book, and is the cause of the book being written. Other methods of treatment are, however, touched upon, but only as far as the light of my own experience enables me to speak. The tenth chapter I consider of great importance, and I trust it may be useful in bringing about in Britain a more organised, rational, and successful method of dealing with epileptics.

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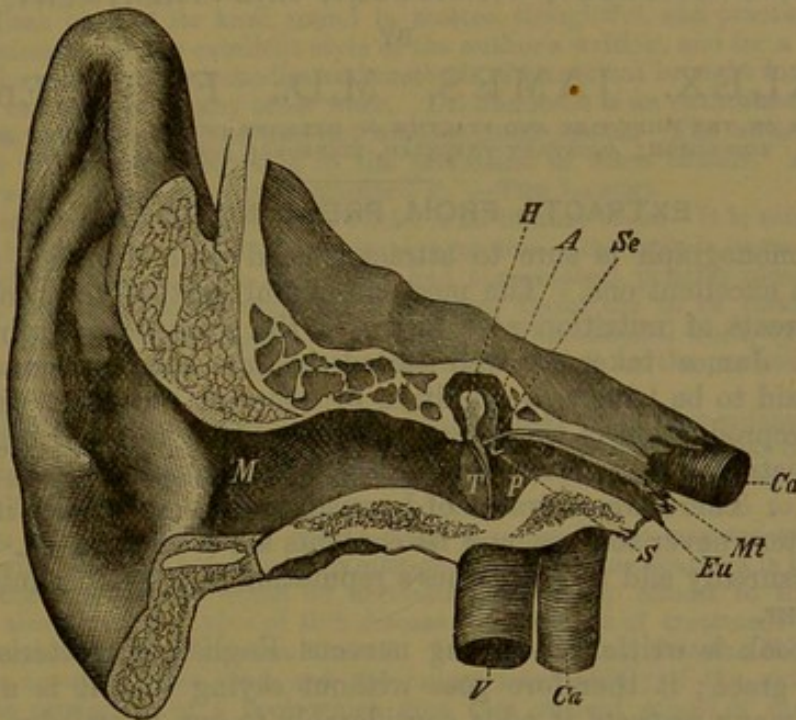
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