

HYPNOTISM

ВY

DOCTOR FOVEAU DE COURMELLES

TRANSLATED BY LAURA ENSOR

ILLUSTRATED WITH 42 VIGNETTES BY LAURENT-GSELL

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LONDON

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The study of hypnotism—that is to say, of sleep provoked by artificial influences—is one which presents no small difficulty in the attempt to reduce it to the intelligence of the general reader. So many theories have been mooted, so many consciences have been startled, that it would seem advisable that a purely scientific and rational account should be laid before the public.

Hypnotism is now a common topic of conversation; books and newspapers teem with it. The moment a crime is committed, the pet theory of hypnotism and suggestion is invoked, destroying and drowning all judgment. It is loudly asserted that free will is an empty word and that the hypnotized subject is a mere automaton. This idea is assuredly more than sufficient to arouse a feeling of doubt in the mind of a juryman summoned to decide the fate of a fellow-creature, or to make a philosopher ponder over the

existence of free will, or to alarm the thinking man preoccupied with reflections on an hereafter. Where lies the truth then, amid all these novel ideas? The question suggests the thought, that guided by reason and experience it might be desirable to endeavour to unravel the network of scientific opinions and disentangle the labyrinth of dissertations. From the outset I am prepared to affirm—and later on I shall clearly demonstrate—that free will is not a mere idle word. Formerly, as a medical student in the Paris hospitals, and afterwards as Vice-President of the International Magnetic Congress in 1889, I had access to the best authorities, and have been able personally to test most of the assertions which have been put forward, to effectuate some cures, and to form an exact opinion on the different phenomena. I have interrogated the much decried magnetizer, the humble practitioner and the learned academician; and the book I now offer to the public is the result of my numerous observations and interrogatories.

Facts that seem still to pertain to the domain of the marvellous, speculative experiments, and complex hypotheses are all herein recorded. In these cases, however, I shall confine myself to the part of a faithful historian of the facts and experiments of others, quoting the sources and authorities on which they rely and leaving to them all the responsibility and merit of their labours. But I remain—and I emphatically repeat this—absolutely affirmative on the question of free will, which, notwithstanding everything said to the contrary, remains intact.

Were it only from this point of view, it would appear that a popular work on hypnotism was called for; and when we further take into consideration the cures that may be effected and the dangers that may be avoided by a certain degree of acquaintance with hypnotic phenomena, it indeed seems almost indispensable.

The following cases prove that this need exists.

I was recently sent for to attend a patient suffering from lethargic attacks. I proposed that in the presence of the family I should induce artificial sleep, having in identical cases met with the very best results. Ignorant, although they lived in Paris, of this new therapeutic agent, they no doubt took me for a charlatan, for I was never called in again, and the young girl probably still continues for whole days in a lethargic state, to the despair of her relatives.

The second case was even more serious.

A young girl suffering from an acute attack of nervous suffocation was brought to one of the principal hospitals in Paris; an eminent surgeon, fearful lest she should suddenly expire, without a moment's hesitation performed the operation of tracheotomy. Had he simply induced artificial sleep, her breathing would at once have resumed its normal condition.

These facts speak eloquently enough in favour of the study I have undertaken without dwelling any longer on its importance, which I have no desire to exaggerate, for we must bear in mind that the phenomena presented by hypnotism are always exceptions. If, however, I succeed in interesting the general public, in reassuring timid consciences, and in effecting some cures, my efforts will be amply repaid.

DR. FOVEAU DE COURMELLES.

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HYPNOTISM.

CHAPTER I.

THE GENESIS OF HYPNOTISM.

HYPNOTISM is as old as the world, for although its name is of recent date, it is no other than the scientific word for magnetism. In whatever quarter we direct our researches, whether it be in dusty old manuscripts or deciphering hieroglyphics, we find the indelible traces of the influence of man over man.

The Temple of Isis, dedicated to Nature, reveals in its ideological figures—figures, that is, expressing ideas—that a state of trance was known to the Egyptians. On the zodiac in the arched vault of the Temple at Denderah, Isis is depicted holding a child by the hand, while she passes her other hand in front of him in the attitude of a magnetizer. Diodorus of Sicily writes: "The Egyptian priests were wont to assert that Isis deigned to manifest herself to men during their sleep to inform them of the different remedies and methods of healing; and that by implicitly

following her counsels patients despaired of by the doctors were saved."

Prosper Alpinus, in his treatise on the Egyptian practice of medicine, mentions their mysterious chafing and rubbing, and their dreams.

In India, mythology represents Vishnu with flames issuing from his finger-ends. Some modern subjects indeed, affirm that they see blue or violet-coloured flames issuing from the experimentalist; the same thing no doubt took place in the days of Vishnu.

Hippocrates believed in somnambulistic powers. We find ancient writers continually referring to similar beliefs, and while we are willing to admit that credulity played a very important part in such matters, it is impossible to deny that certain subjects did present an unusually abnormal condition, well calculated to impress the beholder. It is also well known that exhibitions were got up and surrounded by a certain amount of charlatanism, for Aristophanes openly derided the wizards of the olden days.

The history of the middle ages is full of similar narratives. A state of insensibility, stigmas, witch-craft and the exorcisms of the priest Gasner in 1772, demonstrate in an undeniable manner the existence of magnetism.

The following are the names of the most trustworthy experimentalists of that early period: Cardan, who mentions a state of insensibility produced by a

magnet; Paracelsus, who asserts his theory of double magnetism, and shows that the magnetic fluid of a healthy body attracts the weaker and deteriorated magnet of an unhealthy one; so also do Glocenius, Burgraeve, Helinotius, Robert Fludd, Father Kircher and Maxwell, in the sixteenth and seventeenth centuries. These latter considered that the magnet was endowed with the principle of existence. A great number of more or less hazy works, full of abstract terms, often misunderstood by those who employed them, have been handed down to posterity, and they all show the influence of that passionate love of the marvellous which humanity seems unable to shake off. It would seem, indeed, from all past experience, and even judging from the present state of society, that an irresistible attraction draws us towards the study of the occult sciences at the close of each century; then the attraction dies away and vanishes, to rejoin the forgotten bygone ages that have preceded it.

The close of the eighteenth century, filled as it was with a feverish and mystical activity, proved no exception to the rule. A worldly-minded generation, overflowing with nervous temperament, and over-excited by the expectation of some great event, was inevitably destined to produce such a man as Mesmer.

In this name, full of magic reminiscences, our waning nineteenth century sees one who has been

cruelly traduced, and is almost ready to worship him. His name is to be rehabilitated, and the charlatan of former days is very near being transformed into the great man of the present time.

Mesmer is proclaimed the creator of scientific magnetism, the scholar who has given us the fruitful inheritance now become hypnotism; whose ideas and labours have led to vast researches—researches and discoveries that we are about to analyse in this book.

Antoine Mesmer was born in Germany in 1734. At an early age his thoughts were turned towards the unknown and unfathomable, for we find him at the age of thirty-two discussing, before the Faculty of Vienna, his thesis for the degree of Doctor of Medicine, and the subject he had chosen was "The influence of the stars and planets as curative powers." We must suppose that the examiners shared his mystic aspirations, for it is extremely doubtful, to say the least, whether in the present day the choice of such a subject would obtain for its propounder the degree of Doctor in Medicine.

Mesmer argued that the sun, moon, and stars acted on the human body by means of a subtle fluid, which he called animal magnetism, in order to point out its affinity with the magnet. A few years later the young doctor fell in with Father Hell, a Jesuit, who cured diseases by means of magnetized iron. He perceived at once the similarity of experiments, and tried the magnet, and soon the Viennese newspapers were full of accounts of his numerous cures. Ostervald, director of the Academy of Science at Munich, who was suffering from paralysis, and Bauer, professor of mathematics, who was afflicted by persistent ophthalmia, both declared themselves cured by his system.

Orthodox men of science were disposed individually to recognise the new therapeutic agent, but collectively, as a medical corporation, they rejected it. Mesmer soon, however, abandoned the use of the magnet, and confined himself to the imposition of hands.

For some reason unknown to us, Mesmer was obliged to quit Vienna; he then came to Paris, and was fortunate enough to convert to his ideas d'Eslon, the Comte d'Artois' physician and one of the medical professors at the Faculty of Medicine. His success was very great; everybody was anxious to be magnetized, and the lucky Viennese doctor was soon obliged to call in assistants. Deleuze, the librarian at the Jardin des Plantes, who has been called the Hippocrates of magnetism, has left the following account of Mesmer's experiments:

"In the middle of a large room stood an oak tub, four or five feet in diameter and one foot deep; it was closed by a lid made in two pieces, and encased in another tub or bucket. At the bottom of the tub a

number of bottles were laid in convergent rows, so that the neck of each bottle turned towards the centre. Other bottles filled with magnetized water tightly corked down, were laid in divergent rows with their necks turned outwards. Several rows were thus piled up, and the apparatus was then pronounced to be at high pressure. The tub was filled with water, to which was sometimes added powdered glass and iron filings. There were also some dry tubs, that is, prepared in the same manner, but without any additional water. The lid was perforated to admit of the passage of movable bent iron rods, which could be applied to the different parts of the patients' bodies. A long rope was also fastened to a ring in the lid, and this the patients placed loosely round their limbs. No diseases offensive to the sight were treated, such as sores, wens, or deformities. The patients then drew near to each other, touching hands, arms, knees or feet. The handsomest, youngest and most robust magnetizers held also an iron rod with which they touched the dilatory or stubborn patients. The rods and ropes had all undergone a preparation, and in a very short space of time the patients felt the magnetic influence. The women, being the most easily affected, were almost at once seized with fits of yawning and stretching; their eyes closed, their legs gave way, and they seemed to suffocate. In vain did musical glasses and harmonicas resound, the piano and voices re-echo.



MESMER'S TUB.

these supposed aids only seemed to increase the patients' convulsive movements. Sardonic laughter, piteous moans and torrents of tears burst forth on all sides. The bodies were thrown back in spasmodic jerks, the respirations sounded like death rattles, the most terrifying symptoms were exhibited. Then suddenly the actors of this strange scene would frantically or rapturously rush towards each other, either rejoicing and embracing or thrusting away their neighbours with every appearance of horror.

"Another room was padded and presented a different spectacle. There women beat their heads against the wadded walls or rolled on the cushion-covered floor, in fits of suffocation. In the midst of this panting, quivering throng, Mesmer, dressed in a lilac coat, moved about, extending a magic wand towards the least suffering, halting in front of the most violently excited and gazing steadily into their eyes, while he held both their hands in his, bringing the middle fingers in immediate contact, to establish the communication. At another moment he would, by a motion of open hands and extended fingers, operate with the great current, crossing and uncrossing his arms with wonderful rapidity to make the final passes."

Bailly was also an eye-witness of these scenes, and he dwells upon the influence of the magnetizer, and how a word, a glance or a sign of his could rouse the patients from their somnolence.

These Demoniacal Convulsions, as they were called, attracted a number of fine ladies and youthful idlers, who came to the Austrian thaumaturgist either with a view of obtaining relief, or to experience a new sensation. The exasperations and nervous attacks that frequently took place, soon roused public opinion and alarmed its conscience. Intoxicated by success, and his surroundings, Mesmer was led away from his real vocation: the healing of the sick by human magnetism; and although a real student at the outset of his career, he ended by becoming nothing but a charlatan, and lost both himself and his cause. There can be no doubt that all these scenes, ostentatiously and noisily got up by Mesmer and his imitators, threw discredit on the word magnetizer, which for most people became synonymous with charlatan. It would however be unjust to confound them with real conscientious magnetizers whose labours have advanced science and therapeutics, and amongst whom we can count many learned physicians. A reaction has moreover set in in their favour, and a new name, not discredited like the other—that of magnetist, is being substituted for the old one.

As for Mesmer, his too great popularity led to a reaction under which he was bound to succumb. He had left the Place Vendôme—not a fashionable quarter of the town in those days—and bought the Hôtel Bullion in the Place de la Bourse. While

there he was induced to magnetize a tree, at the end of the rue de Bondy, and thousands of sick people came and had themselves fastened to it, in the vain hope of cure.

This was his apogce, the Capitol so nigh to the Tarpeian Rock. The Academies, when requested by Mesmer to investigate his experiments, declared themselves unable to agree; and the Royal Society of Medicine threatened to crase d'Eslon's name if he did not cease supporting Mesmer.

While the discussions were taking place Mesmer left Paris; he however soon returned there and began to teach his system of magnetism with a financial end in view only. However, he and his pupils disagreed, and in 1784, the government deemed it advisable to interfere.

Two commissions were named, one composed of members of the Faculty of Medicine and of the Academy of Science (Franklin and Lavoisier, with Bailly as chairman); the other, of the members of the Royal Society of Medicine (Laurent de Jussieu).

Binet and Féré, in their book on animal magnetism write: "It is interesting to peruse the reports of these commissions; they read like a debate on some obscure subject of which the future has partly revealed the secret."

They sought for the fluid, not by the study of the cures effected, which was considered too complicated

a task, but in the phases of mesmeric sleep. These were considered indispensable and easily regulated by the experimentalist. When submitted to close investigation, it was however found that they could only be induced when the subjects knew that they were being magnetised, and that they differed according as they were conducted in public or in private. In shortwhether it be a coincidence or the truth—imagination was considered the sole active agent. Whereon d'Eslon remarked; "If imagination is the best cure, why should we not use the imagination as a curative means?" Did he, who had so vaunted the existence of the fluid, mean by this to deny its existence, or was it not rather a satirical way of saying, "You choose to call it imagination, be it so; but after all, as it cures, let us make use of it." This second hypothesis seems the true one. The two commissions came to the conclusion that the phenomena were due to imitation, imagination and contact, that they were dangerous and must be prohibited. Strange to relate, seventy years later, Arago pronounced the same verdict!

In 1784, Laurent de Jussieu was the only member of the commissions who discerned anything more than imagination in the *Demoniacal Convulsions*. He believed in a fertile but nascent truth, and absolutely refused to agree with his colleagues' conclusions.

Doctor Pététin, life President of the Society of

Medicine at Lyons, an adversary of the new ideas, noted however in 1787 seven cases of catalepsy and transposition of senses. Later on, a pupil of Doctor Mesmer, the Marquis Chastenet de Puységur, attracted all the scientific world to Buzaney, near Soissons. where he obtained most remarkable results. Doctor Cloquet relates that he saw there, patients no longer the victims of violent hysterical fits, but enjoying a ealm, peaceful, restorative and silent slumber. It may be said that from this moment, really efficacious and useful magnetism became known. had resuscitated magnetism; public opinion became infatuated once more about this new agent that was to be the gratuitous means of curing mankind. Puységur's "tree," impregnated with the fluid, was touched by hundreds of persons who came from all parts, and the effects were most beneficial. Mesmer had also noticed that sleep could be induced without convulsions, but he had refused to act upon the suggestion. The learned naturalist Deleuze wrote, in 1813, the "Histoire critique du Magnétisme animal," which sums up the question as it stood at that period, and, notwithstanding all the alleged discoveries that so many fancy they make in the magnetic world, no. more complete or thorough work has been written on the subject.

In 1820 Dr. Bertrand, formerly a cadet at the École Polytechnique, held a course of public lectures

on magnetism, and orthodox science now took up the interesting question. Dr. Husson at the Hôtel-Dieu; Dr. Georget and Dr. Rostan at the Salpêtrière, induced Baron du Potet to perform experiments in their different wards; but the patients, whose habitual propensity it is to deceive and to say that they have taken in the doctors, were unfortunately listened to.

In 1825 Dr. Foissac persuaded the Academy of Medicine to take up the subject, and Husson the reporter admitted in his conclusions that magnetism did exist:—

"Considered either as an agent of physiological phenomena or as a curative means," said the members of the commission, "magnetism must be allotted a place in medical knowledge; consequently doctors alone must make use of it, or at least superintend its application. The commission has collected and noted down facts important enough to warrant the Academy's authorising the study of magnetism as a serious branch of psychology and natural history."

The above declaration was signed by:—Bourdois, De la Motte, Fouquier, Guéneau de Mussy, Guersant, Itard, J. Leroux, Marc, Thillaye, and Husson reporter.

The Academy, however, astonished at this report, refused to commit itself in June, 1831, and again in 1837, still in search of the miraculous and failing to find it, concluded on the non-existence of magnetism



PUYSÉGUR'S TREE.

But magnetism is now in the hands of honest men, and has not again gone astray. It is of course open to doubt, and its partisans may even be considered mad, but with the exception of Mesmer's cupidity none of its adherents have been swayed by mercenary motives. Puységur indeed offered a striking contrast to Mesmer, and avoided all public exhibitions and everything that could affect the imagination, never choosing special subjects, but experimenting on peasants—male or female—afflicted with stubborn and matter of fact diseases. He however admitted the marvellous and believed in somnambulistic lucidity.

Although the prize of 3,000 francs (one hundred and twenty pounds), founded in 1837, by Burdin, a member of the Academy of Medicine, and offered to any one who would under certain scientific guarantees, be able to read with his or her eyes blindfolded, has never been awarded, this phenomenon often takes place—strange to say—when away from any learned body. "Somnambulists," Binet and Féré remark, "continued to see through opaque bodies, to predict the future, and to prescribe remedies, as though the Academy had not pronounced its verdict."

About the same period, Baron du Potet invented the magic mirror which convulsed so many people. The famous magnetiser first traced on the floor with a bit of charcoal, a complete and blackened circle. The

subject drew near and then receded, looking alternately at the spectators and at the circle: "Soon, writes du Potet, "the effect is visible. The subject's head is lowered, his whole person becomes uneasy, he turns round and round the circle without taking his eyes off it, then bends lower, rises again, draws back a few steps, then advances again, frowns, looks morose and gloomy, and breathes heavily. The most curious scene then follows. The subject without doubt sees images reflected in the mirror, for his perturbation, his emotion, his strange motions, his sobs, tears, anger, despair, and fury all prove the disorder and agitation of his mind. For him it is no dream nor night mare; the apparitions are realities, and a series of future events represented by figures and signs that he understands, unfold themselves before him, filling him in turn with joy or sadness as they pass before his eyes. Soon he is seized with a transport of frenzy, strives to lay hold of the phantoms, and dashing forward stamps with his foot on the blackened circle. the dust flies up, and the operator now approaches and puts an end to this dramatic performance, so full of excitement and terror."

In all this du Potet fancied he saw magic; but, hypnotism obtained by physical means brings about the same results.

It was at the same period, that spiritism (table-turning, spirit-rapping, etc.) made its appearance.

Father Lacordaire, from the pulpit of Notre Dame, acknowledged the existence of magnetism: "Wrapped in a fictitious sleep," he said, "man sees through opaque bodies; he is able to indicate remedies that heal, and appears to know things he knew not while awake."

The enthusiasm now became universal; the new ideas found disciples even amongst the clergy, and an encyclical letter from the Holy Inquisition was addressed to the Roman Catholic Bishops (30th July, 1856) warning them against the errors and dangers of magnetism.



CHAPTER II.

THE SCHOOL OF THE SALPÉTRIÈRE AND ITS ORIGIN.

It has been shown how magnetism rose, prospered and fell. Not once, however, has the word hypnotism been pronounced, and yet it is this very hypnotism, which under the name of animal magnetism has been tossed to and fro, sometimes held in high repute and sometimes scouted, undergoing the most varied destinies without ever having been passed through the sieve, as it were, of a thorough, sagacious, scientific scrutiny. Upheld by earnest but enthusiastic men, it has chiefly owed its success to the marvellous that surrounded it. It was now necessary to free it from these useless and mischievous trammels in order to restore its credibility. Under its earlier name this rehabilitation would have been almost impossible, for although justice should be done to those who carefully preserved the vital spark of magnetism, and the belief in its future development, their errors, illusions. and indeed, the easy triumphs and questionable practices they indulged in, were calculated only to discredit it.

It has often been asked why the name given to sleep induced by artificial means has been changed, and why scientific men use the word hypnotism for what is nothing more than animal magnetism. Are we to see in this a desire to hide how much they have borrowed? At first sight this might seem to be the case; such an assumption would however be utterly wrong. Hypnotism is one thing, and magnetism is another. The earlier discovery is due to Mesmer and his predecessors; the second, hypnotism—an offshoot of the other—is due to Doctor James Braid, a Manchester surgeon.

Braid, however, did not seek to deny magnetism, for he wrote as follows in his book on "Neurypnology." "For a long time I believed the phenomena produced by my experiments and those produced by the mesmerists to be identical; and after a close investigation, I have come to the conclusion that there is a certain analogy in the effects produced on the nervous system. Nevertheless, and judging from the effects magnetizers declare they have obtained in certain cases, there seems to be enough differentia to lead one to consider hypnotism and mesmerism as two distinct agents."

Braid was the forcrunner of our actual hypnotizers, and more particularly of the School of the Salpêtrière. His discovery was made in the following manner:

In November, 1841, he witnessed a public experi-

ment made by Monsieur Lafontaine, a Swiss magnetizer. He thought the whole thing a comedy; a week after, he attended a second exhibition, saw that the patient could not open his eyes, and concluded that this was ascribable to some physical cause. The fixity of gaze, must, according to him, exhaust and paralyse the nerve centres of the eyes and their surroundings. He made a friend look steadily at the neck of a bottle and his own wife look at an ornamentation on the top of a china sugar bowl; sleep was the consequence. Here hypnotism had its origin, and the fact was established, that sleep could be induced by physical agents. This, it must be remembered, is the essential difference between these two classes of phenomena; for magnetism supposes a direct action of the magnetizer on the magnetized subject: an action which does not exist in hypnotism. This distinction is not generally made, hence the confusion between the two methods. Whenever the word hypnotism is therefore employed, the reader must remember that it is sleep induced by physical agents that is understood, that is to say sleep obtained by fixing the gaze on some object (as Braid discovered) or by some sudden sound, like that of a Chinese gong (such as is used at the Salpêtrière). When, on the other hand, the word magnetism is employed, it will be understood that reference is made to a subject passing from a waking condition into that of sleep, owing to the personal action of the experimentalist on the experimentized. This latter explanation is not yet scientifically accepted as an absolute fact, but it will be shown, by the valuable facts and opinions set out in this work, that it must be taken into due consideration, independently of the undeniable influence exercised by the imagination and the frequent and unavoidable intermingling of hypnotic and magnetic actions.

Braid without doubt discovered a new method, and a new science, but he certainly was not so absolute in his denial of magnetic power as has since been asserted. He noted down the attitudes retained during eatalepsy, the power of a puff of breath to awaken, the different phases in sleep, verbal suggestion and suggestion when in the waking state. Unfortunately he enumerates all these phenomena confusedly, pell-mell, without any distinction of period. Binet and Féré, Professor Charcot's pupils, write as follows: "This omission on the part of Braid is supplied by the Salpêtrière School, which points out that hypnotism is a nervous condition presenting characteristics so varied in their intensity, if not in their nature, that several distinct phases or degrees have been recognized during which the subject reacts differently."

Braid thought he could localise the mental faculties in certain parts of the brain; and that by touching certain places on the head of a hypnotized subject,



BRAID'S FIRST HYPNOTISATION.

he could at his choice awaken either a thieving propensity or a feeling of veneration, and piety, &c. Such phenomena may as easily be considered the result of a real action as that of unconscious suggestion.

Braid being a medical man, at once thought of making use of hypnotism as a curative means, and he has left notes of several cures effected in cases of diseases of the eye, tic-douloureux, nervous cephalalgy, epilepsy, &c., &c. Public opinion was however not prepared to accept this scientific novelty. Braid and Carpenter failed to get a recognition from the British medical department in 1842, and an investigation of their experiments was refused. Braid, with the true perseverance that characterizes an innovator, continued however his labours.

In America, in 1848, Grimes obtained both in the waking state and by verbal suggestion, all the phenomena of hypnotism. This *electro-biology* met for a time with a certain success.

In France, extracts from Braid's works were published by Littré and Robin, by Robin and Béraud, and by Monsieur Meunier in an article in the *Presse*, but they failed to attract any notice. It was only in 1859 that Professor Azam, of the Faculty of Medicine at Bordeaux, repeated Braid's experiments and published the results in the *Archivės de Médecine*; he particularly mentioned a state of general anæsthesia.

Several surgical operations were at that time performed while the patients were under the influence of hypnotic sleep. Doctor Demarquay, Doctor Giraud Teulon, Doctor Gigot Suard, the Doctors Liébeault, Philips (Durand de Gros), Mesnet (1860), and Lasègue (1865) carried on at that time their studies and experiments.

Doctor Philips, both in his writings and in a series of public conferences, mostly held in Belgium, brought forward one particular theory. He held that the nerve force non-utilised by thought during sleep was accumulative, and that a stimulated or excited sense acted on a special part of the brain; so that a mental impression produced the same effect as a sensitory impression. In 1866 Doctor Liébeault, the founder of the School of Nancy, put forth a similar theory.

Since then, Baillis in 1868, Pau de Saint-Martin in 1869, Mathias Duval in 1874, and Dechambre in 1874, have treated this question, the last declaring that animal magnetism did not exist. Lastly, in 1875, Monsieur Ch. Richet published, in the Journal de l'anatomie et de la physiologie, his experiments in hypnotism made while he was house surgeon in the hospitals.

Doctor Dumontpallier, physician at the hospital of the Hôtel-Dieu, and President of the first International Congress on Hypnotism held in 1889, gives the following account of the first researches which lent an impetus to the new science.

In 1876, a man who thought himself dying, wrote to the great physiologist, Claude Bernard, saying that he would like to ascertain before he died whether he had deceived himself about certain facts that had been under his observation for the last twenty-five years. Claude Bernard, who was President of the Biological Society, considered that the request was suggested by a very creditable and justifiable sentiment, and at once acceded to the demand. A commission was named, composed of Messieurs Charcot and Luys, with Dumontpallier as reporter. After a series of experiments which extended over more than a year, they confirmed the metalo-therapeutic theory discovered by Doctor Burg.

His discovery had been made in the following way:

While practising as a young doctor, he had one day been obliged to go out, and had deemed it advisable to lock up a patient in his absence. Just as he was leaving the house he heard the sound as of a body suddenly falling. He hurried back into the room and found his patient in a state of catalepsy. Monsieur Burq was at that time studying magnetism, and he at once sought for the cause of this phenomenon. noticed that the door-handle was of copper. next day he wrapped a glove round the handle, again shut the patient in, and this time nothing occurred. He interrogated the patient, but she could give no explanation. He then tried the effect of copper on all the subjects at the Salpêtrière and the Cochin hospitals, and found that a great number were affected by it.

He was thus able to restore sensitiveness to some who had been deprived of it for many months. At the Salpêtrière the female patients were employed at needlework and Burq gave them copper thimbles. Then he heard by chance that one of the patients who used a steel thimble had recovered her sensitivity. From that day metaloscopy was established, and Burq experimentalized with all the different metals, and found out their different action.

Magnetism had led to this important discovery, and the authentication of it recalled to mind the forgotten theories of Braid.

Doctor Dumontpallier who recognises in Burq a conscientious and intelligent inquirer considers him the promoter—perhaps unconsciously so—of the revival of hypnotism. Burq, however, held his peace. The mere mention of magnetism would have deprived him of his practice and probably have doomed his discovery. He had already learned this to his cost, for, at the outset, he had been scoffed at and derided, and been very nearly turned out of the hospitals.

He was also the inventor of scales that would weigh with the same precision either a hundredweight or an infinitesimal quantity, but being an unassuming and retiring man, he led the precarious and struggling existence that is the common lot of inventors. It was indeed only when he fancied he was dying that he ventured to court publicity; he however lived for some years after.

The experiments were renewed at the Salpêtrière, and Charcot was led to adopt Burg's theory by the following circumstance.

One day as he was going his rounds at the hospital, he received the visit of several English doctors, who, in the course of a discussion insisted on the great difference that existed in neurotic diseases in England and in France. Anæsthesia, more especially, they urged, presented the greatest differences. The eminent doctor, in order to demonstrate his argument, suddenly pricked the arm of an habitually insensible patient. But to his intense surprise the patient screamed with pain, at which the English medical men exchanged glances of undisguised satisfaction. Charcot, anxious to clear up the mystery, if mystery there was, made a thorough examination, and discovered that Burg had played the harmless joke of applying a gold plate to the patient's arm, and thereby restored the sensibility which for some years past had disappeared. Charcot then seriously joined in the labours of the commission on metalo-therapy, and was soon convinced like the others of its truth.

On a certain Sunday morning, Vulpian, who was sceptically disposed, went to see Dumontpallier's experiments at the Salpêtrière. The first attempt proved negative in results. The metal plate-which was wrapped up in linen-was taken off the patient, and at the experimenter's request, placed by Vulpian in his pocket; copper was then tried and sensibility restored. The first plate was then examined and found to be in gold, a metal that did not affect this particular patient. In this case, no error could exist. The effect produced could not be due to imagination, as the patient who was expecting some sensation ought to have been affected in both cases; nor could it be caused by the unconscious suggestion of the operator. for the results would have been similar; neither could it be attributed to the influence of the incredulous spectator, for in that case, the experiment was bound to fail in both cases. It was therefore evident that a real action had taken place. All the reports of the Biological Society unanimously agreed on this point. These details show what searching investigations must be made in establishing scientific data

In 1878 Professor Charcot and his pupils began a series of experiments, and started a new scientific



A LECTURE AT THE SALPÉTRIÈRE.

movement which continues to the present day. Many itinerant magnetizers popularized and thereby made known Burg's experiments; some indeed acquired a certain notoriety, their public exhibitions and the dangers attributed to them, leading to a closer and very necessary supervision. Donato, a Belgian, Hansen a Dane, and Durville, Alf. Reybaud, and Auffinger, all Frenchmen, attracted large crowds, and, notwithstanding the prohibitions imposed, the enthusiasm they evoked for the new ideas has not diminished; the impulse came from too great an authority.

Monsieur Charcot was fortunate enough not only to rehabilitate hypnotism, but amply avenged the academic misadventures it had undergone by an essay he presented to the Academy of Science in 1882, "On the distinct nosography of the different phases comprised under the name of hypnotism." His lectures at the Salpêtrière have also greatly contributed to rally physicians to the cause of hypnotism.

Since then the study of hypnotism has been closely followed up, and numerous experiments both at the Salpêtrière and the Charité, in Paris; at Nancy, and abroad have been made.

The following are the principal writers on the subject:

At the Salpêtrière: Charcot and his pupils, Binet and Féré, Gilles de la Tourette and Babinski; Luys and his pupils, Bottey, L. R. Regnier, de Grandchamps and myself at the Charité; Liébeault, Bernheim, Beaunis, and Liégeois at Nancy; Dumontpallier at the Hotel Dieu in Paris; Heidenhain, Grützner, Berger, Baumler, Preyer, Schneider, Ladame, Tamburini, Seppili, Lombroso and Hack-Tuke abroad.

In this list, advocates and opponents are mingled, but this arises from the circumstance that the predominance of the School of the Salpêtrière is a recognized fact, due to its chief being a member of the Institut (Academy of Science section). This learned body is justly considered as the origin of knowledge, the vivifying artery from whence it flows; it is not therefore very surprising that once hypnotism has been admitted-in the person of its chief exponent-within its precincts, its existence and effects should have been acknowledged. Without doubt the phenomena would in time have been accepted, but its acceptance has been more rapid from the powerful protection accorded to the study of sleep induced by artificial means; a protection that could be efficacious only when given by a master devoted to these special studies and occupying a high position in the scientific world.

It is also the Salpêtrière School that first had the idea of classifying the different phases of hypnotic sleep into the lethargic, cataleptic and somnambulistic stages, a classification denied by the School of Nancy

CHAPTER III.

THE SCHOOL OF NANCY.

DR. LIEBEAULT, who is justly considered the founder of the School of Nancy, has not always enjoyed his present renown, nor the esteem that is now legitimately accorded him.

At the outset, in 1866, the opinions he held were received with incredulity. "His practice appeared so strange that the doctors dismissed it without enquiry and Dr. Liébeault kept entirely aloof from the medical profession, absorbed in his studies and devoting himself to his patients, mostly recruited from among the poorer class." (Bernheim).

Monsieur Delbœuf, professor at the University of Liège, gave, in 1889, the following account of Dr. Liébeault's life, which is interesting, not only because it gives us a description of the learned man, but more especially because it shows how scientific renown is attained in our day.

"Monsieur Liebeault was born September 17th 1823 at Favières, a village about thirty miles from Nancy, in the department of Meurthe. Of small stature and brisk gesture, he has a forehead deeply furrowed by horizontal lines, crossed by others that start fan-ways from the root of the nose. With a

complexion tanned like that of a peasant, a bright and quick eye, a hurried and resonant voice, he has an open countenance, a mixture of gravity and simplicity, of authority and gentleness; the gaiety of a child and something of the calm of a priest about him. Moreover he is an apostle, an apostle who has sacrificed everything—fortune, consideration and comfort—for his belief. He never stirs out, and even in his own town is so ignorant of the very names of the streets that he is frequently obliged to ask his way, and has been known to wander about unable to find the railway station. Indeed his appearance is little known to the inhabitants of Nancy, but his name is famous among the poor for thirty miles around."

The son of peasants, he first studied for the priest-hood, but afterwards became medical student at the University of Strasbourg. In 1848 he read something—he hardly remembers what—on magnetism, and was at once struck with the dilemma that was suggested: the difficulty of being neither duped nor cheated by the subjects. He sought for a book on it, and a subject; and having found both became convinced of the efficacy of the method. He was at that time (1850) doctor in medicine, and settled at Port-Saint-Vincent, about eight miles from Nancy, and in good pre One day, as he proposed to magnetize the epidaughter of a farmer, the latter made this discouraging reply: "This is a new-fangled idea, you know how such innovations are looked upon, especially in the

country, you will lose all your clients." Liébeault for ten years had laid aside his work of predilection, when he was again roused to action by the perusal of a pamphlet by Velpeau, upon Dr. Azam's experiments at Bordeaux. He then came to Nancy, settled there and attended gratuitously all who chose to try the new method of treatment, and finally in 1866 published his book on "Sleep and analogous conditions specially considered in regard to the influence of mental or physical action."

Since then, time has progressed and hypnotism has also advanced; Dr. Liébeault is now well known, France claims him as one of her celebrities and all he says and writes is accepted. Success has not changed him, his innate modesty will not, unfortunately, permit our offering his likeness to the reader, for he refuses to be photographed, saying that "photographs of clinics or doctors do not add to the value and reputation of a school." Dr. Liébeault's pupils have revealed him to the world of science; it is they who have quoted him, and by their own authority have imposed him on public attention. Among the most distinguished are: Professor Liégeois, of the Faculty of Law, who loudly expresses his regret that his master's book is too dear, and therefore not sufficiently popularized; and Professors Bernheim and Beaunis, both eminent physiologists of the Faculty of Medicine.

Dr. Liébeault's clients are generally desperate cases, either too incredulous or too sanguine; this is the

usual fate of practitioners experimentalising a new system. His modus faciendi—and this characterises the method in use at the School of Nancy—"has," says Professor Delbœuf, "something ingenious and simple about it, enhanced by a tone and air of profound conviction; and his voice has such fervour and warmth that he carries away his clients with him.

"After having inquired of the patient what he is suffering from, without any further or closer examination, he places his hand on the patient's forehead and scarcely looking at him, says: 'You are going to sleep.' Then, almost immediately he closes the eyelids, telling him he is asleep. After that he raises the patient's arm, and says: 'You cannot put your arm down.' If he does, Dr. Liébeault appears hardly to notice it. He then turns the patient's arms round, confidently affirming that the movement cannot be stopped, and saying this, he turns his own arms rapidly round, the patient remaining all the time with his eyes shut; then the doctor talks on without ceasing in a loud and commanding voice. The suggestions begin: 'You are going to be cured; your digestion will be good, your sleep quiet, your cough will stop, your circulation become free and regular: you are going to feel very strong and well, you will be able to walk about,' etc. etc. He hardly ever varies this speech. Thus he fires away at every kind of disease at once, leaving it to the client to find out his own. No doubt he gives some special directions.

according to the disease the patient is suffering from, but general instructions are the chief thing.

"The same suggestions are repeated a great many times to the same person, and, strange to say, notwithstanding the inevitable monotony of his speeches, and the uniformity of both style and voice, the master's tone is so ardent, so penetrating, and so sympathetic, that I have never once listened to it without a feeling of intense admiration."

The school of Nancy does not admit that there are distinct phases in this artificial sleep, but only different degrees that determine its intensity. It is owing to this opinion that the school is said only to practise the lesser or minor hypnotism; whereas that of the Salpêtrière studies the greater hypnotism. This is indeed a mere question of words. In the first degree, there is numbness, heaviness of eyelids, somnolence; sometimes even the subject being unable to open his eyes. In the second degree, the eyelids remain closed, the limbs stiff, in a state of catalepsy, the uplifted arm remaining upraised. In the third degree the automatic movements suggested continue in spite of the subject, the insensibility being greater or lesser according to his state.

Like its Paris rival, the School of Nancy is far from being unanimous in its opinions.

For instance, Dr. Liébeault believes in the efficacy of magnetised water as a curative means, that is, water into which the practitioner (founder of the school), has dipped his fingers; and when he first noticed the influence this liquid had upon young children of a few weeks or a few months old, he—the adept and apostle of the theory of suggestion—felt his convictions shaken. He began to doubt whether suggestion was indeed the final expression of hypnotism, and whether the fluid theory ought to be definitively set aside. Professor Beaunis has expressed somewhat similar doubts.

Professor Bernheim clings to his own system, "which would lead one to suppose," as Monsieur Delbœuf says, "that he is ready to admit that very young children are possessed of sufficient suggestibility and understanding to know that they are ill, and that the gentleman in front of them talking to their mother has the power and will to relieve them."

Monsieur Delbœuf gives the following description of the professor: "Monsieur Bernheim is an Israelite, and of the Jewish type. He is small, stout, with regular and slightly aquiline nose; grey hair, sharp, intelligent grey eyes, military-cut moustaches and pointed beard; and a voice at once caressing, sharp and penetrating."

Monsieur Delbœuf has so thoroughly studied the School of Nancy, that we cannot do better than give his account of Professor Bernheim's mode of suggestion. A robust old man of about seventy-five years of age, paralysed by sciatica that caused him intense pain, was brought to him. "He could not put a foot to the ground without screaming with pain.

'Lie down, my poor friend, I will soon relieve you,' Dr. Bernheim says. 'That is impossible, doctor.' 'You will see.' 'Yes, we shall see; but I tell you we shall see nothing.' On hearing this answer I thought, 'suggestion will be of no use in this case.' The old man looked sullen and stubborn. Strangely enough, he soon went off to sleep, fell into a state of catalepsy, and was insensible when pricked. But when Monsieur Bernheim said to him, 'Now you can walk,' he replied, 'No, I cannot, you are telling me to do an impossible thing.' Although Monsieur Bernheim failed in this instance, I could not but admire his skill. After using every means of persuasion, insinuation and coaxing, he suddenly took up an imperative tone, and in a sharp, abrupt voice, that did not admit a refusal said, 'I tell you, you can walk, get up.' 'Very well,' replied the old fellow; 'I must if you insist upon it.' And he got out of bed. No sooner, however, had his foot touched the floor than he screamed even louder than before. Monsieur Bernheim ordered him to step out, 'You tell me to do what is impossible,' he again replied, and he did not move. He had to be allowed to go to bed again, and the whole time the experiment lasted he maintained an obstinate and ill-tempered air."

The imperative system recalls that of the thaumaturgist Faria, who in 1813 came from India and had some success in Paris. Binet and Féré give us the following account of him: "He made the subject sit down in an armchair and shut his eyes: then he called out in a loud imperious voice: 'Go to sleep!' This charlatan well understood that the cause of somnambulism lies in the subject himself." Perhaps it is rather hazardous to make such a categorical assertion; however, Dr. Luys, in one of his lectures at the Charité in June, 1888, also says: "The hypnotizer is nothing; the hypnotized subject is everything."

Monsieur Bernheim considers that the physical phenomena produced at the Salpêtrière are merely the result of suggestion.

This assertion seems as hazardous as that of the two above quoted pupils of the Salpêtrière, the form only differs.

Monsieur Liégeois—a jurist—is of the same opinion, and Monsieur Delbœuf describes him as follows: "A great walker, with a tall, robust figure, and a slight stoop like most men of his size, he has a defective sight, and gentle, pensive countenance. Tenacious in his ideas, he is ardent, enthusiastic and eloquent, has extremely prepossessing manners; is an carnest freetrader, but is extremely touchy on some points, such as expensive luxuries, which rouse his ire." He admits the idea of criminal suggestion, that is to say, the possibility of implanting the idea of a crime in a deep and lasting enough manner on a subject's mind for him to commit it. Such is not our opinion, but we will impartially set forth the experiments that have been made with a view either of confirming or

invalidating this theory. The School of Nancy denies the real action of physical agents, such as magnets for instance, in producing phenomena, emotions or contractions; nevertheless the School of Paris operating with magnets—either concealed or rendered invisible by suggestion—have obtained results in cases where wooden magnets—suggested as real—have produced no effect (Luys, Binet and Féré).

The experiments are often contradictory, and vary with the different operators and subjects; sometimes indeed with the same subject, according to the state of his nervous condition; we are therefore far from being completely enlightened on the question of the psycho-physiological phenomena of hypnotism.

The School of the Salpêtrière has pronounced itself very severely upon the nature of the experiments carried on by the Nancy School. "It appears most strange" (Binet and Féré write) "that at Nancy they have never been able to produce in the sleeping subject contractions by stimulating the nerves, tendons or muscles; Monsieur Richet, however, has often found this very ordinary phenomenon when operating on healthy subjects, and Monsieur Bottey constantly noticed it, whenever he sought for it; Braid himself mentions it several times, and yet Monsieur Bernheim who operates on the same kind of subjects has no knowledge of it. What can be thought of subjects so devoid of a material sign? If it be indeed true that they never offer—whatever excitant may be ap-

plied—any of the physical characteristics of hypnotism, if the phenomena they present are obtained only by suggestion, we must come to the conclusion that none of these subjects furnish us with any scientific proof that they are really asleep. Most assuredly our scepticism is not absolute, we do not assert that the Nancy experimentalists have always had to deal with impostors, and we do not doubt the majority of their periments; but if we were called upon to make a medico-legal examination of one of their particular subjects, we should not be able to decide whether he was sincere or not.

"We are, however, rather disposed to believe that the subjects at Nancy do not differ from those of Paris. In reality the difference does not proceed from the subjects but from the operators; they are due to the mode of culture, and above all to the manner in which the studies are conducted. As we have already stated, the results of the experiments depend on the turn that has been given to them. If suggestion is employed as the sole agent, the results will be only those of suggestion; and this is what has taken place at Nancy. But if the study of the physical characteristics be followed up, they will be found, in some patients at the very outset, and in most cases they will be developed after a sufficient length of time."

This is an admission worth recording, and which serves to uphold our argument:—that is, the preservation of free will in the hypnotic condition.

CHAPTER IV.

THE SCHOOL OF THE HOSPITAL DE LA CHARITÉ.

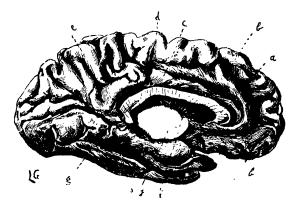
The school of the Hospital de la Charité acts as a kind of connecting link between that of Nancy and the Salpêtrière, accepting as it does both methods and theories. Dr. J. Luys, member of the Academy of Medicine, has performed many curious experiments in this hospital. Both professor and experiments have, however, shared the usual fate of investigators and new ideas, and have been viewed with great suspicion. Emotions produced by physical agents, and the action of medicines not immediately applied, are by no means facts recognized by the scientific world. After examining the different phases of hypnotic sleep, we will relate all the facts as they come under our notice.

Dr. Luys, when physician at the Salpêtrière, was named a member of the commission appointed by the Biological Society to examine Burq's discovery. He was thus enabled to follow up and test on his own patients Charcot's assertions, to form an opinion, and by pushing forward his experiments, to revolutionize the scientific world by his discoveries and their

consequences. The action of physical agents—even at a distance—and of suggestion are both admitted at la Charité. Forces acting outside of these, cannot be included among these factors if we suppose them to be localized in their action.

It is demonstrated in mechanics, that when a force is applied to one important part of a body, the motor power can be displaced, if its own line of tendency be followed, without the equilibrium being disturbed. We are surrounded in nature by a subtle fluid that scientific men call ether, and which is supposed to be imponderable; it would seem possible that this ambient medium—the nature of its substance being unknown—may transmit the perturbations of nerve This is the conclusion that Dr. Luys' theories point to, and in this it is similar to those of magnetizers. The brain nerve cells vibrate under the influence of different causes, why should it be thought that the movement does not extend further than the cranium? That the cranium by its resistance should diminish the motor is very probable, but that it should completely arrest it, without even storing it up or transforming it, seems inadmissible. A force does not destroy itself, movement continues or is modified. If a projectile shot at full speed be suddenly arrested. it becomes heated; friction produces electricity, heat. sound and light. The spread of vibrations runs in Nature in concentric circles; for instance, a stone

falling into water creates around it a series of circles that gradually become larger and larger. Certain obstacles offer a resistance to the force of currents, and these latter choose, if it may be so expressed, the *straight line*, that is to say, the track that offers the least resistance. With a brain in a normal condition,



Brain of an hypnotisable neuropathe.*

we can à priori determine the course it will take. Such is not, however, the case with neuropathes; certain regions are atrophied, others hypertrophied, and all

* This brain is the first and only one that has as yet been submitted to examination. a, b, b, internal frontal circumvolutions; c, calloso-marginal circumvolution; d, paracentral lobe; c, square lobe of exaggerated proportions; f, cuneiform lobule; g, fusiform circumvolution; i, striated part; j, optic layer. Between the anterior and exterior edges of the *Rolando's furrow*, an abnormal triangular lobule was found incrusted. The square lobes are very much developed, especially the left one shown in this drawing.

the natural currents are reversed, or deviated and perturbated. Movements are transmitted in every direction, and the action of man upon man, or of physical agents on human beings may probably act in the same manner.

Although we have not yet entered into the details of hypnotism, that is to say, the actual phenomena of induced sleep, we will, in order not to revert constantly to such or such a school, now give the broad outlines of the special phenomena observed and commended by Dr. J. Luys. Those that are common to all the other schools will be found in their place, in the succeeding chapters.

The hypnotic state, generally produced by the contemplation of a bright spot, a lamp, or the human eye, is in his method induced by a peculiar kind of mirror. The mirrors are made of pieces of wood cut prismatically in which fragments of mirrors are incrusted, they are generally double, and placed crosswise, and by means of clockwork revolve automatically. They are the same as sportsmen use to attract larks, the rays of the sun being caught and reflected on every side and from all points of the horizon. If the little mirrors in each branch are placed in parallel lines in front of a patient, and the rotation is rapid, the optic organ soon becomes fatigued, and a calming, soothing somnolence ensues. At first it is not a deep sleep, the eye-lids are scarcely heavy, the drowsiness

slight and restorative. By degrees, by a species of training, the hypnotic sleep differs more and more from natural sleep, the individual abandons himself more and more completely, and falls into one of the regular phases of hypnotic sleep. Without a word, without a suggestion or any other action, Dr. Luys has made wonderful cures. Wecker, the oculist, has by the same means entirely cured spasms of the eye-lids. Javal, an ophthalmologist, member of the Academy of Medicine, and myself are engaged in researches in the same direction.

This particular and ingenious means of inducing sleep is not Dr. Luys' only find. He has also several methods of exciting emotion in hypnotized subjects, either by placing them in particular positions or by touching certain muscles of the face. He also obtains these results by placing on the neck of the subject, tubes filled with various medicinal substances. A few years ago, Doctors Burot and Bourru, professors at the School of Medicine at Rochefort, drew the attention of scientific men to these facts. At the School of la Charité these experiments were repeated, and recognized as facts, but on being brought before the Academy of Medicine, and submitted to the investigations of a special commission, they were finally rejected. Notwithstanding this, we will now proceed to give a short account of these experiments as carried on by Dr. Luys.

If an hermetically scaled tube containing a medicine unknown to the subject is placed in contact with the neck, an effect varying according to each substance is produced. Thus alcohol produces merry or furious



Subject under the influence of a tube containing alcohol.

drunkenness, according as it is distilled from corn or from wine; water produces hydrophobia; ipecac. vomiting; oil of cherry-laurel, ecstasy and piety; nitro-benzole convulsive shocks through the whole body; valerian, feline movements and crawling on all fours; etc.

There have even been cases that have acted as involuntary tests; for instance, some tubes were brought in at haphazard, and the opera-

tor, thinking he had one kind of medicine, was astonished to see it produce the effects of another substance. On examination it was found that the experimentalist had made a mistake, and that the subject was right. The idea of suggestion must therefore in this case be set aside.

On the other hand, I heard, in June, 1887, Dr. Jules Voisin, physician at the Salpêtrière, relate that

he had produced the known effects on his subjects by saving out loud which substance he was using, while in reality he only made use of empty tubes. And a fortnight later, repeating his experiment without saying anything, he obtained the same series of phenomena, exactly in the same



Terror under the influence of water.

order. He therefore concluded that the action was solely due to suggestion and also to the sharpness of memory in neurotic patients.

Colonel Albert de Rochas (now administrator of the Ecole Polytechnique) wrote to me in July, 1887, as follows: "If, however, an individual can stiffen his finger under the influence of another will, or even under the idea that this phenomenon has in some way been roused in him, it does not necessarily follow that the stiffness might not be produced on the finger by the contact or approach of a foreign body, without



Action produced by valerian.

the mind taking any part in the act." This is an infinitely complex question, and moreover not a very general one, for there are little or no opportunities of verifying it, the subjects who present these actions being most rare.

Dr. Luys also induces emotions by coloured balls. He has often exhibited these phenomena in the course of his lectures. For this purpose he uses hollow glass balls, either blue, yellow, red or green. The subject having been sent to sleep (the lethargic stage), a shade is placed over the subject's eyes, and suddenly, under the action of one of these balls, he is seen to open his eyes and manifest a distinct emotion. If a blue ball is presented to him,* terror and horror are depicted in his gaze, if a yellow ball, joy and mirth. According as the coloured surface is larger or smaller the emotion is more or less violent. The same thing takes place with magnets; according to the nature of the pole used, the countenance assumes different expressions. It is an interesting psychic action. Thus the north pole placed in the hand causes joy and mirth, the south pole repulsion. reunion of the two forces—that is to say a pole placed in each hand—give experimental indifference.

Taking for basis the transfer of insensibility, emotions or contractions from one point of the organism to another, by the action of magnets, and the analogy that exists between these latter and the human body, Dr. Luys-in this following Babinski who, in 1886, conceived the idea of passing the disease of one subject to another-adopted the idea of putting his patients in communication one with another. This is

^{*} This antipathy for certain colours may also exist in the waking state. In 1890, in the course of my practice, a patient of mine. whose husband had in her absence thoroughly done up their house, and hung it with indigo blue draperies, was deeply affected, and constantly in tears at the sight of this colour.

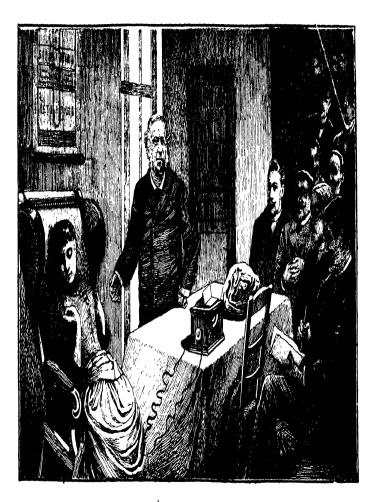
termed transfer. Some individuals are easily disposed to take, for the time being at least, the diseases of others; and, when brought into contact with the sick. can for a few minutes cure them.

Thus Dr. Luys showed me a patient whose pulse had by the use of magnets been reduced from 140 pulsations to 80 when placed in contact with a hypnotized subject; and this latter soon experienced such a difficulty of breathing that the experiment had to be cut short. Nevertheless three sittings had sufficed to produce this wonderful slackening of the pulse. Patients suffering from any arterial disease have been much alleviated by these means.

The following is the mode of operating.

The trained subject, easily hypnotisable, and the sufferer are seated opposite each other. The first is sent to sleep while holding the hands of the patient; a powerful magnet is moved round, first describing a closed circle, and then turning the north pole to the diseased part or organ. A peculiar kind of contagion takes place, a transfusion of vitality, a propagation of nerve influx. The hypnotized subject suffers but little, still he does suffer; while the sick person, his partner in this struggle against disease, is relieved.

If the experiment is renewed several times, the patient's organism is rested, and by degrees throws off the disease. Magnetizers have always asserted that while making their curative passes they catch the



DR. LUYS' LECTURE AT THE CHARITE.

patient's illness. This would be a demonstration of transfer, but would require to undergo a thorough investigation.

If the hypnotized subject is hot, the patient feels the same sensation, and perspiration will burst out on the same parts of the body in both individuals.

We seem to touch upon the miraculous, but that which appears so at one period, becomes quite normal at another. Railways were declared to be impossible; the phonograph was attributed, by the academician Bouillaud, to ventriloquism. Our common sense is the result of our education, information and surroundings. In the scientific domain nothing can be declared absolute. However, when we are confronted by some new and utterly unknown fact, it is necessary to proceed with the greatest caution, to test and verify it, and to wait till time has given it its sanction. It is in this manner that the School of la Charité carries on its labours.

Their work is continually advancing, leading to fresh discoveries that will enrich science and alleviate suffering humanity.

"Hypnotism is a science of experimentation," Dr. Dumontpallier said in his speech at the opening of the Hypnotic Congress in 1889, "its advance is inevitable. To secure its progress we must recommend the greatest reserve, at the same time that we court the strictest investigation, and an acceptance of those facts only that have been tested and confirmed by all the experimentalists. The incredulous say the results are too miraculous; but every new discovery at the outset appears miraculous. Certainly some of the experiments are calculated to upsal all preconceived notions, and to disturb the would-be quiescent mind; but whatever may be thought, these phenomena exist, we know under what conditions they can be produced, their intensity and duration can be gauged, the memory or oblivion of them can be commanded in the subjects under observation. No doubt this may cause some perturbation of mind, but this force exists, and we are obliged to recognize and accept the consequences."

Let us add, however, that when not only our scientific ideas are in question, but perhaps even moral thought is involved, prudence is absolutely and imperatively necessary.

CHAPTER V.

THE CONGRESSES ON THE SUBJECT OF ARTIFICIAL SLEEP.

When it is considered how great were the diversities of opinions and schools on the subject of sleep produced by artificial means, it is evident that the question of this phenomenon, with its application and consequences, could not escape the attention of the scientific associations who held their meetings in the course of the year 1889.

Now sleep produced by artificial means may be divided into two categories: First, magnetism, the earliest discovered and the most fruitful in its results, the action, that is to say, of man upon man; and secondly, hypnotism, originating with Braid in 1841, and developing the action of physical agents and of the imagination of the subject under treatment.

The first thought of the magnetisers, or mesmerists, as early as 1888, had been to organise an international congress on magnetism. In such a project they could not hope for the support of orthodox science, which had, from the first, repudiated and still continued to repudiate even the nomenclature of such

studies. "Animal magnetism" was regarded by such authorities as long since dead and buried. Medical men placed but little or no faith at all in magnetism. They feared to discredit themselves by the practice of it, and often they ignored even its existence, or at least the method of using it.

Exhibitions, often made in public, and accompanied by fantastic results, provoked, along with morbid curiosity, all the scientific researches of the day. The mesmerists therefore were compelled to unite themselves, to interchange their investigations, and make head against the assaults which came upon them from all sides. But inasmuch as it was the custom to deny them all scientific knowledge, they had recourse to certain medical men whose independence of position and character were such as to make them not only not hesitate to declare the similarity of their own convictions, but even to be willing to assume official responsibility in a proposed congress. The presidency of such a meeting was accordingly offered to a doctor in theology, the Abbé de Meissas, chief almoner of the Collège Rollin; and thenceforth Religion and Science joined hands in giving their countenance to the new ideas. The situation of president, however, would, it was considered, have given too much prominence to the Abbé de Meissas, who preferred the situation of a simple member of the congress; and the meeting itself assumed the title of: "The inter-



THE ABBE DE MEISSAS.

national Magnetic Congress for the study and application of human magnetism to the relief and cure of the sick."

Its sittings were held in the Hall of the National Society of Horticulture, from the 21st to the 26th October, at the close of the Universal Exposition. The Congress, in fact, constituted the closing incident of the meetings of the scientific assemblies, and its discussions were conducted with courtesy, and eagerly listened to.

After the partial withdrawal of the Abbé de Meissas, Count de Constantin was elected President: the Vice-Presidents being Drs. Huguet de Vars, J. Gérard and Baraduc, with Monsieur Fabart, (a writer on the occult sciences) and the author of the present work. Dr. Puel, an old man since dead, and who forty years before, was awarded a prizé by the Academy of Medicine for a paper on "Spontaneous Catalepsy," was chosen Honorary President. The subjects treated of had reference especially to the application of curative magnetism, and the action of passes on the subject in the waking state. These demonstrations showed that sleep was far from being a necessity, and the question of the utility of public experiments was raised. Donato, Reybaud, Auffinger, Durville. Ragazzi, Milo de Meyer, all professed magnetisers, maintained their opinions against a great number of members of the Congress, and notably against myself. Monsieur de Meissas spoke with ability and authority

on the use of magnetism in point of view of the conscience. Monsieur Bué, Colonel de Rochas, Dr. Ochorowicz, Professor of Psychology and Natural Philosophy at the University of Lemberg, Dr. Moricourt, successor of Burq, and Monsieur Millien, took part in the discussions with aptness and courtesy. To sum up, it remained clearly established that, apart from physical agents, there existed a useful, beneficial, and salutary influence of the individual in sound health over the diseased person. It may be described as the contagion of health. The existence of free will was admitted; and the necessity of special studies on the part of the magnetiser was declared to be a matter of public utility.

The above Hypnotical Congress united all the great names of the authoritative scientific world. It was held at the Hôtel-Dieu, under the Presidency of Dr. Dumontpallier, attached to that hospital; the Vice-Presidents being Drs. Gilbert-Ballet, Professor Grasset of Montpellier, Professor Liégeois of Nancy, and Dr. Auguste Voisin. The Honorary Presidents were Drs. Charcot, Brown-Séquard, Brouardel, Ch. Richet, Azam, Lambroso, and Mesnet.

We by no means intend to assert by the above enumeration that truth is alone to be found in this latter Congress as compared with the former one.

Such a presumption would be an exaggeration of

the principle of authority, and we are well aware how necessary it is not to bow to it too submissively when new ideas are started, and when facts alone are to be relied on for arriving at a solid conclusion.

And so true is this, and so accordant with the con-



Dr. Dumontpallier.

victions of ordinary good sense on the part of all who wish to study phenomena without foregone conclusions, that we find Dr. Ochorowicz exclaiming, "People will be astonished perhaps to find me citing the authority of magnetisers just as we cite that of men of science; and it is true that ten years ago I should

not have done so. But, later on, I have been convinced little by little that they deserved this confidence at least as much as the hypnotisers, and that if there were amongst them some credulous persons who have imperfectly observed and imperfectly interpreted certain extraordinary phenomena, there were amongst the latter some who have imperfectly observed and imperfectly interpreted certain very ordinary phenomena."

From the 8th to the 12th of August, all the problems of hypnotism, both experimental and therapeutic were discussed, and first and foremost that of the necessity of interdicting public exhibitions of it. The Congress was in favour of the prohibition. There arose even a violent dispute between Professor Delbœuf of Liège and Dr. Ladame, a private teacher at the University of Geneva.

The School of Nancy declared itself in favour of the view of the abolition of free will; but this abolition was disputed by the School of the Hospital of the Salpêtrière. The therapeutic action, that is to say, the beneficial and salutary effect upon invalids, was fully demonstrated.

Even the moral treatment of viciously disposed children found its supporters, and more especially in the person of Monsieur Félix Hément. This rectification of the character is no new idea; instruction repeated daily, with good example, is undoubtedly

efficacious as tending either to check the bad instinct of children or to develop the good. Insane subjects, treated by "hypnotic suggestion," are found to improve in their faculties. (Dr. Voisin.)

The two Congresses, magnetic and hypnotic, were both a very great success, but it need scarcely be said that the former, organised by the legitimate descendants of Mesmer, carried most sympathy with it. In France, frondeurs, and people who assert and contend boldly, are always popular, and it was therefore certain that such would be the issue. To which it may be added that the International Magnetic Congress, open to all alike, friends or enemies, presented a superiority of attraction and a character of independence well calculated to exercise their influence over minds of every type.



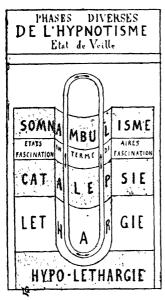
CHAPTER VI.

THE LETHARGIC PHASE.

WE will now turn our attention to the study of the different phenomena. The lengthy statement we have given of the different Schools, has initiated the reader to some of the methods by which sleep is induced. It will be shown that these vary with different operators and with the phases of sleep produced, which would seem to warrant Dr. Ochorowicz's assertion, that the training of the subject is a very important factor. However that may be, we will now give an account of the characteristics hypnotism and the means in use at the Paris hospitals to obtain it. It consists of a series of phases, intimately connected, that constitute a kind of evolution or progressive scale. First, there is the deep stage, in which the mental faculties disappear, and are replaced by special hyper-acuities, this constitutes the lethargic phase; and after that appear the cataleptic, the somnambulistic and the waking phases.

Dr. Luys illustrates these phases in the following manner:—

"Suppose," he says, "a subject is suddenly plunged into a deep well; at the bottom his whole organism will be under the influence of the prevailing darkness. This is the *lethargic* stage, or even some-



Scale of hypnotic states as drawn by Dr. Luys.

times a degree further, that of hypo-lethargy; in this phase the organism is deprived of all power of reaction, and is in a state of absolute, inert sleep. By degrees the subject in rising up towards the light, passes through all the various stages, the summum of which is the waking phase."

Braid's method, that is to say, fixing the eyes on a bright spot, or even on a dark one, such as a black rod, suffices to produce

hypnotism. The object is held quite close and rather above the eyes; the subject squints, the eyes become moist and bright, the look fixed and the pupils dilated. The subject is then in the cataleptic phase. If the object is left before the eyes, lethargy is produced.

The convergency of the eyes—as Carpenter remarked—is sufficient, especially at night.

Other visual stimulants, such as the attention bestowed on needlework or on a book, will sometimes produce the same effect. An intensely strong light—although this more generally produces catalepsy—or pressure on the globes of the eyes, will also throw the subject into the lethargic state.

In the same way the sense of hearing can also be impressed by the repetition of monotonous sounds, such as the tic-tac of a watch, a nurse's lullaby, the sighing of the wind, the crackling of electric sparks, or even the roll of a passing carriage.

Binet and Féré induced sleep by a prolonged impression of musk on the olfactory nerves, and by titillation of the pharynx.

It has been discovered that certain parts of the skin—the forehead, the car-lobe, the arm, and the back—when pressed, induce sleep; these spots, small as regards surface, are called *hypnogenic points*. Some of these induce sleep, others only awaken the subject.

The command to sleep is sufficient, especially with trained subjects; in which case the exact moment at which the phenomena will take place can be foretold.

Polarity has also been used; that is, the action of material substances, assimilated to magnets, and

possessing, as they do—and the human body as well—positive and negative poles.

There are, therefore, very many ways of producing lethargy; its characteristics are not very marked,



Lethargic contraction.

except as regards what Monsieur Charcot calls the neuro-muscular hyper-excitability. This is the faculty of contraction: the rigidity of the muscles, under the influence of the slightest touch, friction, pressure, or massage, or even that of a magnet placed at a

distance. This contraction only disappears by the repetition of the identical means that called it into action. For instance:

If the fore-arm is rubbed a little above the palm of

the hand, this latter vields and bends at an acute angle. The subject may be suspended by the hand, and the body will be held up without relaxation, that is, without returning to the normal condition. To return to the normal state, it suffices to rub the antagonistic muscles, or in ordinary terms, the part diametrically opposed to that which produced the phenomenon; in this case, the fore-arm,



Insensibility—Needles run through the arms.

a little above the hands. It is the same for every other part of the body.

The subject presents under this phase the aspect of a person in a deep sleep; the eyes are either entirely or half closed, the face is impassible and expressionless. The body is completely collapsed, the head thrown back, the limbs hang loose and flaccid, and if upraised and let go, drop down heavily. The insensibility is complete; at this stage pins and needles can be run into the subject and any kind of operation may be carried out with impunity.

It is in this stage that the medicated tubes and coloured balls produce the *emotions* that we shall again witness in catalepsy. (J. Luys.) These can also be obtained when certain muscles of the physiognomy are contracted by touching them in their course. (Binet and Féré).

These contractions can likewise be produced by the application of metals (J. Luys). Iron induces a kind of general tetanic condition, of an intensity proportional to the extent of surface operated on.

The lethargic subject, under the action of these different agents, passes from this state to that of catalepsy and then opens his eyes. He goes up one degree in the progressive scale.

This stage varies in length of duration. When hypnotism has been induced, the subject generally awakes naturally at the end of a very short time. If hypnotism is spontaneous, the period generally extends over a considerable time. We will give the following examples:—

In the month of August, 1889, I wrote: "There is at this moment in the hospital at Mulhouse a most interesting case. A young girl, twenty-two years of

age, has been asleep there for the last twelve days; her complexion is fresh and rosy, her breathing quite Anormal, and her features unaltered.



The action of iron.

"No organ seems attacked, all the vital functions are performed like in the waking state. She is fed with milk, broth, and wine, which is given to her in a spoon; her mouth even sometimes opens of itself at the contact of the spoon, and she swallows without the

slightest difficulty; at other moments the gullet remains inert.

"The whole body is insensible; the forehead alone presents, under the action of the touch or of pricks, some reflex phenomena. However, by a peculiarity, which is extremely interesting, she seems, by the intense horror she shows for ether, to retain a certain amount of consciousness and sensibility. If a drop of ether is put into her mouth, her face contracts and assumes an expression of disgust. At the same moment, her arms and legs are violently agitated, with the kind of impatient motion that a child displays when made to swallow some hated and dreaded dose of medicine.

"In the intellectual relations, the brain is not absolutely obscured; for on her mother coming to see her, the subject's face became highly coloured and tears appeared on the tips of her eyelashes, without however in any other way disturbing her lethargy.

"Nothing as yet has been able to rouse her from this torpor, which will no doubt naturally disappear at a given moment. She will then return to conscious life as abruptly as she quitted it. It is probable that she will not retain any recollection of her present condition, that all notion of time will fail her, and that she will fancy it is only the day following her usual nightly slumber; a slumber which in this case has been transformed into a lethargic sleep, without any rigidity of limb or any convulsions.

"Physically, the sleeper is of middle size, slender, strong and pretty, without any distinctive characteristic. Mentally, she is lively, merry, industrious, sometimes whimsical and subject to slight nervous attacks."

This is the last case that has been thoroughly tested and authenticated. I will only just allude to the starving girl at Bourdeilles, Marie B——, who, it was said, had lived for the last eight years with no other nourishment save that derived from rinsing her mouth with plain water, and who, when Dr. Lafon submitted her to a strict and watchful investigation, presented at the end of a fortnight every symptom of inanition and wasting away (April 1890).

If we seek for cases of spontaneous lethargy, we meet with a large number of them; and without mentioning those of persons supposed to be buried alive, either while in a state of lethargy or catalepsy—especially during an epidemic—we find many cases recorded which have not ended fatally.

A few years ago the whole village of Thenelles near D'Origny Sainte-Benoite, in the department of Aisne, was in a state of wonder and amazement over a young girl, who had been in an unbroken slumber for four years! The fame of this strange phenomenon was noised abroad, till the report at last reached

Paris, and some of the doctors determined to investigate the case. They published an account of their expedition and related how they had tried to cure the patient, notwithstanding the opposition of her mother, and had even appealed to the authorities to interfere. This lethargic subject was then twenty-five years old (March 1887) and presented a considerable emaciation of the stomach and lower limbs. Her sleep had never been interrupted. The eyelids when raised showed her eyes convulsively turned upwards; and blowing upon them called forth no reflex movement of the lids. Her jaws were tightly contracted, and some of her teeth had been broken off level with the gums in vain attempts to open her mouth.

The muscles contracted at the least breath or touch—a symptom characteristic of lethargy; the uplifted arms remained in the position they were put—a symptom of catalepsy.

The subject, a very nervous, irritable girl, had suddenly fallen into this state on the 30th May, 1883, after an intense fright. She was nourished by liquid food poured into her mouth.

There are numberless similar cases, and each time there is a fresh lethargic case all the others are raked up again.

In July, 1883, Dr. Seimelaigne, manager of the private infirmary of Saint James, had a patient who died after having been asleep 1698 days during the last eight

years of his life! He had during this period been fed by means of a stomach-pump.

Dr. Burette had under his observation, in 1713, at the Hospital of the Charité, a patient who had slept for six months.

Franck noted a case in which sleep lasted eighteen months. Legrand de Saulle, the famous alienist, who died in 1886, published several of these interesting phenomena. One morning he found, on going his rounds, a patient wrapped in a deep slumber, which lasted from the 9th September, 1868, till April, 1869, when he died. Another case was that of a patient of twenty-four years of age, who slept without intermission from the 3rd April till the 1st October, 1867.

In 1707 Homberg read to the Academy of Science the account of a lethargy of a subject nicknamed *The Dutch Sleeper*, which had lasted six months. There was also a patient at Louvain, called the *Flemish Marmot*, who was seized every evening with a lethargic attack that lasted till the following day.

Quite recently Dr. Jules Voisin, at the Salpêtrière, had a patient, Eudoxie R——, who remained for several months in a state of complete immobility and insensibility.

In Dr. Luys' division at the Charité we met with a patient who, without any apparent cause, fell into the same kind of sleep as that which could be induced in her by hypnotism.

She remained in a state of contraction during the three days this sleep lasted, and then awoke with the lower limbs paralysed (30th September to 2nd October, 1886). Dr. Luys also produced, in the course of his lectures, another patient who had slept for thirty-three consecutive days in an asylum at Bordeaux.

CHAPTER VII.

THE CATALEPTIC PHASE.

When we ascend the scale of hypnotic phases, we find the cataleptic state immediately above the lethargic. It can either be produced instantaneously, that is to say, by throwing the waking subject at once into this phase of induced sleep; or indirectly, by lifting up the cyclids of a subject in the lethargic state. The light in some way illumines the brain, and endows it with new virtues.

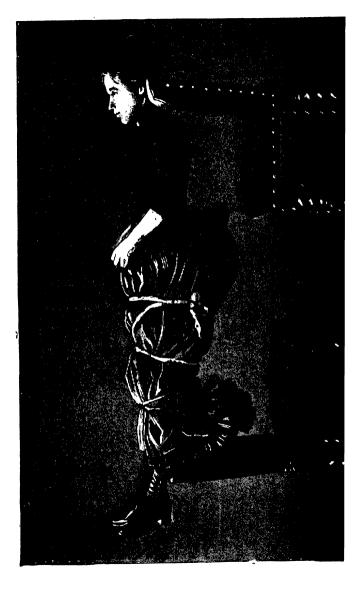
The direct process is somewhat similar to that employed to obtain the preceding state: that is, either by fixing the eyes on a bright object, or by a sudden sound like that of a Chinese gong, a tom-tom, a whistle, the vibration of a tuning-fork, or thunder, &c.

The sudden apparition of a solar spectrum in a dark room, a steady look at the sun, the abrupt incandescence of a magnesium or an electric lamp, bring about the same result.

The subject is then set fast in the position he was in at that exact moment; whether seated or standing, walking or on his knees, he remains in the same attitude, with an expression of fear depicted in his countenance and gestures. Immobility is the chief characteristic of this phase. The subject will take any position he is put in; the limbs can be raised without any resistance on his part, but instead of heavily falling down again as in the preceding state, they will, if left to themselves, retain the attitude that has been given to them. The eyes are no longer closed; they are now wide open, the look is fixed and the countenance remains impassive.

The cataleptic subject does not, however, retain indefinitely these attitudes; at the end of a few minutes, he returns to a position of rest and sometimes falls back into the lethargic stage. A strong man might simulate this phase, but the apparatus for testing, such as the sphygmograph, or the cardiograph, soon show the difference between the sleeping individual and the one who is feigning sleep. (Binet and Féré.) The pulse beats differently, the heart also; the respiration is modified and the variations are very perceptible. It must, however, be admitted that an individual who may have trained himself for some time in simulation, and a real cataleptic subject would exhibit about the same appearance.

Transfer—which may also exist in lethargy in so far as contractions are transferred from one limb to another—in this case exists in the attitudes. This appellation, which has met with so much success, is



due—so Monsieur Dumontpallier informed me—to the idea that had occurred to him, at the sight of these actions due to magnets, of thinking about some funds he had transferred on the previous day, from the $4\frac{1}{2}$ per cents. to the 3 per cents.

In the greater hypnotism, the subjects retain the attitudes without any contraction. Nevertheless if any pressure is applied to the muscles, nerves or tendons, paralysis will ensue, rapidly disappearing however, under the influence of electricity, on awaking suggestion or antagonistic stimulation having little It is these contractions, brought on by the manipulation of the muscles, that give cadaveric rigidity to the subject, and permit of sensational experiments; such as placing the subject with his head on one chair, and his feet on another, while all his body remains stretched out in empty space. In this state the body of the subject can be stood or sat upon. without it's yielding in the slightest degree. The commiseration of the public is generally aroused, and the operator is implored to desist, all of which adds to the sensational character of the exhibition. Magnets are not the only agents that induce transfer; certain others—either by the application of polarity or some special action—act in the same way.

The following account shows the method pursued at the Salpêtrière; we give Messieurs Binet and Féré's account: "The patient is seated near a table,

on which a magnet has been placed, the left elbow rests on the arm of the chair, the fore-arm and hand vertically upraised with thumb and index extended while the other fingers remain half bent. On the right side the fore-arm and hand are stretched on the table, and the magnet is placed under a linen cloth at a distance of about two inches. After a couple of minutes, the right index begins to tremble and rise up; on the left side, the extended fingers bend down and the hand remains limp for an instant. The right hand and fore-arm rise up and assume the primitive position of the left hand, which is now stretched out on the arm of the chair, with the waxen pliability that pertains to the cataleptic state."

It is an interesting study to divide the individual as it were in two; to throw one side into lethargy and the other into eatalepsy; or else to endow the subject with emotions and attitudes that are in flagrant contradiction with each other.

To induce hemi-lethargy and hemi-catalepsy is a very simple process. First the patient is thrown into a lethargy, then one eyelid only is uplifted, and that side alone will enter the second phase of hypnotic sleep. If the arms are raised up, one will fall down again heavily, while the other remains up in the air.

The exhibition of different emotions is certainly the most interesting phenomenon of this phase. Whether



THE SUBJECT BEFORE AND AFTER THE TRANSPER.

obtained by coloured balls, or medicinal substances placed on the neck of the lethargic subject, who at once passes into the cataleptic state (Dr. Luys); or whether obtained by the position the patient is placed in—which is the most usual manner—the result is the same, and presents a series of attitudes not only strikingly true in expression, but often beautiful.

Braid was the first to notice the constant harmony that exists between the corporeal attitude and the expression of the physiognomy. In the cataleptic subject, there is a close connection between the attitudes and the intellectual manifestations. A series of hallucinations can be induced through the senses, particularly by the sight, and by the positions in which the subject's limbs are placed. His whole being comes into harmony with the executed movement—which he will automatically continue—or with the more or less whimsical position in which he has been placed. There is an absolute co-ordination in the subject's actions.

Although at first an inert, plastic mass of flesh and bones, a kind of corpse in which all mind seems absent, the cataleptic subject allows himself to be moulded at the will of the operator. He becomes a soft wax figure on which the most fantastic emotions can be imprinted, he is an automaton capable of being animated. Like another Pygmalion, the hypnotiser gives life to Galatea, and the living marble becomes an impulsive and active being.

We do not, indeed, ourselves differ very much from this automaton. We can detach ourselves, as it were, at our own will, and summon up within us whatever emotion we choose.

The following passage from Dugald Stewart may be given as a proof; it relates to the intimate connection between the expressions and the emotions, and demonstrates how, on assuming or throwing off a certain expression, the corresponding emotion is evoked or disappears.

"As every mental emotion produces a perceptible effect on the body, so in the same way when we throw into our physiognomy a violent expression, accompanied by analogous gestures, we in some degree experience the emotion that corresponds with the artificial expression impressed on our features. Mr. Burke assures us that he has often felt anger gradually rising within him, as he assumed the outward signs of this passion, and I do not doubt, that with most individuals, the same experiment would give the same result. It is related, as Mr. Burke goes on to remark, that when the famous philosopher and physiognomist Campanella wanted to know what another person was thinking he would mimic as closely as possible their attitude and expression of countenance, while at the same time he concentrated all his attention on the emotions he experienced."

These are motory suggestions. We must summarily

define—for we shall have to return to it with many reservations—the word *suggestion*. It is the implantation of the hypnotiser's will in his subject, an implantation

which in the somnambulistic stage

made by word of mouth; and in the cataleptic stage by gesture or mimicry. The emotions in this latter stage are made at command, in the true acceptation of the word, for they are produced not by orders verbally expressed, but by expressive movements.

If the hands are opened and drawn close to the mouth, as when a kiss is wafted, the mouth



Cataleptic astonishment.

smiles. If the arms are extended and half bent at the elbows, the countenance assumes an expression of astonishment. The slightest variation of movement is reflected in the emotions. If the fists are closed, the brow is contracted and the face expresses anger.

If a lively or sad tune is played, if amusing or depressing pictures are shown, the subject, like a faithful mirror, at once reflects these impressions.



The threatening attitude.

These reactions of gesture and physiognomy are sometimes met with in somnambulists or in waking subjects, but they never acquire the maximum of intensity of the cataleptic reactions, which are due to the complete automatism of the subject at this stage.

The least change of attitude induces a certain determined expression, and is effectuated or modified as rapidly as the operator chooses. If the hands are opened and placed near the lips, a smile is the result; if they are shut tight, anger is depicted.

The phenomenon can be reproduced indefinitely; if a smile is produced, it can be seen to diminish and disappear at the same time as the hand is moved away; and again to reappear and increase when it is once more brought near. Better still, a double expression can be imparted to the physiognomy: by approaching the left hand to the left side of the mouth the left side of the physiognomy will smile; while, at the same time, by closing the right hand the right eyebrow will frown.

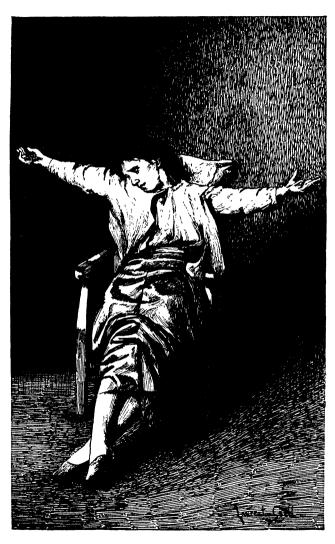
Messieurs Charcot and Paul Richer have, by the partial electrization of the muscles of the face, produced the determinate emotions of the face that are associated with the different positions of the body. And according to the strength of the current, they have obtained different degrees of the same emotion.

It has often been wondered what could be the state of mind of a cataleptic subject placed in an attitude of passion. The statuesque immobility and the tragic expression of the physiognomy form a curious contrast; on one hand, he will seem to see or hear nothing; while on the other, he will represent the most intense passion. Monsieur Richer conceived the idea of resolving this problem by studying the respiratory trajects of the subject during the experiments. He



The kiss.

caused the muscles expressing terror to contract, and strange as it may seem, although the most violent fear was depicted in the features and gestures of the subject, the breathing, after a sudden expiratory movement, regained its calm and cataleptic immobility.



CATALEPSY IN THE ATTITUDE OF CRUCIFIXION.

It is therefore certain that suggestion through the muscular sense in the cataleptic phase, is more superficial than suggestion in the somnambulistic state." (Binet and Féré).

Attitudes are imposed on the subject, but the influence can be carried still further and determine the movements. The subject can be made to send kisses, or to turn his hands round each other indefinitely; if the hand is brought near the nose, it will blow it; if the arms are stretched out, they will remain extended, while the head will be bowed with a marked expression of pain. There exists therefore an association of movements, as there exists an association of ideas.

Heidenhain found a still higher degree of automatism in *imitation*. The subject's gaze is taken possession of by the operator; nothing is easier, for that purpose, the patient has only to be fixedly looked at, and his eyes will soon be unable to quit those of the operator. If he steps back, the subject will rise and follow him, and will then copy all his movements. He can be made to laugh, whistle, sing, clap his hands or stamp his feet. The patient has become a mirror, and imitates with his right hand the movements of the operator's left hand as he stands facing him. This is what Despine called the specular imitation.

Just as with the appropriate movements, the cataleptic subject can be made to assume every possible and

imaginable attitude; either that expressive of cestasy, prayer, melancholy, pain, disdain, anger or fear.

In this phase of hypnotism, cestasy is the most graceful and artistic phenomenon. Donato, a master in the art of exhibiting the phenomena of hypnotism, carries out his performance in the following manner. He throws into a state of catalepsy several subjects, generally young and pretty women, in evening costume. A male subject brings—like a living antithesis—an element of mirth into the picturesque scene before the public; the expression of this subject is a mixture of admiration and bewilderment. The women leaning forward in an attitude of attention, seem to listen to some inner voices, or to some melodious and far-off sounds. They look as though anxious not to lose a particle of their rapturous sensations.

Then if the harmonious and veiled sound of a piano is heard, the expressions become more and more accentuated. The cataleptic subjects bend lower and lower, striving to seize and concentrate within themselves all the sonorous vibrations that charm them.

If the sound is heightened or increased, the subjects seem to receive a shock and a feeling of disappointment. The artistic sense developed by hypnotism is disturbed. The faces express astonishment, stupe-faction, and pain. If the same soft melody be again resumed, the same expression of rapturous bliss reappears in the countenance. The faces become

seraphic and celestial when the subjects are by nature handsome, and when the subjects are ordinary looking



Musical ecstasy.

or even ugly, they are idealized as by a special kind of beauty.

The absent mind leaves the whole body free for the impressions, and yet on awaking, there is no recollec-

tion of what has taken place; neither is there at the moment of the impression—if we can judge by Monsieur Paul Richer's experiments—any acceleration in the beating of the heart, or any disturbance of the respiratory organs. The mask alone is in motion. Psychology here reveals an unfathomable mystery, a real undoubling of ourselves, the unconscious variations of our personality.

Sometimes the subjects lean backwards with all the grace of perfect equilibrists, freeing themselves from ordinary mechanical laws. The curvature will, indeed, at times be so complete that the head will touch the floor and the body describe a regular arc.

When a female subject assumes an attitude of devotion, clasps her hands, turns her eyes upwards and lisps out a child-like prayer, she presents an admirably artistic picture, and her features and expression seem worthy of being recorded on canvas.

Music is one of the best means of producing cestasy; it can also be attained by making the ratient gaze at a person in ecstacy or even look at a picture representing such a subject. Music will also induce the patient to step in time, dance, and waltz.

Automatism is also induced by the recollection invoked by some familiar object. There is therefore an unconscious memory, suggestion derived from habit. Thus, if a piece of soap is put into a cataleptic patient's hands, he will move it round in his hands as



CELESTIAL VISIONS.

though he wished to wash them, and if any water is nigh, he will wash them. If an umbrella is offered, he will open it, and shiveringly shelter himself under it, as if he felt the approach of a storm. The association of ideas that connects an object and an impulsive movement exists in hypnotized subjects; it also exists in mad people. Max Simon relates that a learned man was suddenly seized while shaving himself, with an imperative desire to cut his throat, and could only resist the feeling by abandoning his occupation.

The action may last a very long time. Regnard saw a patient wash his hands for two consecutive hours. If a female subject puts on her boots, she will lace and unlace them for an indefinite time, and if she does crochet-work, she will ceaselessly repeat the same stitch.

By closing one of the eyes, the subject can, as it were, be divided into two. This, again, is hemilethargy and hemi-catalepsy. The hand that corresponds to the shut eye stops, while the other continues its movement, striving even instinctively to make up for the one that has failed. (P. Richer.)

Absolutely conscious actions cannot be suggested to a cataleptic patient. To hand him a pen will not make him write. If, however, words or letters are dictated out loud, the subject will write in an irregular handwriting. The subject can also be transformed into a

phonograph, and be made to sing, scream, cough, sneeze, or speak different languages; repeating all with astonishing facility. The Salpêtrière School call this écholalie.

It forms an exception to the laws of catalepsy, according to which the subject usually neither speaks nor hears. It belongs, indeed, rather more to the hemi-cataleptic and hemi-somnambulistic state, for it is obtained by placing the hand on the eranium, the forchead, or the nape of the neck of the subject. (Berger of Breslau.)

It is possible—owing to the association of ideas and movements—to suggest emotions to the patients. If the operator's fingers imitate the airy curves that a bird describes in its flight, the subject will try to seize it; if a gesture is then made of placing the bird on the finger, he will caress it with an expression of pleasure. If, on the contrary, a crawling movement is traced on the floor, his face will assume an expression of horror and terror; the subject will contract and draw back, believing himself in the presence of a serpent.

The same emotions are produced, with certain subjects, by the presence of coloured balls or medicated substances placed in their vicinity. (Dr. Luys.)

Catalepsy may be spontaneous; we will give some examples of this in the chapter on cerebral degeneracy. (Socrates', Cardan's ecstasics, and cases quoted by Doctor Favrot, &c.)

CHAPTER VIII.

THE SOMNAMBULISTIC PHASE.

The highest phase in hypnotic sleep, and that which approaches nearest to the waking phase, is the somnambulistic. It has strong affinities with insanity (Doctor Luys); and the latter can be experimentally created. The patients will have irresistible impulses, hallucinations and delirious conceptions. This phase is produced either by friction applied to the crown of the head during the cataleptic stage, or directly by magnetic passes on the waking subject. Some patients are not susceptible to any other form of induced sleep.

Special spheres, which do not act in the preceding phases, now vibrate, and are set in motion.

The difference between a subject in the waking stage or the same in the sleeping stage is hardly perceptible. The countenance presents the same aspect, the eyes are generally open, sometimes, however, they may be closed or half open; the voice alone differs in sound in induced somnambulism. This is the phase which it is easiest to feign; this does not,

however, imply that it does not really exist, but only, it is very difficult to identify.

It is the period of suggestion. This latter brings on experimental and momentary insanity in which the subject's brain becomes a pliable wax ready to see, believe, or execute whatever is commanded. We will follow the School of the Salpêtrière, and especially Messieurs Binet and Féré, in the analysis of the phenomena of somnambulism.

The question of memory more especially has powerfully interested the operators. In this phase there is considerable hyper-excitability. Monsieur Ch. Richet has invented an experiment which illustrates this phenomenon. "I send V—— to sleep, I recite some verses to her, and then I awake her. She remembers nothing. I again send her to sleep, and she remembers perfectly the verses I recited. I awake her, and she has again forgotten everything."

The memory of the hypnotized subject is greater than in the waking state, and its exaltation sometimes seems to be imbued with a miraculous lucidity. Somnambulists, Monsieur Richet tells us, describe with an extraordinary amount of detail the places they have formerly seen, the things they have witnessed. M—— who will sing the air of the second act of the Africaine in her sleep, is incapable of remembering a single note of it when she is awake. Monsieur Beaunis had a patient who in the hypnotic condition

perfectly remembered all he had eaten, and yet was unable to do so when awake. Binet and Féré could induce one of their subjects to remember the whole of his repasts of the last eight days, while in his normal state he could barely remember more than two or three days back.

This is hyper-mnesia. A somnambulist was in Doctor Charcot's study at the Salpêtrière, when Doctor Parrot, physician in chief at the asylum for *Enfants Assistés*, entered, and she immediately named him. When she was two years old, she had been admitted into that asylum, and when awake she could hardly remember the doctor who had at that time attended her.

The memory is therefore much more faithful than is generally supposed; it is only necessary, in order to revive it, to find the stimulants appropriate to the brain, either hypnotism or special medicaments. Opium-smokers, and hasheesh-caters pretend that by these means they excite their memory. We must not, however, be oblivious of the fact, that to maintain the equilibrium of our organism, it is not advisable to over-excite any particular part of the brain; and that such a result is only obtained at the detriment of the remainder.

Dreams often conjure up before us forgotten personages. On awaking the dream has already become vague and hazy with misty outlines. It is the same

with the actions or conversations of the somnambulist (we mean the induced state, not the spontaneous); sometimes even there is amnesia, that is a complete loss of memory, as regards the deeds accomplished. The command to remember brings back the memory (Beaunis). The same result is obtained when the subject is awakened in the middle of an action which leaves traces (Delbouf). For instance, the operator smokes an imaginary eigar by the side of the sleeping patient, he suddenly tells the latter that the burning cigar-ashes have fallen on her neckhandkerchief and have set fire to it. The patient at once rises and throws the handkerchief into water: she is then awakened and remembers all. The same thing occurs with normal sleep; to dream of a danger, for instance, will make the sleeper take precautions to save himself. If he is awakened while taking one of these measures. the whole dream remains imprinted on his mind. The living dream, followed up in the waking state, is a kind of madness, which we will study later on. Exteriorized it constitutes real insanity. Hypnotism is a real experimental insanity, and in the state of somnambulism permits the creation of hallucinations. which are manifested by the play of the physiognomy. The narration of an evil deed accomplished under particular circumstances will cause the greatest indignation. The subject displays a vivacity of expression, an indignation and anger, as remarkable as in the

cataleptic state. The method by which the nervous system is put in motion and the way the cerebral activities are called into play alone differ. If a crime accompanied by the most horrible details is related

before a subject, a feeling of repulsion, a desire to hear no more, is at once most truthfully represented. The memory is diminished, not obliterated, sometimes indeed it is augmented; it is indeed impossible to fix the limits of its variations.

Epileptic absence of mind is not absolute; some patients remember the accomplished fact. (Ch. Féré.)

Whatever artifices may be resorted to, in order to preserve after



Indignation.

hypnosis the memory of the actions performed in that state, perhaps even by reason of these very artifices, it is certain that the memory is affected, superficially, however, rather than otherwise: "for a new sleep will completely restore the memory of things the subject had seemed to lose when awake." (Binet and Féré.)

In contradistinction to the cataleptic, the somnambulist is not an automaton: "he is an individual with his own character, his likes, and dislikes." This is the reason why the somnambulic existence is called the second condition, in opposition to the waking state. There is a somnambulist self. Do we not ourselves even in our dreams, consider them sometimes absurd, and could we feel this, if we were at the time utterly devoid of all critical power?

The subjects remain as in their usual life, each with his own particular character; the one will remain timid while another will be turbulent.

The influence of the voice and of music is considerable, but the tone of the sound seems to play the principal part. Words gravely pronounced, even if devoid of sense, will affect certain subjects as deeply as a tragic story. There has in truth been a great deal of exaggeration as to the change created by somnambulism in the character and intellectual aptitudes of the subjects; the activity for instance does not seem to be modified, and presence of mind is retained.

"A patient who was very young when she was admitted at the Salpêtrière, was in the habit of saying thou to Monsieur X——, either when alone with him or in the presence of persons she was



acquainted with; but directly a stranger came in, she changed her form of speech.

In the somnambulistic state she retained the same ideas of propriety, saying thou to Monsieur X——when alone with him, and resuming a less familiar mode of speech the moment a stranger appeared.

The trained hospital subjects, that is to say, those who are frequently induced to sleep, are in the habit of saying thou to everybody. Probably in the class they are mostly taken from, it is their habitual mode of speech.

The will power is not even modified, and the implantation of another's will does not take place, as has been repeatedly asserted, and as they still teach at Nancy; we will demonstrate this in the chapters on suggestion. The somnambulist opposes a certain resistance. As for the hallucinations that affect in a lesser degree his personality, he will easily accept them if they agree with his own ideas, but if they are contrary to them, they have to be forced upon him. "One of our subjects absolutely refuses to accept a cassock and be transformed into a priest. One of Monsieur Richet's patients, to whom the amputation of an arm was suggested, screamed with pain at the sight of the blood, but almost at the same moment, understood that it was a fiction and laughed in the midst of her tears. Facts of this kind have often erroneously led to the idea that the patient was

dissembling." I question very much the accuracy of this last assertion. "Monsieur Richet's patient was under an hallucination; she really had before her a tangible image, but her reasoning power was not



Surprise and anger.

completely paralysed, and she still had strength enough to resist the false impression that was suggested to her." (Binet and Féré.)

Somnambulists often lie. (Pitres.)

We will now give (quoting Binet and Féré) some examples of hallucination.

Every one of the senses are liable to be affected. The subjects are capable of seeing, hearing, tasting, smelling and touching imaginary objects, and submit to their influences. A subject will fall

into catalepsy at the sudden sight of an imaginary lamp; he will exhibit horror and disgust at a deformity; take pleasure in listening to a well-known and loved voice; will vomit at the idea of a nauseating medicine, or the contact of a sore, and show surprise and anger at the idea or sight of any awkwardness; all this without uttering a word or there being the slightest appearance of reality. The subject may also believe himself to be made of glass, and forbid that any one should touch him; or he may think he is paralysed because he has been told so.

The following are a few examples of delirium created at will, noted down by Monsieur Ch. Richet.

"Under the influence of suggestion, Madame A., the respectable mother of a family, experiences the following metamorphoses: As a peasant woman. (She rubs her eyes, and stretches herself.) "What o'clock is it? Four o'clock in the morning!" (She walks about as if she were dragging her wooden shoes.) "Well, I must get up, and go to the cow-house. Come up! la Rousse! Turn round!" (She goes through the gestures of milking a cow.) As an actress. (Her face assumes a smiling aspect instead of the hard and tired look it just had.) As a priest. (She fancies she is the Archbishop of Paris, and her face wears a very solemn expression. (Aside.) I must really prepare my mandamus! (She leans her head on her hand and reflects. (Aloud.) "Ah! it is you, Monsieur le Grand Vicaire, what do you want? I do not wish to be disturbed. Yes, to-day is the 1st of January and we must go to the cathedral. A very reverent congregation it seems to be, Monsieur le Grand Vicaire. The people are really

very religious, whatever may be said. Ah! a child! let him draw near, that I may give him my blessing. Very good, my child." (She holds out an imaginary ring for him to kiss. During the whole of this scene, she moves her right hand, bestowing benedictions to the right and left.)

The hallucinations may be unilateral instead of bilateral like those we have just related; one eye, one arm, one nostril only will see, touch, and smell the imaginary objects. Doctor Dumontpallier was the first to notice this phenomenon, which is rather frequent in mental derangement.

It is for instance suggested to a female patient that she shall see with her right eye a portrait on a blank piece of cardboard. On awaking she sees with the other eye a blank card only; but with the right one, she sees the portrait. This experiment may be made more complicated by giving to each of the two symmetrical organs, to each eye or each ear, an hallucination of a contrary nature. The patient being in the somnambulistic phase is told through her right ear, that it is very fine weather, while another person at the same time whispers in the left ear, that it is raining. subject will smile on the right side of her face, while she exhibits her displeasure on the left side, by drooping the angle of her lips. Then, to call into play both sight and hearing, the operator will describe a country fête in the right ear, while in the left another person

imitates the sound of a dog barking. The amused expression on the right side is in strong contrast with the alarm shown on the left side, and forms the most



Duality of the physiognomy.

startling opposition. It would thus seem that each lobe of the brain works in an isolated manner.

If the subject is made to see with one eye a bright red card and with the other a white one, and is made to look with both eyes at the card, the effect will be similar to that in the normal condition, and he will see a single rese-coloured eard. In this case there is a modification caused by the concurrence or antagonism of the risual fields.

Hallucination is an exteriorized image. We are able, more or less to conjure up the image of an absent friend.

The intensity and facility of evoking, of seeing, as it were, absent persons or things, would according to Doctor Liébeault indicate a person easily hypnotizable. If we think of any particular thing, we see and feel sensations connected with that idea. "Few men," the Scotch psychologist Dugald Stewart tells us, "can look down from a high tower without experiencing a sensation of fear. Nevertheless their reason must convince them that they run no more risk than if they were standing beneath it." Monsieur Taine adds, "in reality when we suddenly look down beneath us, we fancy we are hurriedly precipitated to the bottom, and the very idea we have conjured up terrifies us, for although it lasts only for an imperceptible moment, during that moment we believe it: and we instinctively shrink back, as if we felt ourselves falling."

If this faculty is exaggerated by the name of the object conjuring up the sight of it, it would explain the hallucinations of hypnotized subjects. If these exteriorized sensations are often repeated, even in the waking condition, they become a permanent obsession.

The same ideas will reappear directly hypnotism is used; and it is sufficent to recall some fact of normal life, for the hypnotized subject to live over again the corresponding period and communicate it to her surroundings.

Visual hallucinations are infinite. We will cite one of Doctor Charcot's experiments. "A portrait is suggested to a subject, as existing on a blank card, which is then mixed with a dozen others—to all appearance similar eards. The subject being awakened is requested to look over the packet, and does so without knowing the reason of the request; but, when he perceives the eard on which the portrait was suggested, he at once recognizes the imaginary portrait. It is probable that some insignificant mark has, owing to his visual hyper-acuity, fixed the image in the subject's brain."

Attempts have been made to establish well-defined differences between hypnotic and natural sleep, oblivious of the fact that in nature nothing is absolute, and that very distinct demarcations do not exist. Magnetizers allege that by passes, they transform the physiological state into an induced state. Hypnotizable individuals in a natural sleep, can easily be induced to somnambulism. It frequently happens that when half awake, we hold a conversation of which we retain little recollection when completely roused. Nevertheless lunatics or those on the verge of lunacy often

believe in their dreams, exteriorize them, and fellow the impulses that their sensations create (Poetors Liébeault, Ph. Tissié). But this state has only been authenticated in well characterized insanity. It is therefore impossible to make use of this argument in the assimilation of the two kinds of sleep. Natural somnambulism has till now offered more surprises than the induced somnambulism. Perhaps the connecting links and the stages that lead from one to the other may eventually be discovered.

CHAPTER IX.

FASCINATION AND LESSER HYPNOTISM.

A sudden glance cast unexpectedly upon a highly sensitive subject will cause him to start forward



Instantaneous surprise.

towards the operator, and take possession of his glance: this is one of the characteristics of spontaneous catalepsy. A bright light, or a glittering object

fixedly looked at, will bring about the same result. In this state the subject's limbs will retain any position the operator chooses to put them in.

A thorough study of the phenomena that characterise catalepsy shows that they are very similar to the symptoms of the other phases; often indeed being composed of the three states just described. The Salpêtrière school call this frustrated hypnotism. Monsieur Pitres of Bordeaux has described the cataleptoid state in which the eyes remain shut. This condition also exists with the eyes open, and is then catalepsy obtained instantaneously. It reproduces the smile, cestasy, and emotions induced by the gestures or attitudes imparted to the limbs.

Hypnotism will affect not only nervous individuals, but also sound healthy individuals—or those that are considered such. Monsieur Richet, in his book entitled L'Homme et l'Intelligence, says that "nobody is absolutely refractory to magnetism." He began in 1875 to make use of the passes, and produced what he called somnambulism, a different state, however, from the one described in the preceding chapter and presenting different degrees; such as torpor, excitement, and stupor, characterized by a facility of contraction, a possibility of obtaining answers and automatism.

Doctor Brémaud, a naval doctor, has obtained in men supposed to be perfectly healthy, a new condition which he calls fascination. The inventor considers this is hypnotism in its mildest form, which, after repeated experiments, might become catalepsy.

The subject fascinated by Monsieur Brémaud—fascination being induced by the contemplation of a bright spot—falls into a state of stupor. He follows the operator and servilely imitates his movements, gestures and words; he obeys suggestions, and a stimulation of the nerves induces contraction, but the cataleptic pliability does not exist.

Messieurs Bernheim, Liégeois and Beaunis consider this state entirely due to suggestion; the school of Nancy can only obtain the minor hypnotism, which differs little from the waking state.

Long before Monsieur Brémaud, a platform magnetizer as the scientific world called him, thought he had discovered this fascination and even named it after himself. He operated in the following manner. After having, at the beginning of one of his séances—which at that time attracted not only all Paris, but people from every part of the world—operated on his own subjects, and thereby impressed the imagination of his audience, he would inquire if any of the spectators were willing to submit themselves to an experiment. Several would come forward. He would choose one, and make him lean on his hands, so as to weaken the muscular power. Both hypnotizer and patient remained standing on the platform, in front

of an audience now thoroughly interested in this struggle between one who strove to master and one who would not submit. The patient's enervation under the influence of the numberless eyes fixed on him, soon reached its climax. The fascinator would then suddenly call out, "Look at me!" upon which the candidate-subject would draw himself up and gaze intently into the operator's eyes. The latter would then look down on his hapless victim, with round, glaring eyes, and, in the majority of cases, succeed in fascinating the subject. No doubt some individuals would feign to succumb, thereby deceiving the operator; and when they quitted the séance would not fail to declare he was a charlatan. But the whole exhibition was well managed, and it would be unjust to infer a general rule from some particular exceptions.

Fascination thus made its way. By the constant sight of gigantic advertisements, the attention of scientific men was aroused, they went to see the performance, were at first incredulous, then doubted, and finally took up the subject and studied it; striving to make it scientific and useful as a curative means. It no longer remained the object of morbid curiosity, but became a therapeutic process that doctors availed themselves of to alleviate suffering.

Doctor Luys conceived a special mode of fascination which has been described in the Chapter on the school of la Charité-by the contemplation of a revolving mirror.

The patient is captivated, he has the credulity neces-



Smiling while in a state of credivity.

sary to accept suggestions; this is what Colonel de Rochas calls credulity and Doctor Luys credicity. Sometimes it is not possible to induce a sleep deep enough to be able to speak to the subject without awaking him; it remains more a state of somnolence.

sedation and calm. It would seem as if the fatigue of the optic apparatus was extended to the brain, conveying to it a feeling of comfortable repose.

Braid by making the patient fix his eyes on a brilliant spot has produced hypnotism.

Doctor de Jong, of the Hague, uses several methods, and he gave the following account of them before the Hypnotic Congress in 1890.

"No method is infallible. With each one I have successfully induced hypnosis, but each one has from time to time utterly failed. Sometimes when I have been disappointed by one method, another one has easily proved successful with the same patient. From which I deduce that we must seek the method appropriate to each individual. This experience has taught me not to decide too quickly that any individual is absolutely refractory; unless indeed every known method has proved ineffectual. Sometimes these individuals progress from a state of natural sleep into a hypnotic state. One of the newest methods is Doctor Luys'. Like all the other methods it is not, however, universally successful. Several individuals refractory to all other processes, have been hypnotized by the revolving mirror; many others, on the contrary, on whom the mirror has been used several times without result, have been affected by some other process, so that this last method has not changed my opinion.

The use of the mirror without doubt presents a great advantage in point of time, as a large number of patients may be hypnotised at the same moment, and meanwhile the operator can occupy himself in some other way.

I have myself tried every kind of process of hypnosis, and entirely agree with Dr. de Jong, that no method is absolutely certain. Verbal suggestion, pressure on the eye-globes, magnetic passes and other processes already described, may in turn be applied with more or less success. Whatever method is followed, a certain moment is reached when the eyes remain closed, and the arms fall down flaccid. In this state the subject hears the hypnotiser. Even if the patient remains motionless, with a countenance as inert as that of a mask, he is conscious and can hear and sometimes see through his half-closed lids. On awaking it will generally be found that he has retained a recollection of what has happened. And he awakes without being touched, without any blowing on the eyelids, at the gently repeated words "Now awake."

In frustate hypnosis, as the vague, ill-defined state of lesser or minor hypnotism is called, the subject is ready for any suggestion. If the operator places the subject's arm in a certain position, and affirms that the patient cannot put it down, he will passively retain the imposed attitude. An action communicated to a limb will be automatically continued until the operator directs its stoppage. The state is one of absolute insensibility, and pins can be run through the skin without causing the patient the slightest pain. Some exceptional subjects do retain sensibility, but this can be annulled by suggestion.

Frictions on the crown of the head, raising or shutting down the eyelids, do not modify these phenomena.

Suggestibility varies according to the subjects. Some of them only have their eyes closed, with or without numbness; others have besides this a limpness of the limbs, with inertia or inaptitude for any spontaneous action; others again maintain the attitudes or automatical movements that have been mposed on them.

Unreasoned and absolute obedience is thus obtained, and insensibility, illusions and hallucinations are induced: it is a regular ascension, the summit of which is somnambulism. "On the average, one subject in every five or six hypnotised attains this thorough condition." (Binet and Féré.)

CHAPTER X.

CEREBRAL DEGENERACY.

Modern, more especially contemporary, physiology has been directed towards the study of insanity; and the works published by Esquirol, Luys, Baillarger, Ball, Legrand du Saulle, and Charcot, on the nervous system and mental alienation, have paved the way. By the side of certain well-characterized and determined disorders, there exist some vague, undefined symptoms, badly equilibrated nervous conditions, kinds of latent folly, almost unknown cerebral disorders. The domain of mental disease has by this constant study taken up a very predominant position, too much so indeed, for there is a tendency now to see insanity everywhere.

Insanity is certainly the most accentuated form of cerebral degeneracy. Many other deviations of the brain exist, however, such as hysteria, epilepsy, hysterioepilepsy, and all the variations of these diseases. Hysteria which inspires the ordinary public with such a false and terrifying notion requires a short but reassuring explanation. It is a deviation of the nerve-

currents, that renders the organism capable of simulating a disease, without there being any real lesion. A doctor, for instance, will believe he is treating a patient, male or female, for consumption; he will find all the disturbance, all the irrefutable signs of that disease; he will order an appropriate treatment, and when on the following day he returns to see his patient, he will find that all appearance of the malady has vanished. Another time, a patient will suddenly become dumb, without either having had convulsions in childhood, or nerve disturbance since then; the doctor, thinking his condition proceeds from paralysis of the larynx, applies electricity to the vocal chords. Nothing, however, seems of any avail, till one fine day, a violent emotion or some unknown cause brings things back to a normal condition, and the patient recovers his voice. Again another time a doctor has a patient brought to him who for several months has had a limb completely paralysed, without however showing signs of the muscular atrophy which generally accompanies and is fatal in any organic lesion. The physician inquires about the nervous antecedents, and finds there are none; he prescribes a particular diet, strengthening frictions, massage, enforced exercise, etc. Everything fails; then a few months later he hears by chance that his patient, weary of trying different treatments. has left off all remedies, and is completely cured.

Similar cases could be indefinitely given.

If diseases are thus unconsciously simulated in an organism that seems powerless to resist, it must be the same in the case of the thinking faculties of the living being. Many patients who are considered lunatics, are only suffering from hysteria localised in one particular part of the brain; thence those momentary irresistible impulses of theft, or even murder, of manias, of travel, &c.

A man still young, dressed in rags, has been known to come to a hospital in a state of utter despair and destitution. He has been making a long journey on foot, of which he remembers nothing, not even why nor how he started.

In the case of Albert X., related by my friend Dr. Tissié of Bordeaux, and which I shall return to later on, the patient, he says, "could not help starting off the moment the inclination seized him; an irresistible impulse took possession of him, and he would leave home, family, and business, start off straight before him, walking at a quick pace, doing forty-four miles a day on foot, till he would at last be taken up as a vagrant and be put into prison." This form of delirium is much more frequent than is generally supposed.

Judgment and intelligence have gone astray, but there are no hallucinations properly speaking, at least not at first.

One fine day a certain idea will seize hold of a patient. He may, for instance, suddenly be struck by

the idea of the immorality of the world and will consider himself bound to reform and civilize it. Another patient, full of the idea that he can lessen the labours of his contemporaries, fancies he has discovered perpetual motion. My friend Henri Farjas and I often had, as manager and editor of the Revue universelle des inventions nouvelles, visits from some such individuals, unhappy inventors, perfectly conscious of all the usual circumstances of life, and even half conscious of their own condition: "I should not advise you," said one of them, "to call my invention perpetual motion, because every one would scoff at my presumption; call it the automotor-motor."

As for those who are seized with the perambulating mania, they are numerous; we will cite a few examples.

Dr. Luys related, a few years ago, in the course of one of his lectures at the hospital of the Charité, the story of a man who was so upset by an explosion of gas that took place in the rue François-Miron in Paris, that he suddenly left his work, and went off, and only recovered consciousness, as it were, on finding himself at Milan. During his journey he had lived, for most part of the time, on roots and herbs.

In February, 1890, Professor Proust laid before the Academy of Moral and Political Science, the case of a young barrister who was seized with this kind of wandering attack, during which he had several times swindled and been condemned by default. Taken up at last, he had been discharged after having undergone an examination by Drs. Mottet and Ballet. On awaking—for this condition may be considered a state of spontaneous somnambulism—the patient does not remember anything.

The mad impulse that launches the subject forth, is not at once accepted by him; the subject will struggle, the equilibrium of the intellectual faculties is not immediately overthrown. At first but a mere passing thought, the idea becomes recurrent, till at last it develops into a fixed and unavoidable obsession. This constitutes insanity, and yet Leuret adds, that the difference between this state and a normal one is often null.

F. Leuret relates the case of a man of forty, who from his early youth was impressed with the vicious state of society and determined to reform it. For this purpose he travelled, studied all the different government constitutions and human principles of morality; he learned several languages, wrote in the papers, and published pamphlets in order to propagate his system, and in all this displayed a remarkable degree of intelligence. In this manner he spent his whole fortune; then falling into a state of abject poverty, he lived on anything he could pick up, digging up carrots and beetroots, or begging in the streets till at last, always misunderstood, he was taken up and sent to the asylum at Bicêtre. The title of his

principal pamphlet was: "L'Humanisation, ou adresse au genre humain sur la doctrine infinie, tout à fait inconnue et toute nouvelle de l'humanisation."* When this stage was reached, his insanity could no longer be doubted, but it had gradually and imperceptibly grown upon him.

"No one," Leuret tells us, "had flattered the vanity of this patient, but no one either had repressed it. He required—before his travels—friends devoted enough, or foes sufficiently exasperated to tell him the truth; he lacked both and therefore became insane. Perhaps had he been undeceived when his madness was only beginning, he might have been saved."

Other patients have the delirium of persecutions, and fancy themselves the victims of the whole human race that declines to recognize their merit. Others, again, fancy themselves some great personage, some missing king, Louis XVII. for instance, etc. Whatever the outward manifestations may be, all classes of society furnish their contingent to the group of insane. Patients may, however, be classed as follows: the delirious, the hallucinated, the demented, the impulsive, and the captivated. Hysteria also contributes a certain number, or more properly, hysteria is often accompanied by mental disorder. One of the most interesting cases of the wandering propensity is the

^{* &}quot;Humanization, or an address to mankind on the infinite doctrine, completely unknown and quite new, of humanization."

one already cited by Dr. Tissié. He is the first diurnal hysterical somnambulist whose case has been thoroughly investigated; and he may truly be compared to the wandering Jew. He is incited by a dream at night, which continues when he is awake.



Albert X., diurnal somnambulist.

Hypnotic suggestion has displaced the active dream, and Dr. Tissié, librarian at the Faculty of Medicine at Bordeaux, has by this treatment obtained some good results. His subject has been freed from the autosuggestion of his dream, and been able to give up some of his travelling propensities.

Albert's history is really curious; it has been sent

to me by Dr. Tissié for insertion in this book. It is the odyssey of an hypnotic subject told by himself either in the waking state or in a state of induced hypnotic sleep. In this last condition Albert remembers all he has done when in a state of somnambulism, but he forgets in the waking state the actions he has committed when in the somnambulistic or induced sleep. He therefore offers the two states mentioned by Professor Azam: the prime or normal state, and the second or somnambulic state.

Imagine an individual asleep, though with his eyes open, behaving as though awake, but living a peculiar life, in the second state, in the midst of a society living in the prime state; imagine this individual passing, after an ordinary sleep, from one state to the other, either with partial or complete forgetfulness, and it will be at once seen what original and unforeseen events such an existence will offer.

One day, at Bordeaux, Albert—this was the subject's name—was sent to buy coke at the gas-works, and for that purpose was given four pounds. The next day he is astonished at finding himself in a railway carriage, and at the Tours station. He is asked for his ticket, and discovers that he has taken it for Paris, whither he arrives without a farthing. Here he is taken up by the police, who find him lying on a bench at the railway terminus. Sent to Mazas prison, he remains there a fortnight, when inquiries having

been made, the police hands him over to his family, who re-imburse the four pounds to his employer, and he returns from Paris to Bordeaux on foot; he was then fourteen years old! Albert will walk as many as 44 miles a day, captivated by his dream, which produces hallucinations both of sight and hearing. He cannot stop, an invisible power urges him forward; he goes on straight before him, with some idea of orientation, however, and happy whenever he finds a long, straight road.

His parents, knowing his predilection for travelling, made him enlist, and he joined an infantry regiment at Valenciennes. One fine day, however, Albert failed to put in an appearance; he had deserted and gone off to Belgium in one of his dreams; from that moment he wandered about Europe, but more especially through Germany and Austria. After that he visited Belgium and Holland, where he very nearly embarked for India, then went on to Switzerland, Germany, Prussia, Austria, Hungary, Turkey, and Russia, where he narrowly escaped being hanged as a Nihilist.

"I left Posen," he tells us, "and wandered aimlessly about. One day that I had lost my way across country, some peasants said to me, 'As you are a Frenchman, go to that big house over there, they are sure to give you some bread and money.' No sooner, however, had I entered the grounds, than an enormous dog flew at me, knocked me down, and

lacerated my right arm and wrist with his teeth and claws. People soon came to my rescue; but I was badly wounded, and the master of the place sent me, at his own expense, to the hospital at Warsaw, where I was taken care of for a fortnight. When I was all right again, some Jews advised my going to Moscow, telling me there were a great many French people there, and that I should certainly be able to get work in the town. I started off, therefore, making the journey from Warsaw to Moscow in cattle waggons, and tending the beasts. I reached Moscow a few days after the Czar's assassination, and found the city in a very excited condition. As for me, not having anything to eat, and being out of work, I did not know what to do with myself. The Russian government, however, provided me with food and lodging for some time, under the following circumstances.

"I was looking at a statue in the middle of a large square, when some police agents proceeded to enter into conversation with me. As I did not know a word of Russian, I tried to convey to them by an expressive pantomime all my regret at not being able to answer them.

"Either they misunderstood my gestures, or were scandalised at my behaviour, I know not which, but the upshot was that, in spite of my protestations, they seized me and carried me off to a gentleman who.

not knowing French, sent for an interpreter. I then discovered that I was in the presence of a commissary of police.

- "'Your papers! Where are your papers?' he asked me.
 - "'I have not any,' I replied.
 - "'What are your means of existence?'
- "'They are numerous, Monsicur le commissaire. I travel a great deal. When I have any money, I spend it; when I have not any, I ask for some; when nobody gives me any, I almost die of hunger.'
 - "' What has brought you to Moscow?'
- "'I really should be very much embarrassed to say, but this is what happens to me. I suffer from fearful headaches, feel dull, and have a craving to walk, and so I start off. I go straight before me, and when I come to myself, I am often far away; the proof is that a few months ago I left Valenciennes, and here I am now.'
- "'There can be no more doubt, we have caught one,' exclaimed the gentleman, his face beaming with delight.
- "'Come now, it's no use trying to deceive them,' said the interpreter, turning to me, 'they know who you are.'
- "'They know me? What luck! Then they will get me work.'
 - "' Why, the more I look at him, the more striking

I find the resemblance. We have caught him at last, take him away,' said the commissary.

- "I was seized hold of, pushed and dragged away.
- "'But what are you going to do with me?' I protested.
- "'Take him to prison, the Nihilist!' cried the gentleman.
- "So I was a Nihilist without being aware of the fact. My appearance tallied, it seems, with the description of a man they were eagerly looking for. And that is how the Russian Government, during three months, supplied me with board and lodging; however, the perspective of a running noose, or a sojourn in ice-clad Siberia, did not tempt me.

"In the course of the fourth month of my imprisonment, the prison yard was one day filled with soldiers. The prisoners were called out one by one; four, whose heads were shaven, left the ranks; they were about to be hanged. I did not feel very comfortable. Fifty more were picked out to be sent to Siberia; and the Russian Government, hearing of my love of travel, was about to send me on a long, very long journey."

Albert was incorporated in a convoy of prisoners that were about to be expelled the country, and were being sent off to the Turkish frontier. From there he went on to Constantinople, then returned to France, where he took advantage of the amnesty granted to



DR. TISSIÉ HYPNOTIZING ALBERT IN THE PRESENCE OF PROFESSOR AZAM.

deserters; and was again incorporated at Valenciennes but only again to desert. Once more he wandered all over the continent, and for the second time gave himself up a prisoner at Delle, and was condemned to penal servitude in Algeria. His conduct was, however, so good, that in a very short time he received a free pardon; but at the moment of rejoining another regiment, he was discharged as unfit for military service owing to perforation of the drum of the right ear. His military career was at an end, but he still continued his dreams. He resumed his vagabond wanderings through Europe, of which all the principal roads as well as most of the prisons and a certain number of the hospitals were well known to him, for he is possessed of an excellent memory.

At the present day, owing to the investigations both Professor Azam and myself have made of his case, and also to certain certificates testifying his mental condition, Albert is protected against himself. He is confined in the Hospital of Saint-André at Bordeaux, into which he was admitted on his arrival from Paris on foot, where he had been for some time living with his wife. He had dreamed one night that I advised his return to Bordeaux, and assured him he would find work. The next morning he started off on foot, and accomplished the distance in nine days, a feat that was attested by the medical certificates he received on the road, and the way-bill the authorities had delivered to him on presentation of the certificates

Dr. Charcot and I had given him. One day he had actually done seventy-five miles!"

This peculiar and special kind of insanity does not exhibit any external difference from a normal condition; and this knowledge leads us to protest against the words of an eminent magistrate who in 1830 said: "We do not require any physician's assistance to determine whether there is any mental disorder. If any insanity exists, everybody can easily recognize it by the extravagance or violence of the individual; if there is cause for doubt, the doubt will equally exist for the physician."

The investigation must be protracted, for the illness only breaks out at intervals, after a longer or shorter period; and its existence is only proved by the attacks. When these are violent, and the patient throws himself on the floor, rolls about or is seized with contortions, no doubt is possible. It is, however, necessary always to bear in mind the possibility of simulation, which although it may be unconscious and involuntary nevertheless exists; it is indeed one of the characteristics of this state of degeneracy.

Hysteria does not exclusively affect women, as it was so long believed to be the case, the stronger sex—to make use of a received term—is by no means free from it, and furnishes very many examples of this fantastic and incomprehensible Proteus. It is necessary to dispel this error, as well as those that exist about the nature of this disease.

Epilepsy is also a state of neurosis reacting upon the intelligence, and like the phase we have just described, furnishes the greatest number of hypnotisable subjects. There are two forms of epilepsy, the greater and the lesser. The aura presents a series of phenomena which are forerunners of the first state; it is a sensation as of a current of air either cold or hot, or a violent pain starting from the foot or hand or any other part of the body and rising up to the head; sometimes there is a congested and inflammatory attack of these parts, at other times a sudden functional disorder is manifested, such as vomiting, palpitation, lancinating pains in the chest, constriction of the throat, an irresistible impulse to run or turn round and round, hallucinations (flashes of light before the eyes or sounds of whistling resounding in the ears). The aura lasts a few seconds, or a few minutes, and sometimes in itself constitutes the whole attack. This latter however, when exhibited in full force, suddenly seizes the patient, who after uttering a scream falls to the ground. Convulsions, froth at the mouth, and hebetude accompany the awaking, after which the patient gradually recovers consciousness, and remains with nothing but a sensation of intense lassitude.

Simple dizziness, with momentary absence of mind and delirium, constitutes the lesser epilepsy. The subject's conversation is suspended for two or three seconds, he goes through the motion of chewing, his

Hypnotism.

eyes are fixed and dull, then suddenly he returns to his normal condition and the fit is over.

This disease, when its attacks are frequent, gives a peculiar stupefied expression to the countenance, almost the same as that which follows the first attacks of the greater sort.

Epilepsy, although often hereditary, is sometimes the consequence of poisoning (saturnism or lead-poisoning) or of some functional disorder of the kidneys, or it may be produced by worms in the intestine; in which cases the malady will disappear when the cause is removed.

Hysteria and epilepsy are often combined, the result being a morbid affection that partakes of the characteristics of both.

An exaggerated love for animals—or bétolatrie (as the French call it) is an eccentricity that indicates a want of equilibrium in the mental faculties bordering on this disease, and pertaining to a special kind of degeneracy. This condition explains the whimsical testaments we hear of, for instance the legacy of his library made by a German professor to his favourite spaniel.

Notwithstanding all this, degeneracy on certain points does not exclude genius, sometimes indeed it would seem as if the cerebral over-activity accumulated in direct ratio of its unequal repartition. Aristotle said that there were no superior minds without a grain of folly. And the novelist Hector Malot has considered that he was authorized in

placing the following words in the mouth of one of his heroes: "It is thanks to half-demented beings that humanity advances, progresses, enjoys life and shines forth; without them, it would soon relapse into imbecility. Cæsar, Mahomet and Peter the Great who were all epileptic, Turenne who stuttered, Socrates who had hallucinations, Pascal who suffered from obsession, Rousseau from melancholy, Byron from scrofula, Mozart who was a neuropath, Buffon who squinted, all these ran a great chance of being placed in confinement had they lived in our time."

These disorders may be compared with those due either to spontaneous hypnosis, lethargy, catalepsy or natural somnambulism. Some authors attribute these conditions to polarity, assimilating the human body, animals, and objects to real magnets. However, that may be, these phenomena are well known, and Colonel A. Rochas, in his book Les Forces non définies, has described a good many of them. The absentminded fits accompanied by an ecstatic condition to which Socrates was liable, are particularly curious.

"In one instance," Plato says in his Symposium, "during the siege of Potidæa, he was seen, early in the morning, standing in one place rapt in meditation; and as he seemed not to be able to unravel the subject of his thoughts, he still continued to stand as inquiring and discussing within himself, and when noon came, the soldiers observed and said to one another—'Socrates has been standing there thinking,

ever since the morning! At last some Ionians came to the spot, and having supped, as it was summer, bringing their blankets, they lay down to sleep in the cool; they observed that Socrates continued to stand there the whole night until morning, and that, when the sun rose, he saluted it with a prayer and departed."

According to Aulus Gellius in his *Noctes Atticæ* Socrates' ecstatic fits were extremely frequent.

"It is said, that he often stood thus, in the same attitude day and night, from the rising of one sun to that of another, without even moving an eyelid, standing motionless at the same spot, his gaze rivetted in the same direction, absorbed in thought, as if his meditations had detached his spirit from his body. Favorinus, speaking of the rare moral fortitude of this sage, reminded us one day of the fact that Socrates often remained in the same position from sunrise to sunrise, as motionless and upright as the trunk of a tree."

Saint Augustine is his De Civitate Dei mentions a priest at Calama who could at his own will fall into catalepsy. Cardan says the same of himself. And Doctor Favrot in his inauguratory thesis (1884) mentions many recent cases of this singular faculty.

These disorders do not exist only in hysterical subjects, but are also found in individuals to all appearance the least nervously organized.

^{*} Shelley's translation.

Hysteria is a malady that assumes every kind of form, and completely warps all judgment, will, or intelligence.

The world is full of hysterical and neuropathic individuals, who constitute the class of subjects most liable to be affected by magnetism or hypnotism; making it, as it were, one vast hospital. Everybody knows their propensity to lie, and to attract attention by every possible means. Their affections or their dislikes are, without any motive, carried to extremes. Their organs, affections, intelligence and tastes are all perverted. They are capable of sending an innocent creature to the scaffold.

"The hysterical woman"—professor Dieulafoy writes—"is exaggerated in all things; willingly does she make an exhibition of herself, and is possessed with the need of attracting attention; in order to render herself interesting, she will imagine all kinds of simulations, and be capable of the most repugnant Hysterical women are often malicious, perverse, deceitful, and liars; certain of them will lie with incredible tenacity and audacity; they sow discord wherever they go; they know not what to invent to attract the attention of others; they will even feign to commit suicide, and throw their family into a state of despair by threatening to destroy themselves, when they have absolutely no wish nor intention of so doing; they accuse themselves of actions they have never committed, and falsely accuse others of robbery or murder. Most hysterical subjects have

hallucinations during the convulsive attack; with some these hallucinations exist without the attacks; thus a woman may be calmly and quietly reading or working and suddenly rise abruptly, and scream, imagining she sees fantastic animals on the floor or wall. . ."

This is certainly a very unflattering description, which fortunately is only true in rare cases.

With regard to a criminal whom we shall again have to refer to—not that she is interesting in herself, but on account of the discussions her case has led to—Dr. J. Gérard writes:—

"A woman suffering from neurosis has no will-power, but something replaces that absent faculty: she is a liar in every comprehension of the word; she invents, with unheard-of facility, the most machiavelian romances; more especially if she has the slightest grain of truth to start with, and she will embellish it till the truth is utterly unrecognisable; moreover she will at last sincerely believe all she has imagined, whether it is for her benefit or not.

"Every hysterical subject craves for a pedestal, whether it is a velvet cushion, the foot-lights of a theatre, or even the prisoner's dock."

There exist also natural somnambulists who, like the epileptic at the moment of impulsion, go as unerringly to their goal as a stone falls to the ground— (Dr. Liébeault) and accomplish actions of which they do not retain the faintest recollection

CHAPTER X1.

SIMULATION.*

In the preceding chapter we have had occasion to speak unfavourably of nervously affected subjects. It is necessary therefore to support this language by proofs, and we shall thus be able to demonstrate the existence of feigned effects on the part of such individuals. These may be either conscious or unconscious, and the opinion of many magnetizers is that they are the latter.

But first let us make it clear how far such unconsciousness can go; and with that view let us look into Dr. Vibert's manual on forensic medicine, into the memoir of Monsieur Liégeois, Professor of Law in the Faculty of Nancy, and into the Reports of the Hypnotic Congress.

The question at issue is that of judicial mistakes caused by the actions of persons no longer under the control of moral sense; as for instance:

1st. The Comtesse de W- accused her maid of

^{*} Simulation appears to be a word applied equally to persons who "feign" in order to deceive others, or who are themselves labouring under self-deception.

having attempted to poison her. "You remember, do you not," asked afterwards the celebrated advocate Chaix d'Est-Ange, "how the attention of all Paris was roused by that cause célèbre, and how women crowded frantically to the trial, and took the side of the supposed victim?" Well, the Courts of Justice, acting under false impressions, condemned the maid to death. But the judgment was quashed; a second trial brought out proofs of her innocence, and the unhappy creature, who had been condemned to the scaffold, was acquitted by an unanimous verdict. It was proved that the Comtesse de W——had herself bound herself on her bed, and had herself poured out the poison which was found still blackening her breast and lips.

2nd. Auto-suggestion is also a cause which may lead astray magistrates of the highest integrity, and by putting them on a false scent, close, so to speak, both their eyes and their intelligence to everything which does not coincide with the preconceived idea; thus:

A certain Mr. L—— who was prosecuted as having been guilty of the assassination of Madame B——, the wife of the juge de paix of Vouziers in the department of Ardennes, was indebted for his life solely to the jury being equally divided.

The real murderer, however, was the son of the victim!

The commission of a second crime placed him in the hands of justice. The summing up of the Public Prosecutor demonstrated in so many words that under the former indictment, the authorities, blinded by the very atrocity of the crime of which they sought the perpetrators, allowed themselves to be carried away by delusions, went off on a false track, and never even searched the premises of the real murderer, to discover whether there existed any restiges of the crime or of the instrument with which it had been committed.

I have cited Monsieur Liégeois, but I cannot think that either hypnotism or even nervous affections have anything to do with such cases. They are simple examples of judicial misapprehension, errare humanum est. Such self-delusion on the part of the judges is only what manifests itself more or less in everything that we do, and does not fall into the domain of neurosis, unless we would drag everything that happens in this world into the same category.

- 3rd. We know that hysterical persons will steal in shops, without any necessity for their so doing.
- 4th. So again, a sick-nurse poisons nine persons without a single motive either of interest or vengeance. Again, Helen J——, between the years 1833 and 1851, poisons, without explicable motive, twenty-six persons, three of whom die.
- 5th. Dr. Dufay, Senator for Loir-et-Cher, was fortunate enough to be able to demonstrate to a

Court of Justice, the complete innocence of a young girl, who, in a state of spontaneous somnambulism hid in a safe place the jewels of her mistress, who accused her of having stolen them.

In 1885, the Court of Justice of the Seine, condemned to three months imprisonment a girl named Annette G--- for having stolen a blanket. scarcely had she been placed in the St. Lazare Penitentiary than she was obliged to be removed to the infirmary. A morphinomaniae and hysterical subject of the most confirmed character, she had, according to her fellow-prisoners, been present at her trial in a perfectly unconscious state, and acts of petty larceny being decided with great rapidity in the Paris Courts, the judges had never discerned her condition. On appeal, her counsel Monsieur Lagasse, obtained the nomination of experts, and on Messieurs Charcot's, Brouardel's, and Motet's report, to the effect that "culpability could not exist in the pathologic condition in which they found the prisoner," the Court repealed the sentence.

7th. In 1886, Ulysse X—— broke into the shop of a second-hand dealer, facing his own house in Paris, and there began deliberately to take away the goods, just as if he were removing his own furniture. This he did without hurrying himself in any way, and transported the property to his own premises.

Being caught in the very act of the theft, he seemed

at first to be flurried and bewildered. When arrested and taken to the lock-up house, he seemed to be in a state of abstraction; when spoken to he made no reply, seemed ready to fall asleep, and when brought before the examining magistrate actually fell asleep. Dr. Garnier, the medical man attached to the infirmary of the Prefecture of Police, had no doubt of his irresponsibility.

The simulation of such disordered conditions as the above, occurs frequently and readily. Someone has said that it required great ability to play the fool, and that is by no means paradoxical; but criminals have often enough intelligence to play such a part. It is true that medical men of the present day have a tendency to see in every case lunatics rather than criminals. But society must be protected, even in cases where real insanity is proved to exist.

The question, however, is complicated and the distinction of difficult elucidation. How are we to detect simulation in hypnotism? And how are we to distinguish between consciousness and unconsciousness—between what is voluntary and involuntary?

"Simulation," say Messieurs Binet and Féré, "which is already a stumbling-block in the study of hysterical cases, becomes far more formidable in such studies as we are now occupied with. It is only when he has to deal with physical phenomena, that the operator feels himself on firm ground."

Yet even here there is by no means certainty. I have already remarked with regard to catalepsy, the new and ingenious apparatus of modern medical science gives no absolute conclusions. That the respiration and circulation may be profoundly modified by the exertion of abnormal efforts, such as stretching out the arms at full length for five minutes consecutively, must be admitted; yet that such would be the case if the same exertion had been practised from infancy, or during a long period, is what I cannot allow. must always make allowance for training, and recollect that story of Montaigne, about a woman, who, having accustomed herself to carry a calf from its birth, carried it when it became a bullock! Although somewhat exaggerated, the story does not the less demonstrate the power of habit.

We know that many hospital patients who are subjected to the higher or greater treatment of hypnotism are of very doubtful reputation; we know also the effects of a temperament which in them is peculiarly addicted to simulation, and which is exaggerated by the vicinity of maladies similar to their own. To judge of this, it is necessary to have seen them encouraging each other in simulation, rehearsing amongst themselves, or even before the medical students of the establishment, the experiments to which they had been subjected; and going through their different contortions and attitudes to exercise

themselves in them. And then again, in the present day, has not the designation of an "hypnotical subject," become almost a social position? To be fed, paid, admired, exhibited in public, run after, and all the rest of it? All this is enough to make the most impartial looker-on sceptical. But is it enough to enable us to pronounce an a priori negation? Certainly not; but it is sufficient to justify legitimate doubt. And when we come to moral phenomena, where we have to put faith in the subject, the difficulty becomes still greater. Supposing suggestion and hallucination to be granted, can they be demonstrated? Can we by plunging the subject in hypnotical sleep, feel sure of what he may affirm? That is impossible; for simulation and somnambulism are not reciprocally exclusive terms, and Monsieur Pitres has established that a subject who sleeps may still simulate.

Moral proofs undoubtedly exist, but they are of value only to him who is intimately acquainted with the patient upon whom he operates; and even then, is there not such a thing as unconscious simulation? "Do we not know the history of honest Hublier," ask Messieurs Binet and Féré, "whom his somnambulist Emélie cheated for four years consecutively, and whose story may teach us elesson of prudence not to be wisely neglected."

Mere observation is not sufficient, any more than experiment; but it may aid us in the investigation of

truth, though it may not keep us absolutely in the right path. Thus the school of the Salpêtrière has demonstrated that "hallucinary vision may be modified by optical instruments, just like natural vision; that hallucination of colour produces the same effects of contrasted colour as real colour; that paralysis temporarily induced by suggestion is accompanied by the same physical symptoms as that arising from organic causes." It would certainly be attributing too much knowledge of physics and physiology to nervous subjects to believe them capable of such simulation as that above mentioned. But have we not already read the remark of Messieurs Binet and Féré, à propos of the hallucination of the supposed sight of a portrait upon a black card, viz.: "that the brain took advantage of some insignificant mark to place a figure on it." And would not this mark, seen through optical instruments duplicate itself, and assume colour, and make one believe that what was absent was there? I have seen this experiment tried on subjects who were wide awake; and must we conclude that it cannot be made during sleep? Most assuredly we cannot, and therefore we ought not to be too positive on that head.

Then again, may not the subject who sleeps pretend to be asleep? At first his condition used to be severely tested, and it was ascertained that he really was asleep. But, by - and - by, these pre-

liminary precautions were neglected; time pressed, people wanted to go ahead and make new discoveries. They contented themselves, therefore, with saying to their patient "Go to sleep," or with touching some hypnogenic point of the body. But the patient might pretend to be asleep, or he might have so inwardly affirmed to himself the possession of his free will, that the pressure on the hypnogenic point might still leave him awake. Over and over again, subjects have told me, and proved to me that "they would not sleep, let me do what I liked, because they were determined not to sleep;" and that is an avowal to which we shall return, in order to demonstrate that free will still exists.

That subjects do not simulate certain characters, either because they do not know how, or because they are unable, is what cannot be positively affirmed. Nerrous subjects are generally very intelligent; they talk much amongst themselves, interrogate other subjects, and train themselves mutually. It is all very well to allege amnesia, that is to say, loss of memory as to accomplished facts, but that explanation is not final. A subject who is not feigning, is capable, by recounting that which he himself really does, of teaching another what he must do, and this one again of imitating him perfectly or even better. The medical students of the hospital often make the patients who write well, copy their notes of lectures or

their observations,—a kind of instruction of which they know how to avail themselves!

The right method to pursue in cases of suggestion is to experimentalize upon artificially provoked physical phenomena, and the end to be aimed at is the objectivity of these suggested derangements.

If the subject pretends to see, when he sees nothing, the fraud may be exposed by physical apparatus.

What we have still to learn is (following always Messieurs Binet and Féré, who have written so conscientiously on this question) whether simulation on the part of a subject susceptible of suggestion, cannot do all that suggestion itself does. We have already replied to this by a quotation from Colonel de Rochas' work. Paralysis, or pain, can be created ideally; and it is no matter whether the idea comes from a subject, real or feigned, or from the operator. The fact exists, and may be confounded with a real phenomenon.

As to imaginary hallucinations, we know that certain persons in a waking state can summon up the apparition of any colour they please; and this application of the will has even been considered to indicate a susceptibility to hypnotisation. Between the apparition of the imaginary appearance willed, and the imaginary appearance suggested, there is only a difference of time.

Psychical paralysis can be put an end to by the patient himself; five minutes of voluntary effort will

suffice to put in motion the paralysed member. There is nothing astonishing, therefore, in the reverse of the phenomenon, or in the fact that the hypnotised or hypnotisable subject should be able to paralyse himself. Messicurs Luys and Bacchi, on examining the interior of the eye of hypnotised subjects, found that there existed a hyperemia of the retina. Repeated experiments can alone tell us whether this hyperemia can be voluntarily produced.

So much then for conscious simulation. With regard to unconscious simulation, it arises from the desire of both the subject and the operator to make their experiments succeed. The subject expects a phenomenon, which comes self-suggested. Moreover, we must take into account his sensorial overstrain, which makes him as it were hear the thoughts of the hypnotiser; and hence arises the idea of unconscious or mental suggestion.

In physiology, we are almost all agreed as to the human dichotomy into two separate beings: one conscious, and subject to the will; the other unconscious, and acting independently of us. (C. Richet.) Writers have designated them as the Eyo 1. and the Eyo 11. (Dr. Ochorowicz), or the Eyo sensorial, and the Eyo splanchnic. (Dr. Tissié.)

But let us go into details:

Certain persons have the faculty of awaking exactly at the hour they wish. Evidently, it cannot

be their conscious existence, buried in sleep, which tells them the hour.

We are walking, or turning over the leaves of a book, thinking of something else. A clock strikes near us; our attention not being directed to it, we do not hear it, and then, a few minutes after, the consciousness of what has taken place re-appears.

With hysterical persons, their unconsciousness is constantly on the stretch and always active. Here are some of the experiments made on this subject by Monsieur Jules Héricourt:

If the hand of an hysterical person be made insensible, by suggestion or by manipulation, and then hid behind a screen, and touched several times, and the person be asked to think of some number, the answer will give the number of touches of the hand. (A. Binet.)

Again, if an hysterical anæsthetical female be hypnotised, and signals signifying yes or no be agreed upon, communication can be held with the unconscious subject. In fact, if the insensible parts be pricked and the patient herself be interrogated as to her sensations, she will affirm that she does not suffer, but her unconscious part will protest against this by means of the signals agreed upon. (P. Janet.)

Messieurs Héricourt and Delbœuf protest against the manner in which some operators conduct their experiments. Thus: "Over and over again," they say, "we have heard operators 'talk' before their subjects—hysterical or hypnotised persons—and thus simply indicate to them the different phenomena through which they are expected to pass. And this is often the origin of the petty personal schools of this or that operator, founded upon phenomena which have no real distinction, or any other basis than the imprudence and simplicity of men who really believe that their patients do not hear their prating.

"And it is quite true that, amongst these patients, the 'conscious personality,' rendered profoundly insensible, hears absolutely nothing; but the 'unconscious personality 'loses not a word of what passes. Above all, this latter personality registers with the greatest assiduity the smallest traces it can lay hold of, and it is exactly it which will by-and-bye prompt the action of the former, and so again make it believe in perfect good faith that it is inspired and endowed with a veritable gift of divination."

Nor is this all. Apart from what is expressed by language, there are gestures, unconscious movements (Chevreul and Richet), expressions of physiognomy (Stricker), which the patient also seizes upon and registers.

At the Hypnotic Congress, Dr. Bourdon of Méru (department of l'Oise), speaking of a female patient of superior intelligence who had been put to sleep by him, said:

"While in the profound state of sleep, I asked her: 'What am I thinking of.' 'Such and such a thing,' she replied, 'I heard you thinking of it;' and it was true."

Some time after, my friend Dr. Adolphe Rousseau wrote to me that "it was easy to explain pseudomental suggestion. We cannot think," he says, "without the larynx speaking; in dumb fashion, indeed, but still speaking." Now, according to the avowal of Professor Proust himself, the sensorial power is carried to its highest point in a state of somnambulism. "The slightest breath upon the skin," says George Price, "the least possible noise, the faintest impression, is felt and perceived even at long distances." The ear of the somnambulist catches perfectly the vibratory movements of the larynx of the hypnotiser, who thinks he does not speak, but who does speak, for his subject.

"For months and months," adds my friend, "this subject had been running in my head, and I had said to myself that these extraordinary phenomena of mental or *pseudo-mental* suggestion were nothing more in reality than phenomena of super-acute audition."

Without being so positive on the negation of mental suggestion, we quite agree on the fundamental question of the existence of unconscious communication proceeding from the observer and rendering more difficult the solution of the problem of simulation. But that such influences exist, without being either intended or perceived by him who produces them, is undeniable.

Let us give some instances:

Some years ago, all fashionable Paris went into cestasies over the experiments of Cumberland. This expert conjuror used to take the hand of an individual who had either hid or thought of some object, and then he would go straight to the object in question. More recently Onofroff used to do the same at the Salle des Capucines, on the Boulevards; but he dressed up the spectacle a little. An imaginary assassination was supposed to be perpetrated at a distance from him: the victim and the criminal were designated, and the murderer's weapon was hid. Then a person who was witness of all these facts took Onofroff by the hand, with his eyes bandaged, who thereupon related all that had been done. It was necessary, however, to "fix one's thoughts," otherwise the thread failed which allowed the conjuror to succeed in his experiment. Messieurs Richet and Gley studied this question and with great success: it was clearly demonstrated by them, that during the whole of the experiment fibrillous contractions and slight pressures took place in the hand of the subject. and in some cases a sort of traction of the hand and of the whole arm. These movements increased in intensity when the object sought was approached, but

ceased immediately in presence of it. From 25 persons 16 positive results were obtained. In reality, according to Messieurs Binet and Féré, there is no communication by thought, but only by signs which the subject lays hold of with an acuteness of perception which is really marvellous.

Nor is it man alone who is capable of being guided by these almost imperceptible influences. The same thing happens with the lower animals; and I can cite the authority of the naturalist Houzeau for the existence of this faculty. It often happened to him, when on horseback, to intend to stop at some place, and then to forget; and yet the horse stopped there. He had unconsciously imparted his will to his horse.

Insensibility or anæsthesia has often been cited as a criterion of hypnotic sleep. But this is not so. Many hysterical persons are affected, as a sort of stamp of their malady, with insensibility of the whole of one side of the body; a phenomenon which magnets or other agents, as also, no doubt, the volition or imagination of the subject, are capable of transferring from one side to the other.

The will is often sufficiently strong to prevent such a symptom as pain from appearing, without ceasing to exist. In the Salle des Capucines I have seen Monsieur d'Avilly, called the Parisian Aïssaoua, impart to his body the rigidity of a corpse, and run pins

through his arm while he was addressing the public; yet without ever losing consciousness of pain.

If we turn our attention to the Aïssaouas and the Hindoos, we shall find from their example that, as regards pain, it is possible, if not absolutely to suppress it, at least to endure it without any manifestation.

These Aissaonas or serpent-charmers constitute a powerful religious sect in Morocco. Louis Jacolliot has told us the marvellous phenomena they exhibit; and Mr. George Curzon, M.P., some three years ago mentioned in the Fortnightly Review those of Kairouan as did also Monsieur Paul Bert those in Algeria. Moreover, every one had the opportunity of witnessing these latter experiences at the Universal Exhibitions of 1867, 1878, and 1889. At the last, I was able myself to observe minutely these facts of insensibility to pain and religious fanaticism, which are most remarkable.

These sectarians of Aïssa, or Aïssaouas, bring on themselves a sort of delirium by dances and the repetition of special litanies chanted in chorus, and by inhaling perfumes of a particular quality; the whole being accompanied by music of a strange and weird character. At first they all sit round, looking grave and with an air of thorough conviction. Each Aïssaoua performs in his turn; and then after a harum-searum dance, without rhyme or rhythm, followed by disorderly leaps and bounds, they all

howl and the music ceases. Each actor seems to feel a divine inspiration, and to be ready to dare and accomplish anything. On the Esplanade of the Invalides these Aïssaouas one by one exhibited such specimens as the above of the manners of their country, before a crowd of spectators.

One of them might be seen eating the thorny, leathery leaves of the cactus; another piercing his cheeks, tongue, neck and arms, with long thick iron needles attached to heavy balls; another would greedily devour scorpions and live snakes; another would crack with his teeth, apparently with great gusto, sharp fragments of glass; a head man of the tribe licked a red-hot shovel and forced his eye out of the socket;—and all this was repeated over and over again.

The Aïssaoua will tear and lacerate his skin almost without making the blood run, and while thus torturing himself he will leap, bound, howl, and then embrace his companions on the forehead and sit down gravely.

He will let his stomach be pierced with long nails driven in with a mallet by one of his co-religionists; and not content with crunching glass with his jaws and devouring it, he will swallow whole pebbles, devour living vipers, or make them bite him with undisguised satisfaction.

If we may believe Jacolliot, an ex-judge at Chan-



THE FAKIRS.

dernagor, all this is nothing but play. In his Voyage aux pays des perles, he relates how hundreds of fakirs at the feast of the god Siva, throw themselves under the wheels of his car and delight in being ground beneath the divine equipage. Some go all the way to the Ganges, the sacred river, measuring the distance by their body as they go; others make the same journey on their hands and knees, or jump the whole way with their feet tied together; some, again, only eat and drink once in three days, all through the distance.

The fakirs support the most horrible torments without flinching. They lie down on planks with nails stuck through them; they fasten themselves with iron hooks to a wheel that turns round; they sew up their lips; some, by clasping their hands for years, have fastened them together by the nails growing into the flesh.

Was not the Greek philosopher justified when he declared pain to be "only an expression?" And what are we to think after this of that pretended criterion of special sleep which we are studying, and which we call anæsthesia?

If the reaction of the moral over the physical sense, of the action of the will over the mechanical structure, can be so transcendent, how are we to distinguish the subject that sleeps from one that does not sleep?

To sum up, the result of this long exposition of the

difficulties which beset the inquirer when he desires to eliminate all causes of error from his experiences is that it is almost impossible to do so. The two states of being of which we are all compounded, the conscious and unconscious of Dr. Richet, are so blended together and intricated with each other, as to complicate and often make inextricable the result of experimentation. The most extreme prudence, therefore, is necessary in making affirmations, for these can have no irrefutable grounds to stand upon. There is no absolute criterion for the unreserved admission of hypnotism. On the contrary, there are often facts which are strongly opposed, for example, to the abolition of the will; and these will form the subject of one of our subsequent chapters.

CHAPTER XII.

THERAPEUTIC SUGGESTION.

Suggestion is an order given to, and executed by, the hypnotized subject, either in a sleeping or waking condition. Without dwelling any further, at present, on this definition, we will show the efficacy of these commands from a curative point of view. However dry and arid an enumeration of cases cured may be, it will nevertheless serve to demonstrate the uncontested utility of induced sleep. But it is important we will show the reason why later on—that these curative means should only be used as a last resort. When the whole therapeutic arsenal has been tried in vain, and then only, the medical man has the right to have recourse to hypnotism. I do not assert this as regards magnetism, which, not necessarily inducing sleep, and being only, as it is called, a contagion of health, may be exercised with impunity by a healthy individual on a sick person.

We will now quote some examples; they are susceptible of many interpretations, and the reports presented at the Congresses are full of them. Dr. Voisin's report is valuable in this point of view, and contains sound advice.

"I think," he says, "that we must lay down as an absolute principle never to suggest an illusion, an hallucination, an evil thought, or a bad or mischievous action to a hypnotized subject; but that we should strive to inculcate good advice, tell him to obey, to work, to think what is good, to do good, to hate vice, to be pleasant and make himself useful, and to love those around him. We must carefully avoid making of a hypnotized subject, an object of curiosity or experiment."

Dr. Voisin recommends that each subject should be separately hypnotized, so that the suggestions imparted may not be destroyed by their companions.

Insane and nervous patients derive, under these conditions, great benefit from suggestion; they can be cured of disorders and hallucinations pertaining to the sight, hearing, smell, taste, and general or special sensibility; and also of those pertaining to delirious conceptions.

Insane patients have been cured of visual defects, such as mistaking red for black, blue for green, green for white, yellow for red, or violet for yellow, and in each case normal sight has been restored. Buzzing in the ears has also disappeared under this treatment. And insensibility or anæsthesia, an exaggeration of sensibility or hyperæsthesia, nervous

hemiplegia, as well as the neuropathic contractions of a limb or part of a limb, have been cured by the same means.

A female patient saw men and shadows, armed with sticks, standing before her threateningly, and was in consequence deprived of sleep. She longed for death, and implored the doctor to give her poison; suggestion, however, soon freed her from these ideas.

Another one tried to kill herself, because she heard the voice of her dead father, calling her from his grave. This state had lasted three weeks; one sitting, however, made it disappear. In the same way a cure was effected with an hystero-epileptic patient, who suffered from intense visual and auditory hallucinations, accompanied by violent delirium that had lasted five years.

Dipsomania and morphinomania—the excessive abuse of cerebral stimulants, alcohol, morphia, &c.—are "easily cured by hypnotic suggestion." Individuals afflicted with these manias, as well as consumptive patients, and those suffering from other kinds of tubercles, are particularly sensitive to hypnotism. The League against the abuse of tobacco through its President, Monsieur Decroix, even proposed at the Hypnotic Congress to award a prize of sixteen pounds to anyone who could report four well authenticated cases of the complete disuse of tobacco by the influence of induced sleep.

Memory can also be developed: "I have been able," Dr. Voisin again tells us, "to make ignorant individuals, totally devoid of instruction, recite by heart, and without a mistake, whole pages of the Bible, such as Jesus Christ's genealogy in the Gospel of St. Matthew; long stanzas, fables, pieces of poetry, and even the multiplication tables."

In the treatment of moral obliquity, or for educational purposes, hypnotism can be used in the same manner; Dr. Voisin says: "I have been able absolutely and radically to transform the habit of thought, deed, or word, of children and certain youths; I have made them take a delight in what was good, while formerly they only cared for what was evil. I have brought them to detest the vices they were addicted to; and thus I have cured them of all habits of lying or thieving."

Dr. Marcel Briand, head physician at the Asylum at Villejuif, reports identically the same results. Insane patients are, however, less sensitive to the action of hypnotism than neuropaths. It is necessary to fix the attention and imagination of the subject in whom we wish to induce sleep; and this is almost impossible in the case of patients a prey to delusions which absorb them, or those in whose minds thoughts flit across with fantastic rapidity. "I have tried several times," Dr. Briand says, "to induce sleep in delirious maniacs, who presented no hysterical symp-

toms, but I have never succeeded in obtaining any result;—or rather, a certain number of my patients closed their eyes, and were even good natured enough to seem to doze; but I am bound to state, that sooner or later, they all declared that they had feigned sleep, in order to put an end to a persistence that annoyed them."

Dr. Jong, of the Hague, cured patients of fear, doubt, and writer's cramp.

Messieurs Burot and Bourru, Professors of the Faculty of Medicine at Rochefort, cared a female patient who presented a most interesting case of double personality with two kinds of consciences, two modes of feeling physically and morally, totally different and alternate, although at times closely interlaced. "In one state, the patient is torpid, reserved and indifferent, remaining-she is naturally a very active woman-for whole days unoccupied, without any notion of time, or passing events; this may be called the somnambulistic life. In the other state, which recalls her former life, and that we will call her normal state, Madame de M---- feels and expresses her impressions with the greatest facility; this state is, however, always fragile and incomplete. She is conscious that she is emerging from darkness and is coming to life again." She was completely cured by suggestion, but the ameliorations obtained little by little were generally preceded by violent and acute attacks. I have myself treated two similar cases, in which, although I failed to induce sleep—only obtaining a somnolent condition by the contemplation of rotating mirrors—I have been able to succeed with suggestions, and to cure both patients.

I have also seen a command to speak completely cure a young governess who had been seized with sudden aphony.

Sometimes, suggestion requires the aid of some different element, which will make it more powerful; a dressing up, as it were, that throws dust in the subject's eyes. I will now give Dr. Luys' observations, quoting his own words:—

"I consider that it is important to popularize one element in the new resources that the practice of hypnotism offers, in its therapeutic treatment of nervous diseases.

"The cases cured, here and there, in the hospitals, by reason of their special surroundings, of the publicity given to the experiments, and of the numberless means of verification, permit of our relying on them, and authorize our considering them in the light of acquisitions that can be used in practice.

"The following case warrants this assertion:

"Gabrielle C—— became a patient of mine towards the end of the year 1886. She entered the Hospital of the Charité, to be under treatment for some accident arising from pulmonary congestion, and while there was suddenly seized with violent attacks of hystero-epilepsy, which first contracted both legs, and finally reduced them to complete immobility.

"She had been in this state of absolute immobility for seven months, and I had vainly tried every therapeutic remedy usual in such cases. My intention was first to restore the general constitution of the subject; who was greatly weakened by her protracted stay in bed; and then, at the end of a certain time, to have recourse to hypnotism, and at the opportune moment suggest to her the idea of walking.

"Her case was, for me, the exact reproduction of that of a woman called Anna, a patient who had suffered from the same paraplegia of the motor powers, and who had been cured in a miraculous way, as it were, by hypnotic suggestions, made by Dr. Bottey who, at that time, was working under me as housesurgeon at the Salpêtrière.

"I therefore decided to proceed in the same manner, and intrusted the case to Dr. Foveau de Courmelles, at that time attached to my division at the Charité; who, following my instructions, began a course of therapeutic hypnotism.

"The patient was thereupon hypnotized every morning, and the first degree (that of lethargy), then the cataleptic, and finally the somnambulistic states were produced. After a certain period of somnambulism, she began to move, and unconsciously took a few steps

across the ward. Soon after, still following the method put in practice by Dr. Bottey, it was suggested—the locomotor powers having recovered their physical functions—that she should walk when awake. This she was able to do, and in some weeks the cure was complete.

"In this case, however, Monsieur Foveau de Courmelles had the ingenious idea of changing her personality at the moment when he induced her to walk. The patient fancied she was somebody else, and as such, and in this roundabout manner, he satisfactorily attained the object proposed.

"Here are a few clinical details-recorded day by day in Monsieur Foveau de Courmelles' own writing -connected with this new mode of suggestion, which he so successfully carried out. We continued, he says, to make the patient walk while in a state of somnambulism, supporting her a little, and ascertaining that she was daily improving in her gait. When, however, the waking period had arrived, all effort ceased, and the patient was again perfectly helpless. having reached this point, we suggested to her (while in the somnambulistic state) the idea, to be retained when awake, that she was no longer Gabrielle; but that her personality was changed, and that she was now Yvonne, a very vivacious girl, who occupied the bed next to her. This therapeutic suggestion met with complete success, and Gabrielle retained in her waking condition the impulsion that had been given to her in sleep. She fancied all day that she was Yvonne, walked about exactly as the latter did, and recovered all her natural movements. She only awoke on the following day, and then complained of a general feeling of lassitude and discomfort; and of a disagreeable sensation, as she described it, of being in somebody clse's skin.

"This operation of substituted personality and temporary cure was renewed with the same success for three days running; the patient spent the whole day under the name of Yvonne, moving about the ward, and went to sleep regularly every evening, awaking the next day with the same feeling of unwonted fatigue.

"She was then left for two days in a state of complete repose, without any suggestion, in order to remove the false impression of substitution of personality and the third day, when in the somnambulistic state, it was suggested that on awaking she would find herself cured and be able to walk. This result was actually attained; from that day she recovered the normal use of her limbs, and continued to improve; her gait, which at first was hesitating and jerky, soon becoming regular and measured.

"The cure took place three weeks ago and is now an established fact; the patient is calmer than before her attacks, and seems to have entered into a period of real convalescence." It is now more than three years since this took place, and the patient's condition remains the same She now walks as if she had never been paralysed.

Dr. Luys has obtained a large number of cures (in shaking paralysis, palsy, etc.) by suggestions imparted during sleep induced by rotatory mirrors, even when only a degree of somnolence has been obtained. I have also been successful in curing a state of palsy that had lasted two years.

CHAPTER XIII.

CRIMINAL SUGGESTION.

§ I. Allegation of its existence.

Whoever has a respect for truth and convictions, and is willing to admit the right of others to form their own opinions, must first of all give a faithful exposition of facts, and then show the different interpretations of which they are capable. This chapter will therefore be made up of quotations taken from the most ardent partisans of the belief in criminal suggestion, and bearing upon the experiences that seem to encourage them. Our opinion—and the succeeding chapter will prove it—being absolutely different, we could not give a succinct analysis without appearing, or at least seeming to appear, to lessen the facts: we will therefore confine ourselves to quoting them verbatim.

Suggestion acts—according to these writers—at the very moment it is made, if the subject is consentient, a state that can always be produced by persistence. "Every brain cell," Dr. Bernheim tells us, "set in action by an idea strives to realize that idea; the idea

must manifest itself by action; and this transformation is more easily carried out when the cerebral automatism is paralysed by inactivity of the superior cerebral functions, such as those of attention, and comparison." This result is attained by hypnotic suggestion.

Dr. Luys had, some time ago, maintained the theory of the automatism of the nerve cells, and had made use of it in suggestion.

Dr. Ladame, of the University of Geneva, in his book entitled "L'hypnotisme et la medecine légale," gives several examples in proof of these statements.

Monsieur Bernheim relates the following case: "One day I suggested to S--- that he would, on awaking, see on a table behind him a silver spoon, and that he would put it into his pocket. When he was awoke, he did not turn round, and therefore did not see the spoon. But on the other hand, he saw a watch on a table in front of him. I had also suggested to him the negative hallucination that he would see no one in the ward, and fancy himself alone, which suggestion was realized. The idea of the theft, suggested for the spoon, was evoked in his brain at the sight of the watch. He looked at it, took it up, and then said: 'No, it would be a theft,' and put it down again. If the suggestion of stealing the spoon had been imperatively and powerfully reiterated, I have no doubt he would have taken it.

"Since writing this, I have had the opportunity of again hypnotising S—, and I made the same suggestion, but more imperatively: 'You will put the spoon in your pocket, you will not be able to do otherwise.' On awaking, he saw the spoon, hesitated for a moment, then said: 'Upon my word, it can't be helped,' and put it in his pocket."

Monsieur Liégeois gives us the following experience: "I dissolved a white powder in water, and solemnly declared to Madame C—— (a patient aged thirty-five) that it was arsenic. I then said to her, 'Here is Monsieur D——, he is thirsty, he will ask you in a moment for something to drink; you will offer him this glass of water.' 'Yes, sir.' Monsieur D——, however, made a question I had not foreseen: he asked what was in the glass. And with a candour that banished all idea of simulation, Madame C——replied: 'It is arsenic!' I was therefore obliged to correct my suggestion, and I said: 'If you are asked what the glass contains, you will say sugar and water.'

"Cross questioned by the commissary of police, Madame C—— remembers absolutely nothing. She asserts that she has seen nothing, done nothing, and not given anything to drink to anyone; she does not know what they mean."

In 1887 the newspaper l'Indépendance Luxembourgeoise, gave an account of a similar kind of experiment that took place at Brussels. A young man called on a magistrate and accused himself of having murdered his father. The most harrowing despair and remorse were depicted on his countenance. He was placed under arrest, and cross-examined, when on enquiry it was discovered that he had not committed any crime, and he was at once set at liberty.

The following experiment, and one that is often referred to, although its author—as we will demonstrate—considers it a mere laboratory experience, is recorded by Dr. Gilles de la Tourette.

"We first put II. E——, who has had some words with our friend B——, a medical student in the hospital, into a state of somnambulism, we then say to him: 'You know Monsieur B——?' 'Yes, sir.' 'He is a very nice man!' 'Oh no, sir, he does not attend to me properly!' 'Really! well then we must put him out of the way, and then we shall certainly have another student who will take better care of you.' 'I ask for nothing better.' 'You must do what is necessary: here is a pistol (and we place a ruler in his hand); when you awake, you will fire at him, he will be coming here, wait for him!'

"We blow on H. E——'s eyes, who, after awaking, continues conversing with us, all the while playing with the revolver (or rather the ruler that represents a revolver in his eyes); which he absolutely refuses to part with. The suggestion not yet having been fulfilled,

the subject would sooner kill any one who tried to dispossess him of his weapon, rather than give it up.

"At a certain moment our friend B—, who has been warned of the way he will be greeted, enters the ward. H. E—— allows him to approach, and then coolly discharges his pistol point blank at him. B—— falls down, exclaiming: 'I am killed!' 'What,' we say to H. E——, 'you have killed Monsieur B——! but what can have induced you to commit such a crime?' 'Monsieur B——, did not properly attend to me, I have revenged myself!' 'That is not a sufficient reason.' 'You may think so, but I had also many others; besides, he was doomed to die by my hand!'"

A similar experiment—which has been communicated to me by its author—was made by Dr. Dumontpallier in his division at the Hotel Dieu, in the presence of several literary men. A female patient was hypnotized. Rather plain featured in her normal condition, she became really handsome in the cestatic state. The Doctor said to her: "There are people here who annoy me." "Oh, no," she replied. "Yes, they do, especially that one; you must poison him" (Monsieur Dumontpallier pointed out Alexandre D——). "No, I won't." "But you must, I will it." The patient's physiognomy revealed all her apprehensions and hesitations, which Alexandre D—— watched with the greatest interest. "Here is the glass," the doctor. continuel, "you hear the

poison dropping into it, take it to him." "No, no." "I command you."

The patient obeyed, took the glass to Alexandre D—, and said, "you must drink this," almost forcing it down his throat.

She then returned to her place and saying "It is done," sunk down on the chair. She was awoke, and on being told what she had done, went up to Alexandre D——, and said to him in a tone of absolute sincerity: "Oh Monsieur, quick, take an antidote! If you die, do forgive me before you die."

The tone of her supplications was heart-rending; she threw herself at the feet of her supposed victim, and implored his pardon with convulsive sobs.

Dr. Dumontpallier—whose account I am now writing down within an hour of hearing it—added, when I expressed some doubt: "I challenge my contradictors, notwithstanding their explanations—only recently given—about laboratory crimes, as they term them, to lend themselves, as experimental subjects, to the attempts at criminal suggestion I might make on them."

Dr. Luys has also written in his "Clinical Lectures on Hypnotism," in which he particularly treats of hypnotized subjects in a state of lucid somnambulism: "You can not only oblige this defenceless being, who is incapable of opposing the slightest resistance, to give from hand to hand anything you may choose.



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but you can also make him sign a promise, draw up a bill of exchange, or any other kind of agreement. You may make him write an holographic will (which according to French law would be valid), which he will hand over to you, and of which he will never know the existence. He is ready to fulfil the minutest legal formalities, and will do so with a calm, serene, and natural manner calculated to deceive the most expert law officers. These somnambulists will not hesitate either, you may be sure, to make a denunciation, or to bear false witness; they are, I repeat, the passive instruments of your will. For instance, take E---, she will at my bidding write out and sign a donation of forty pounds in my favour. In a criminal point of view, the subject under certain suggestions will make false denunciations, accuse this or that person, and maintain with the greatest assurance that he has assisted at an imaginary crime. I will recall to your mind those scenes of fictitious assassination, which I have exhibited before you.

"I was careful to place in the subject's hand a piece of paper instead of a dagger or a revolver; but it is evident, that if they had held veritable murderous instruments, the scene might have had a tragic ending."

Monsieur Liégeois, professor of law in the Faculty of Nancy, without heeding whether he was rendering the discovery of real criminals more difficult, sounded a cry of alarm, which upset and disturbed modern society.

"In the middle ages," he said, "the trial by combat or by fire was a much more convenient form of rendering justice than the formalities, delays, investigations, and long debates prescribed by our code of criminal proceedings... It is not the question whether hypnotic suggestion renders the prosecution of crime more difficult; but whether it can really be employed to commit crimes, or cause them to be committed."

To which argument, Dr. Ladame, who quotes it, answers:

"Laid down in such simple terms, this question can only be solved in an affirmative sense. Yes, hypnotic suggestion can be employed for the accomplishment of misdemeanours and crimes. The proof has been experimentally made; and if the experiments of criminal suggestion have not acquired an absolute value, it is because they have as yet been conducted by honest men."

Soon after the Hypnotic Congress, one of its greatest authorities, Dr. Guermonprez, professor of the Free Faculty of Medicine at Lille, wrote as follows on the possibility of suggestion at public exhibitions:—

"A gentleman expressed his regret to a lady who had often been hypnotised, that she would not consent to allow herself to be experimented on by a stage

magnetiser: 'No!' she replied; 'when I am among friends and acquaintances I am quite willing to lend myself for their entertainment; but here, in a public place, on a stage, what an idea! I would not dream of doing such a thing, never!' By her vehemence of expression it was easy to see the contempt she felt for the whole performance, more especially for the spectators present at it. The magnetiser had sent his subject to sleep when he suddenly made him look at the lady, and looking at her himself at the same moment, sent her to sleep. He then made her follow out certain suggestions, laugh, weep, go down on her knees, &c. He commanded her to forget it all on awaking; he then restored her to her normal condition, and she recollected nothing of what had taken place."

Apropos of a book* that denied the abolition of a subject's will under hypnotism, Dr. Guermonprez explicitly affirmed that he held a contrary opinion. Drs. Grasset of Montpellier, and Forel of Zurich, also declared their belief in criminal suggestion.

In January, 1890, a criminal case again brought forward the question of the possible influence of suggestion. We will see, later on, what authorities have denied suggestion; but Dr. Bernheim, of Nancy, affirmed more strongly than ever the destruction of free will, either with or without the sleeping state.

^{* &}quot;Le Magnétisme devant la loi," by Dr. Foveau de Courmelles.

"Everything in life," he said, "is suggestion. The accused woman is an excellent subject for suggestion, and nothing else."

It would seem as if, in the presence of such overwhelming evidence, there was nothing to reply; and that the timid and anxious reader must feel disturbed at thus seeing his security menaced, and feeling this new sword of Damocles—suggestion—which was unknown to the ancients, hanging over his head. Fortunately, there is no such cause for alarm; the following chapter will, we hope, prove it.

CHAPTER XIV.

CRIMINAL SUGGESTION.

§ II. REFUTATION OF ITS EXISTENCE.

To admit criminal suggestion, is to deny the existence of free will. Without entering into an examination of philosophical doctrines, it may be affirmed that every man believes himself to be a free agent, and behaves as such. That we are mere weathercocks, turning at every breath of wind, but fancying we have free will—as a certain philosopher pretends—is of little importance. We might parody Descartes' phrase: "I think, therefore I exist"—in the following manner: "I act, therefore I will."

No doubt circumstances do influence us, but we have often created those very circumstances, and at all events, we are capable of appreciating their worth, and of following or not following the impulsion they give us. We only allow them to influence us if they coincide with our tastes, our aspirations, our disposition of mind; and even then we often at the last moment act in a manner diametrically opposed to that which the circumstances warrant.

Evidently circumstances act as suggestions, in the veritable acceptation of the word, that is to say they give an impulsive tendency; but they have by no means the inevitable power that has been asserted.

Suggestion-which we have not yet clearly and absolutely defined, is the implanting of the will of one person on the brain of another. A servant executing an order is acting under suggestion; he submits to the will that pays him. An affianced man, complying with the wishes of his betrothed, submits to a will foreign to his own. A professor, teaching and repeating every day the same precepts to his pupils, imposes his views upon them. A father, reproving his son for some error, strives to instil his own principles to obtain better conduct; a mother, who coaxes her child, tries by her caresses to attain the same result; a wife, who by her sweetness and numberless means of persuasion, manages her husband, implants her will in him. The orator, who captivates his audience, acts in the same way. Everything is therefore but suggestion in this world; at least, in the true acceptation of the word. No sleep is required for this kind of suggestion, and from this point of view we can agree with Professor Bernheim.

A book, the sight of an accident or of some comical incident, a burst of applause, or the sound of music, fill us with mirth or melancholy sensations; in one word, they act as suggestions upon us.

Art critics, every year, at the time of exhibitions of pictures, suggest to the attentive public, the works it ought to admire. Certain circles give the tone of what is considered clever, and point out what is good in literature or art. A pretty woman will set a fashion that will be followed, if she knows how to show it off. Dress, the choice of furniture or flowers even, are subjected to laws made we know not how. "Here we find," Doctor Luys says, "the same latent incentive, blindly followed, started by an authoritative will that arbitrarily dictates its decrees, and is obeyed by all those who are born to be its humble servants. A superior man is really a social hypnotiser, destined to become the chief of a group of followers to whom he gives the word of command, or the leader of assemblies he fascinates by his eloquence. And all these unconsciously fascinated beings, proni in servitutem, acclaim him, live by his words, and derive satisfaction at being thus led."

It is certain that we are naturally inclined to obey; conflicts and resistance are the characteristics of some rare individuals; but between admitting this and saying that we are doomed to obey—even the least of us—lies a gulf.

We may go further, and again urge in the same sense, that the principle of authority before which so many bow down, the respect of established opinions, of learned corporations, are suggestions which may, in certain cases, prove faulty. Galileo was the only man of his day who made known a truth—the rotation of the earth round the sun; and although he was forced to abjure it, he still cried out, *E pur si muove*. Facts and principles speak more loudly than men, and must be first listened to.

The unfortunate creature who, dying of hunger, steals a loaf of bread from a baker's shop, is merely obeying the suggestions of hunger; he is nevertheless free to steal or to resist the temptation.

If we exaggerate the meaning of a word, we may make it express anything we wish; and thereby completely destroy its original signification. This has been the habit of certain hypnotisers with regard to the question we are now treating. They have drawn conclusions from the various influences which the ambient atmosphere exerts upon us, either from our education, or from the prejudices which it instils in us, till they have come to believe that a verbal order can radically transform a subject. We are ready to admit, that by dint of repeating the same proposition, the character may be modified, but this is merely the effect of our social surroundings. If these are good, the subject who is their product may be good; and the saying, "A man is know by his friends," may be correct. Nevertheless, there are numerous exceptions to this rule. How many superior men have very inferior sons! How many honest parents have

blackguard children! How many criminal fathers have not been imitated by their descendants! And the numberless proverbs such as, "Like father, like son;" or "Good blood will tell;" are, like every other proverb, liable to numerous exceptions.

In our opinion, hypnotic suggestion is an order given for a few seconds, at most a few minutes, to an individual in a state of induced sleep. It cannot be compared, unless very vaguely indeed, to the suggestions we have just been considering. The suggestion may be repeated; but it is absolutely powerless to transform—as has been asserted—a criminal into an honest man or vice versà. After such a categorical affirmation, we must needs produce facts that will prove it. We have seen those that are quoted in favour of the contrary opinion; imaginary crimes executed by neurotic patients! Here we have far more negative than positive proof; and yet this is the ground on which the suggestionists base their assertions. "We make our subjects commit imaginary crimes," they say, "but our subjects being deprived of all conscience (this ought first to be proved), they are just as ready to commit real crimes." If, however, they no longer possess a conscience, why-as Dr. Brouardel said in his lectures on forensic medicine at the Faculty of Medicine in Paris—do somnambulists only obey suggestions that are agreeable, or at least unimportant in their eyes, and that are made to them

by an individual who is a persona grata? Here is the opinion of one authority opposed to another opinion, also of authority.

Monsieur Pierre Janet, of Havre, who on taking his degree at the Sorbonne, presented a thesis on hypnotism—it is curious the way this subject attracts universal attention—said at the Hypnotic Congress, "From a purely psychological point of view, Monsieur Bernheim has enunciated most dangerous opinions, which would lead to the suppression of free will; for my part, I unhesitatingly affirm that his interpretations are also anti-psychological; for psychology like physiology, has laws that suggestion is incapable of changing."

The ancient masters, Puységur, Deleuze, Aubin Gauthier, the Abbé Loubert, etc., are of the same opinion, and tutte quanti.

When Dr. Charcot was interviewed about the criminal case we alluded to in the preceding chapter, he showed himself extremely sceptical about suggestion having played any part in it. He said that the accused woman was probably affected by what the English have been the first to call moral folly, a disease due either to atavism or some congenital vice, which must however be considered only in the light of an extenuating circumstance. And he added, "The School of Nancy pretends that by means of suggestion an individual can be sufficiently influenced to make him commit a crime; but there is not a single example



DR. CHARCOT.

of such a crime, and the School of Nancy would be extremely embarrassed if it were called upon to prove what it alleges.

As for suggestion in the waking state, this cannot either be invoked in the case in point. It is certainly possible to influence a hypnotised subject sufficiently to make him fulfil an insignificant action; but, I repeat, there is no example forthcoming, that anyone has been able to make a criminal. There are only—what Gilles de la Tourette has called—"laboratory crimes."

"From her birth, the accused woman was predestined to crime; and, when her accomplice asked her to make a sack in which to put the body of the victim, she simply and unhesitatingly obeyed. If he had induced sleep to make her execute this work, she would not now remember anything about it; this is conclusive." We are not, however, prepared to accept this statement without reserve; the absence of memory after accomplishment of the deed does not necessarily follow, as it is even necessary sometimes to educate the subject to forget. "Whatever degree of hypnotism the subject may be under, conscience is always retained. When the subject obeys and smites as commanded, he is perfectly aware that he will not injure his victim."

The accused is simply what we call a *lucid mad-woman*, whose responsibility is more or less weakened, but not destroyed.

"It would be the first example of criminal suggestion," Professor Charcot says elsewhere; and the Abbé Meissas plainly declared, before the International Magnetic Congress of 1889, his belief in the preservation of free will, under induced sleep.

Dr. Bernheim considers that suggestion explains not only the crime, but the subsequent conduct of the culprit in giving himself up, when brought under the influence of a different suggestion from a third party. Yet why should this third party have had more influence than the murderer, who was the habitual suggester?

The papers were filled with details of this case, which engrossed public attention not because the accused persons or the victim were in themselves interesting, but on account of the serious problem it raised; and general opinion, founded on the experiments of the numerous doctors interviewed, was almost unanimous in favour of the negation of any criminal suggestion.

We will now discuss, one by one, the facts alleged in favour of criminal suggestion, as cited in the preceding chapter. Monsieur Bernheim's experiment of the theft of a spoon, can be explained by the fact that the subject acted in full consciousness because he knew who had given the order, and felt assured of impunity. The same may be said of the poisoning proposed by Monsieur Liégeois, and the similar act

ordered by Dr. Dumontpallier. The pistol shooting, commanded by Dr. Gilles de la Tourette, is according to his own words, a laboratory crime.

A subject possessed of nothing, will readily sign all kinds of bills; he will give and will away as much as requested! The young man at Brussels, who accused himself of parricide, may have dreamt it, and believed in the reality of his dream, which would indicate a predisposition to insanity.

Messieurs Liégeois, Ladame, Grasset, and Forel's assertions—notwithstanding all their authority—cannot be deemed sufficient, based as they are on these facts. The example—quoted by Dr. Guermonprez of the magnetiser influencing a lady, who was horrified at the idea of making a public exhibition of herself, and yet a few minutes after was amusing that very same public, can be explained by a change of mind, and a sudden wish to make a display of herself; and such an experiment has no value except in the eyes of the operator. Professor Delbœuf, of Liège, is of my opinion, or-as his work was contemporaneous with mine— we are of the same opinion; and he shows, by the most conclusive experiments, that even the sensorial hallucinations are voluntarily accepted by the subjects, and that they are conscious of them.

All this demonstrates how little remains of facts, which at the first glance appear so terrific. The most

simple reasoning shows that conscience remains existent. If the unconscious self is so watchful that the subject—as we have shown in the chapter on simulation—can understand a series of signals while in the more profound states of hypnotism, why should the conscious self, the Ego, disappear in the higher somnambulistic state? Is there not a certain degree of simplicity in believing that the subject—aware that these crimes are commanded by men of science, well known as experimentalists-ignores that he will be stopped in time? Suppose even that he cannot be stopped, he will still be protected by the instigators of his crime, and especially by their theories, which for good reasons of his own, he does not believe in! He is certain of impunity; and, as his social status as an hypnotic subject is in question, he is not only determined that the experiment shall succeed, but ready to do anything, and more even than the hypnotiser demands.

As for the therapeutic suggestions and their efficacy, they by no means imply the abolition of will; the subject wishes to be cured, lends himself to the idea, and, aided by his own imagination, is sometimes successful.

It is only necessary to quote the facts given by magnetisers to refute the alleged negation of free will. Donato, for instance, asserted before the International Magnetic Congress of 1889, that he had

induced sleep in 30,000 individuals, but that not one of them could be so influenced against their own will, and Alfred Reybaud gave similar evidence; moreover, it is only necessary to see what takes place daily in the hospitals, where the best subjects go to the highest bidder. If, on the other hand, hypnotism did bestow this fatal power, it is evident that a welltrained subject would never be able to abandon his first master; and yet, not once, but hundreds of times, subjects-when it is to their own interest-leave their former masters in order to get better pay. When my work on Magnetisme devant la Loi appeared, I used this argument in support of my theory of the preservation of free will in conversing on the subject with one of our most eminent critics, and he replied, "That one experiment scientifically carried out by men of science, was worth more than five hundred made by magnetisers." This seems indeed a singular abuse of the principle of authority, which the many errors contained in scientific records hardly justify.

I have often seen the suggestion made to subjects, not to allow any but their habitual hypnotiser, either a doctor or a magnetiser, to induce them to sleep; and yet I have frequently seen these very same subjects at public exhibitions where any one could and did send them to sleep.

Dr. Delbœuf has tried to do violence to the subject's will, and declares that he has never succeeded.

The Revue Scientifique remarks about Monsieur Liégeois' book: "Automatism under hypnotism is not absolute; and we have seen hypnotised individuals energetically refuse to make the suggested avowals, systematically and obstinately persist in a lie, and resist suggestions that in any way personally affected them or engaged their responsibility; while at the same time they readily obeyed any insignificant suggestions."

Colonel de Rochas tried the following suggestion on an excellent subject. The latter had been left alone for a few minutes in an apartment, and had stolen a valuable article. After he had left, the theft was discovered. A few days after, it was suggested to the subject, while asleep, that he should restore the stolen object; the command was energetically and imperatively reiterated, but in vain. The theft had been committed by the subject, who had sold the article to an old curiosity dealer, as it was eventually found on information received from a third party. Yet this subject would execute all the imaginary crimes he was ordered.

Donato, Hansen, Alfred Reybaud, de Casti, and all the magnetisers, great or little, are unanimous on this point. Although they have often been the victims of simulators, who, paying for their places at public exhibitions, considered they had a right to amuse themselves as they chose, yet they really induced sleep in a sufficiently large number of persons to be able to form a sound opinion; and they maintain that free will is not destroyed. All that an experimentalist can do, is to unsettle a subject and develop nervous phenomena in him; sometimes, indeed, producing an attack. It is, therefore, an error to call suggestion an implantation of will, for it is at the most a violent temptation given to the subject, which he has the power to resist.

A hungry individual seeing a loaf, or a greedy man before a well-served table, would be tempted to eat, but they may do so or not as they please. These comparisons, which I find very ingenious, were suggested to me—as everything is now supposed to be suggested!-by the Abbé de Meissas. Take away, however, the exciting cause, and the patient will soon calm down. This is the reason why an order should be rescinded, and the hypnotised patient will have no attack if this rule be followed. Monsieur de Rochas obliterates the suggestions he has given to his subjects by frictions on the crown of the head-for he has noticed that they are always in an anæsthetic state when they are about to carry them out—and this not only allows them the free use of will, as they have the power to resist, but also frees them from any evil thoughts. If these thoughts agree with their own natural ideas, suggestion will augment their tendency; but that is the full extent of its power.

The criterion of a criminal suggestion would be the

proof of a real assassination committed under suggestion. "Let them produce one authentic case," Dr. Gilles de la Tourette says, "and our opinion will be shaken, although we should not, even then, be convinced." Monsieur Liégeois' answer to this is, that they cannot have a murder actually committed, as that would not be lawful. These are but specious arguments; in truth, the patients whose profession it is to be hypnotic subjects—and this very uninteresting class is the one generally operated on—will, certain as they are of impunity, do everything the men of science choose to order.

Thus, we cannot come to any conclusion. The absolute criterion would be contained in numerous facts, duly tested by numerous observers, and accomplished in a manner evidently contrary to the subject's interest. Moreover, the latter should not know that he was under observation. I think that we should go as far as suggesting suicide; even then, the subject might believe that he would be stopped at the last moment. I have heard a subject say: "If I were ordered to throw myself out of the window, I should do it, so certain am I, either that there would be somebody under the window to catch me, or that I should be stopped in time. The experimentalist's own interests and the consequences of such an act, are a sure guarantee."

After such a confession, there is nothing more to be said.

The experiments made in 1890 by Dr. Bernheim, in Dr. Dumontpallier's division at the Hôtel-Dieu, have, therefore, very little value. In any case, they cannot and ought not to disturb any juryman's conscience. Suggestions and ideas are contagious; they constitute faith; this is true for everybody. There is no marked transition between insane, nervous, or sound individuals. Superstition, calumny, doubt, and murder, are transmitted from father to son, without there being any need of penning up individuals in an asylum; not only do the ties of blood bear with them these melancholy germs, but there is also the ascendancy exercised by example, the imitative instinct that governs the brutal masses, and no one will ever be perspicacious enough to discover the slight difference that separates enthusiasm for the beautiful, and eagerness for that which is good, from a fanaticism for evil, and a passion for the horrible. "If we coolly examine," Monsieur Rauders tells us, "the variations of will, we must come to the conclusion that there is no middle course. We are all, if we speak of our morbid condition, in some degree or another weak and faltering; but if right and law are to be upheld, we are none of us irresponsible. If he who has suggested the criminal offence is to be considered as an accomplice, he must bear his share of punishment, but this will be no reason for sparing the real culprit, even if he has been but the tool.

"Far from thwarting the course of justice in penal

matters, Dr. Bernheim's studies demonstrate that the law cannot be carried out with too much severity. The worst consequence of crime is the vulgarisation and proselytism of crime."

We have ourselves defended the same ideas, and quite recently wrote as follows: "Even if it were established—and the contrary has been proved—that certain neurotic persons have, under this undefined influence, committed a criminal act, these individuals are as dangerous as any noxious animal, and must be separated from society either by the walls of a lunatic asylum, a prison, or death."

As for the changes of personality, they can be explained by a faculty of assimilation in the *unconscious* subject, whose intuitive powers are increased by the inhibition of the higher cerebral functions. Even then, in order to be certain, the commission of a real crime would be necessary!

The burlesque side of the question is illustrated by the extraordinary case that was brought before the tribunal of Helsingfors.

A certain medical student, who was frequently hypnotised against his will, at least so he said, brought forward some witnesses to corroborate his statements, and to his surprise, heard them tell the judges the most extraordinary stories. On making a thorough investigation, it was found that all the witnesses summoned were hypnotised!

We feel inclined to ask: Why not also the judges?

CHAPTER XV.

IMAGINATION.

IMAGINATION can explain most, if not all, of the phenomena produced by hypnotism. We have already seen the part it plays in the cures effected by hypnotism, when used as a therapeutic agent, and we will now proceed to quote numerous instances that will justify our opinion. Dr. Liébeault did well to take as the epigraph of his book, "Le Sommeil et les états analogues," Montaigne's saying: "The human mind is a great worker of miracles," for the folle du logis, as Pascal called imagination, is capable of great things, more especially when its action is increased by the education and imitative instinct of the subject, evoked by the phenomena produced before him.

Three years ago we wrote as follows on this matter. The question treated of actions produced in the waking state, due to a new and special force.

"A few days ago, a magnetiser was performing at Monsieur X——'s. I happened to be present, and as he asked for some volunteer subjects, I offered to let him experimentalise on me. I noticed that when he

placed his hand between my shoulders—which he said was necessary in order to act upon the cerebel-lum—he leant heavily, either purposely or involuntarily, thereby causing considerable fatigue to the subject. Moreover the subject, if at all a nervous one, would be intimidated at finding himself on a stage under the concentrated gaze of a number of spectators, and, enervated by the experiments he had already witnessed, would be seized by a vague sensation of fear.

"From this state to that of a mute terror, heightened by his own imagination and the physical fatigue he is undergoing, as the magnetiser still leans heavily upon him, there is but a step. And soon the subjectvictim of his own imagination—becomes the prev of the experimentalist. When he has ascertained that the subject has reached this condition—but not before-he operates at a distance upon him. As he failed to produce any effect on me by applying his hand on my shoulders, the magnetiser tried to make me kneel down. For this purpose he manipulated the lumbar muscles, or loins, and those of the calf of the legs, but he only produced a sensation of fatigue. similar to that felt after a long walk; and I felt in no way inclined to kneel to this new deity! I even laughed at his want of power."

This example will show how conscientiously we have tried to realize the real effects of the phenomena.

The result is the same with forty per cent. of the subjects. Is there therefore any real power, or is it that imagination, aided by the surroundings and the preliminary announcement of the expected results, is the sole agent? Or do both these causes act together? It is difficult to unravel the tangled web of explanations. All these causes may be admitted, but the action due to imagination is an undeniable fact. We meet with fear and terror in animals as well as in man, yet they are nothing but the effect of imagination, although their consequences are sometimes terrible, as witnessed by the following examples:

Some persons have, under sudden and excessive fear, seen their hair turn white; sometimes only half the hair has changed, while the other half has retained its normal colour.

Boerhaave relates that a man condemned to death was handed over to him; that he had had his eyes bound, and had gone through the pretence of opening his veins. Taps of water were then turned on, simulating streams of blood pouring into metal basins. When the bandage was taken off the man's eyes, he was dead.

An usher in an English school, who was hated by the boys, was seized by them and strapped down. His eyes were bound, and his head was placed in a kind of frame; they then dropped on the unhappy man's neck, not the hatchet that had been prepared and which he had seen, but a damp cloth. When released from this improvised guillotine, the poor creature was found to have died from the effects of his imagination.

Professor Mosso, of the University of Turin, cites the following facts:

"A man died of fright the day it had been foretold him he would die. Some individuals have fallen down dead on hearing themselves condemned to death." Hallert had already noticed that fear could stop the beating of the heart and greatly modify the circulation of the blood.

Surgeons are well aware that patients may die from a violent shock to the nervous system, either by the traumatic action or by a moral cause. In such cases the elongated marrow performs its functions so feebly that chloroforming is sufficient to stop the respiration and the action of the heart. Whenever Porta, the eminent surgeon of the University of Pavia, saw a patient die while he was operating on him, he would disdainfully throw his instruments on the floor and say to the dead man in a tone of reproach: "The coward, he has died of fright!"

There is a certain kind of fear that is never got rid of, and is, as it were, automatic. For instance, James the First could never help trembling at the sight of a naked sword, owing to his mother, Mary Stuart, having, while enceinte, seen her favourite assassinated under her eyes.

Montaigne gives examples of soldiers who have died of fright.

We will now show how imagination can, under certain conditions (such as silence, darkness, &c.), inordinately magnify sensations and give rise to intense and prolonged terror.

It is impossible to have any clear perceptions at night, when things assume vague and undecided shapes, when sounds become intensified and mysterious, when the pervading shade and silence envelopes all sleeping nature; the undisturbed imagination then becomes more active, and falls a prey to a thousand trifling incidents, to which it lends an exaggerated importance. Unable in this condition to correct the impressions by sight or senses, danger seems to fill the whole atmosphere, to re-echo in the ears, to rustle round the body; and fear is soon changed into terror. The hallucinated sight fancies it perceives in the gloom fantastic and gigantic enemies; nay more, it does really see them, feels their approach, their touch almost, and the individual, haggard and wildly terrified, remains powerless and cataleptic, and finally dies of sheer terror!

Let us imagine two students, for instance, who have determined that they will see a ghost, said to haunt a certain deserted house. They are both young and impressionable, and start off one evening for the haunted mansion, determined to clear up the mystery. They play cards till eleven; one of them, Nicholas, incredulous and tired, quietly goes off into a heavy sleep. His companion, Serge, now left alone, as it were, begins thinking about the story, and the ghost that is to appear at twelve o'clock. The clock strikes half-past eleven, Serge tries in vain to awake his friend, the lamp grows dim, and finally goes out. He feels the terrible solitude and shakes Nicholas, but fails to rouse him; suddenly a pale ray of the moon lights up his companion's face; then Serge, terrified, has no doubt; it is no longer Nicholas he sees before him, but the ghost!

Hypnotism plays no part in such phenomena; nevertheless it presents effects exactly similar, and the identical visions, hallucinations, and physical phenomena. Here we are in presence of two initiative causes, of a like nature, so closely related that they at last merge into one, that is—imagination. The writer who creates imaginary personages, the painter who puts his dreams on canvas, the sculptor who carves and endows the marble with life, all work by imagination and exteriorize their sensations; yet are we for that to consider them as hypnotised, insane, or hallucinated beings? Such an hypothesis would be too absurd.

Cures effected by hypnotism are certainly due to

the imagination, just as disease is brought on by it. Certain skippers boast that they can make an impressionable subject sea-sick in absolutely calm weather. Invalids are recommended not to be nerrous about themselves, which is a similar line of thought. Let us show how matters are generally conducted in order to effect a cure.

The new method is talked about to the patient, and described as a panacea; then a description of the great man who puts it into practice is given. The invalid has probably tried in vain every remedy; often, indeed, he is neurotic and suffers only from imaginary illnesses. The marvellous effects of the new therapeutic system are constantly repeated before the patient, and he is given newspapers full of descriptions of the wonderful cures effected. The patient's imagination is thus excited, and at last he himself proposes to go and see one of the high priests of the new science. He is then ready for the experiment.

If the patient is rich he goes to a handsome house, and up a flight of ornamental steps. A liveried servant opens the door, and he enters a superb hall; then a still finer drawing-room, into which he is ushered. Here he anxiously waits, thinking over all he will say and how he will be received. There are so many other patients waiting, that he feels sure it will be at least three or four hours before it is his turn to be

admitted; but he derives a certain satisfaction at this, as it proves how celebrated the doctor must be. Everyone speaks in a low tone, and the word cure is constantly re-echoed. The table is littered with reviews and papers filled with the praises of the new medical man. The patient's imagination is excited, he feels certain he will be cured. The enervating sensation attendant on expectation, and the deep silence, aggravate his nervousness. He counts his companions in misfortune as they pass in before him. Now there are only four, now three, two, one; at last his turn has come! How long this last inverview seems; no doubt this last man is a friend of the doctor's. He hears a door shut-how long it seems before he is summoned; what can the great man be about? Ah, now at last it is really his turn; and he goes into the doctor's study.

A solemn-looking man, with a gold-rimmed double eye-glass stuck on his nose, and a prematurely bald head—or else very long hair—receives him. The patient, trembling with emotion, states his case. His eyes wander restlessly over the furniture, the bowl filled with golden fees, the bookshelves that cover the walls, the pictures, &c., all gifts of grateful patients. A few brief questions fall from the practitioner's lips; oracles could not be uttered with more solemnity! At last the patient leaves, sometimes but not always cured.

If he is a poor man the proceedings are different. The patient in this case goes as an out-patient to an hospital. He finds when he reaches the gates that a good many individuals are already waiting for admittance, chiefly country people. After some time they are admitted into the consulting-room, which is divided in two, and furnished in the simplest manner, with wooden benches, iron chairs, a tiny couch, and a stuffed chair; in one corner there is a small table with the hospital register and a few books; two or three coloured prints, and an earthenware stove make up the whole stock. Here everyone chats, many of the patients having met before; they talk over their symptoms, and relate to one another the different cures that have been made; it would be too dull to remain there without a little gossip, for there are no reviews, or papers, or works of art here to while away the time. One man gives vent to a doubt; an enthusiast answers him, the discussion becomes general, and imagination sets to work, either for or against. Everybody speaks so well of the doctor, he is said to be so clever, so learned, so kind! a little abrupt perhaps, but such a good heart! The surroundings, although different, exercise nevertheless the same influence as in the case of the rich patient.

The same kind of thing takes place at the hospital. First the patient must obtain—after many weary hours of waiting—the right of admission to one of the

wards. A stern, rough-mannered, middle-aged doctor, his head covered by a skull-cap, enters a small study, in which the patients are to be admitted one after the other. He is attended by a young man, who has also a skull-cap on his head, and a white apron with the traditional pin-cushion fastened to the apron; this is the resident house-surgeon. After him -for the rules of precedence are as closely observed as at Court, although there is no Master of Ceremonies -come four or five young men with white aprons, but without caps; these are the medical students attached to the hospital. After them, other young men with hats on their heads come in: these are ordinary medical students who one day follow one course of demonstrations, and the next day follow another; their number is proportionate to the celebrity of the Great Man. At the end of a few minutes, when this procession has passed in and the Great Man has comfortably settled himself in front of a table covered with printed forms and instruments, the patients, who have been anxiously awaiting huddled together, are ushered in. They also come, each in their turn, according to the number handed to them on arrival. They are often bullied for they know not or dare not explain their case before all these men who stare at them. At last they are given an order of admittance. If they are very ill they are at once placed in the wards, where they find companions who relate to

them all the different cures—or deaths. If, on the other hand, they are merely ailing, they are told to return every morning; this is generally the case with candidates for hypnotism. They will then be sent to a kind of laboratory, hung with gigantic drawings, tudies of the brain, of insane or fascinated patients; revolving mirrors will be placed before them, or bright lights flashed in their eyes; and here again they will be intimidated by the gaze of numerous students. Their imagination is over-stimulated, their nerves unstrung, the expected result, however—that is a cure—is rarely attained.

Our imagination plays such an important rôle here below, that those who know how to act upon it through the senses by means of exterior impressions almost invariably attain success; the action of the mind is therefore undeniable, but it is assisted by extraneous elements, such as the influences really exercised by physical agents, by individuals, &c.

There are, nevertheless, some examples in which the imagination alone has been called into play. Drs. Bourru and Burot have obtained nasal hæmorrhages, and bloody sweats by hypnotic suggestion. The same phenomena were produced also by Dr. Mabille in the same subject. Another experiment—that has since been tried with success by Dr. Bonjean—has become famous; and is due to Monsieur Focachon, a chemist of Charmes, who showed this phenomenon to Drs.

Beaunis and Bernheim, on a patient whom he brought to Nancy in May, 1885. During her sleep eight postage stamps were applied to her left shoulder while it was suggested to her that they were a blister; the same effect was gradually and slowly produced as with a real blister.

Our sentiments, affections, friendships, or love, excite our imagination and make us discern qualities, virtues and beauties often where they do not exist; and, on the other hand, hatred, envy and fear, reveal imaginary defects, vices, or deformities.

Courage is increased by imagination. Let us suppose that an old soldier, his face bronzed by southern climes and scarred by sabre cuts, his eyes flashing from beneath heavy overhanging brows, relates in a thrilling and enthusiastic voice his battles and wonderful encounters, do we not feel the same emotion that animated him run through our veins. On the battlefield, the smell of the powder, the smoke, the roar of the cannon, the sharp, hurried orders electrify the troops and endow them with fresh courage. Suppose a popular and respected representative of the government is sent to stimulate by his presence the zeal of the soldiers; his high reputation, cool and intrepid courage will increase tenfold the valour of the combatants; it is no longer enthusiasm but real frenzy that takes possession of them. The army will either be victorious or entirely annihilated, mown down and

decimated by the missiles they do not heed. Such was Carnot, the organiser of victory at Wattignies: and Bonaparte, when he was General of the Republic, or First Consul, or Napoleon the First. when by his presence and eloquent proclamations he electrified his soldiers. We have but to listen to the veterans of his army—so picturesquely called the glorious remnants of the Great Army—to understand the enthusiasm produced by the valour, the scenic effect, and the imagination of the subjects, and also by the power that seemed to emanate from the very person of the hero. There is a disposition now-a-days to cast aside all mysterious or occult forces, as unworthy of true science; but it cannot be denied that small, puny individuals, have often a real influence on their contemporaries, while strong and powerful men have none, even when both are gifted in an equal Sometimes, indeed, those who have no influence whatever on their fellow-creatures are men of undeniable worth. There is therefore something inherent in human nature, a power peculiar to ita living magnetism—of which we will hereafter speak at length.

Imitation contributes in a large proportion to the increase of this influence. The automatism of the cataleptic subject is a phenomenon of this order. There are imitative thoughts due to our surroundings—just as there are imitative actions. In this case, the

reasoning power is not called into action, and sentiment alone guides our sympathy or antipathy; joy, tears, contempt, horror, hatred and vengeance are undergone without a motive; pity is an involuntary feeling, which instantaneously dictates the mental impressions.

"A man is hungry, instinctively we put ourselves in his place, and feel hungry; he is thirsty, we feel the same thirst; he suffers, we suffer with him; he is unhappy, we are saddened and ready to weep; and the misfortunes we unwittingly feel we are ready to alleviate in order to alleviate our own feelings" (Dr. Liébeault). Somnambulists are very much given to this imitative sympathy.

Sympathetic illness is well known; Malebranche quotes the case of a maid servant, who, seeing some-body's foot bleeding, felt in her own foot, at the very same place, an intense pain, which only disappeared after a certain length of time. Virey relates how a certain maid had a violent pain in her arm on seeing a surgeon cut an abscess on her mistress's arm. Hocquet met with a man who had felt such an acute pain in his heel as to remain permanently lame, only because he had seen an unfortunate man suspended, by that part of the foot, from a cart. Bérigny heard a woman scream in exactly the same manner as another woman who was suffering in her loins. There are certain miserable wretches who, when they have

witnessed an execution by the guillotine, immediately thirst to shed blood. Blood seems to call for blood. Soldiers have been known to commit murder after having formed one of a firing party told off to execute a comrade, and this with the sole object of striking in their turn a martial attitude; similar to that of the soldier whom they have shot.

Popular and revolutionary impulses are collective imitations; they may be epidemic, and then they give rise to strange maladies; for instance: the young women of Millet who one after the other hanged themselves; and others at Lyons who drowned themselves together in the Rhone; there are also the well known cases of fatal sentry-boxes, in which the soldier mounting guard always shot himself; and of the gate at the Invalides, where several old pensioners hanged themselves one after the other. Besides these, there is the instance of a large number of soldiers of the foreign legion and of the 8th Rifles who, while serving in Africa, all shot themselves in the same wrist.

Magnetized patients copy the actions, attitudes, and theories of their magnetizer; Dr. Liébeault tells us that "they unwittingly accept everything from him, become part and parcel of his mind and body, bone as it were of his bones."

Is it not also imagination, and more especially their attention being absorbed by other matters, that makes wounded soldiers fight on without being conscious of

their wounds, and those grievously struck not to feel any pain? "I have had by my own personal experience," Dr. Liébeault again tells us, "a proof that we may lose consciousness of the wounds inflicted on the field of battle; one day, as I was going my round of visits, my carriage was upset, and I was pitched out on the ground. I picked myself up, unharnessed my horse, and aided by some passers-by, set the carriage again on its wheels, congratulating myself the while on having escaped uninjured. It was not till three hours afterwards that I perceived I was suffering in my right ankle and arm. I was more especially affected by a contused elbow with ecchymosis, a contusion which prevented the free use of my arm for nearly a month. I only felt pain when my excitement, a very legitimate one, had subsided; how natural it is therefore, if the emotion caused by a mere fall prevented my feeling any pain, that soldiers, excited by fighting, and having all their thoughts concentrated and converging towards one object, should be still more insensible than I was to pain. Their attention is violently diverted and rivetted on an emotional idea. their senses are thereby isolated and inhibited just as in somnambulism, therefore they are unconscious of wounds which in a normal state would be extremely painful."

The School of Nancy entirely agrees with—and even goes farther than—the ideas of its founder, and

only admits of suggestion—or the action of imagination -as the sole hypnotic agent. Notwithstanding this opinion, we must recognize, with the Salpêtrière School, that it only has any action on nervous subjects. The physical phenomena produced by the Paris Schools, are—according to the opinions held at Nancy -due to the imagination directed in one determined groove. We have seen Binet and Féré's stern reply, which is now corroborated—as Professor Charcot writes to me-by Dr. Babinski, formerly at the head of his clinic. Two of the latter's conclusions coincide with my own ideas, and are important enough to be repeated: 1st, hypnotic manifestations are nervous defects, and therefore exceptions to the rule; 2nd, ideas or physical agents often produce the same results; that is to say, imagination and reality are very nearly identical.

Patients who have often been sent to sleep, acquire a craving for it, due either to their imagination or to an organic passion similar to alcoholism.

It is a well known fact that certain fashionable pharmaceutical products cure every complaint for a certain time, unfortunately somewhat short; hence the phrase "Make haste and take this medicine while it cures." The confidence of a patient in his doctor, the relief he feels on seeing him, the salutary effect of substances harmless in themselves, but declared to be efficacious, are phenomena of the kind which my

brother physicians and myself meet with daily in our medical practice. These cures or ameliorations of even organic diseases take place mostly among nervous patients. Moreover, who would venture to affirm, in our present over-excited times, in the midst of the turmoil and bustle of cities, that they were not slightly neurotic, and therefore capable of being cured by normal and physical hygiene, working principally on the mind. I could even now multiply the examples that bear out this assertion, but this would unwarrantably lengthen out this chapter; whatever may be thought of these discussions and examples, and notwithstanding the numerous extraneous coefficients which render them somewhat obscure, it is undeniably evident that imagination, that is to say, the human mind, is capable of great things.

CHAPTER XVI.

MAGNETISM AND CONTAGION.

It has been said that there must exist a force or an assemblage of forces emanating from the individual, the variations of which are manifold. Such a sympathy may exist between two human beings for a determined time, sometimes indeed for a whole lifetime. Antipathy and hatred may also become sympathy and love; there are therefore veritable transformations, or in other words, a change in the direction of the forces, which from being divergent, become convergent.

If we compare these phenomena with those of mineral magnetism, for instance, we shall find a certain analogy between them; a north and south pole attract one another, two south poles repel one another. This explains the mutual attraction that dissimilar characters experience. This is the law of contrasts, and the repulsion that similar characters feel is doubtless due to the same cause.

It may be objected that comparison is not proof, but the analogy between animal magnetism and mineral magnetism may extend still farther. A magnetizer is able to elicit or displace the emotions of his subject; physical agents, particularly magnets, may exercise the same action. There seem to be tracks of force, that is to say curves, representing the emotions, the dimensions of which vary according to the power of the experimentalist or of the magnet.

Subjects have been seen to develop electricity. The most celebrated case was that of Angélique Cottin, a small, robust young girl of thirteen, who was extremely apathetic both physically and mentally. From the 15th January, 1846, the day on which the phenomena first manifested themselves, she was under Monsicur de Farémont's personal observation, and was also seen by Drs. Beaumont, Chardon, de Mortagne, and Tanchou of Paris; and by Messieurs Arago, Mathieu, Laugier, and Guyon. Slight shocks were felt on touching her, the furniture and utensils moved when she came in contact with them, and things touched or worn by her were violently repelled.

There are numerous examples of this kind; Dr. Féré described, in 1884, the case of a young woman of twenty-nine, whose hair gave out sparks on being combed. Her whole body at the contact of her under linen emitted crackling sparks, and her clothes adhered so tightly that her movements were thwarted; whenever she felt any violent emotion these symptoms were intensified. The electricity thus produced was

positive. The partisans of polarity have numerous arguments in favour of the analogy between physical and psychological forces. Apart from the preceding facts, they have assimilated the human body, plants, animals, and minerals to veritable magnets, the actions of which work either harmoniously or discordantly, according to their several dispositions.

There is, however, only analogy not identity, otherwise the phenomena would be absolutely the same. On this point, we can rely on the Salpêtrière experimentalists, whom no one will incline to accuse of mysticism. We will now describe the difference between hypnotism, that is sleep due to physical agents, and magnetism, that is the action of man upon man.

"The phenomena of elective sensibility," Binet and Féré tell us, "are greatly developed during somnambulism. In this state the patients often display a kind of attraction for the operator who has induced them to sleep by touching them on the crown of the head. If this pressure is made with any other agent than the hand, we obtain indifferent somnambulism. The subject remains calm; any person can approach him, cause contraction of his limbs, impart suggestions, in fact there is in this case no individual influence.

But it is quite different in the case of elective somnambulism. When the experimentalist has exerted pressure of the hand on the summit of the subject's head, or has breathed on him, the subject seems drawn towards the operator, and directly the latter moves away the subject will manifest anxiety and discomfort. Sometimes he will follow the operator moaning, and will only be calmed when near him. Any foreign touch elicits painful symptoms.

This particular state is obtained by the use of magnetic passes, imitation and suggestion: this latter may bring on a state of elective somnambulism, at a given date, and in the absence of the operator (Beaunis).

Electricity is natural in certain subjects, and artificial in others; this is a consequence of natural sympathies and antipathies.

The indifferent state may be transformed into the elective by tactile hyperæsthesia on touching with the naked hand a subject in the first state. And even if two observers touch the subject's hand, each one has only the sympathy of that half of the body that corresponds with the hand that he touches (Ch. Richet).

The patient hears and sees only the person who has put him into the elective somnambulistic state; his contractions will only give way to that same person, and the patient will only listen to the suggestions of that agent.

Magnets transform the attraction into repulsion: and there is nothing astonishing in the fact that

psychical forces should be transmitted, even at a distance, thereby explaining these variations of action. Health is an union of forces, and the source of all their manifestations. It is so true that the subject's imagination and physical agents are not everything, that results have been obtained on children a few days old, and on animals. It may therefore be said without being thought paradoxical that health and disease are both contagious, in the same respect and very probably with the same degree of intensity.

This sentiment comes naturally to us; the sight of illness saddens and repels us, and it is only by education that we attain self-sacrifice. The aspect of a strong, active, cheerful person pleases, and is sympathetic to us. Certain individuals seem to exhale a perfume of health; they seem to emit an atmosphere of strength and energy with which others become impregnated; this would explain the success of young girls who have only a transitory beauty, that is to say, youth and freshness without grace or wit. The same sentiment leads to such unequal matches, as that of a young girl and an old man, or an old woman and a young man, the one seeking protection and the other strength.

Everything is contagious in this world; matter or mind, all is subject to the same law. One note of an octave will make another vibrate; the explosion of a dynamite cartridge will make a neighbouring one detonate; a horse that falls will cause another to stumble; and all this without any apparent reason. Bodies are atoms of matter, united by an invisible force; the intervals that separate these atoms are either empty or full of fluid. What is this fluid? it will be asked. To this question I reply: What is electricity? We know not the essence of this latter and yet we do not deny it; why should we aet differently with regard to the other. If we were to treat the earnest partisans of magnetism as mad, or dishonest men, as its adversaries do in order to deny its efficacity as an agent, we should be acting in a most unscientific manner; for simple and unsupported affirmations have never convinced anybody.

"Every living being," Jussieu tells us in the report already alluded to, "is a real electric body, constantly impregnated with this active principle; not, however, always in the same proportion. Some possess a large amount, others less; hence, it is evident that it is outwardly propelled by some, and drawn in or eagerly sucked up by others; and that the vicinity of him in whom it is abundant is profitable to him who lacks it. The co-habitation of a child with an old man is favourable to the latter but injurious to the former; in the same way plants kept in a nursery garden are strong and fresh but if grown in the vicinity of great trees they wither and dwindle down."

This idea had suggested experiments on animals, with a view of ascertaining if they could impart health, and from this sprung the most absurd ideas, although they were in the first instance based on a correct one. Even in Paris there are a great many people who will apply pigeon's brains, killed expressly for that purpose, on the heads of children suffering from meningitis.

In other parts of the country, toads are put under the patient's pillows. In former times, the tears shed by deer before death used to be therapeutically prescribed.

In our own day—and conscientious observers affirm the truth of the fact—it has been found that dogs and cats lying on their master's feet will free them, at the animal's expense, of rheumatic pains. When every kind of treatment has failed, a poor beast, that would probably hardly have had enough devotion to free his master of rheumatism of his own accord, has been made to take the illness, no doubt to its own despair!

This new branch of medicine is called Zootherapy: the parallel magnetic actions on animals is called Zoo magnetism (Doctor Liébeault).

These phenomena seem to point to the existence of the *fluid*, which has till now been such a disputed matter. We will give the facts and quote the names of the authors, leaving—as we said in the prefacethe merit and responsibility to them, as indeed we have done all through this volume.

Human action at a distance is mathematically registered, thanks to the magnetomètre invented by the Abbé Fortin, of Chalette. This instrument, which in 1890 was presented by its inventor to the Academy of Sciences, announces the approach of storms by the variations of a metallic needle, which is neither magnetic nor magneticable, but in any case very mobile; it has, moreover—and this is an important detail—the curious property of deviating when the hand is brought near it. If the hand is held for five minutes in the vicinity of the needle, from which it is separated by the glass globe that contains the instrument, no effect is produced; but two or three minutes after the hand is removed the needle displaces itself to an angle that varies with the operator. Both Colonel de Rochas and myself remarked this curious deviation, which cannot be attributed—on account of the slowness of the action - either to electricity or mineral magnetism, at least in so far as their action is at present scientifically known.

Dr. Ochorowicz's hypnoscope and Dr. Durville's sensitiromètre, which they have devised as instruments for testing hypnotic susceptibility, have in many cases given me no appreciable result; whether from my falling on a series of insensible persons, or from nullity of action, it is impossible for me to say.

Dr. Ochorowicz admits the possibility of somnambulists putting themselves "in communication" with a patient and thus finding out his illness. The magnetizer can also, when placed in contact with the patient, feel divers sensations, independent of the temperature, or heat. There are, besides this latter element, other means of perception, as the sense of smell, for instance; and Dr. Monin has written: "The odorous waves always reveal any important chemical changes, and in all biological phenomena play an important part." However that may be, all magnetizers—I speak only of those who strive to relieve suffering—experience determined impressions from contact with their patients.

"I had a patient, anomiated to the last degree, to whom my hand always felt hot, even when it was icy cold—for it was winter time—while she gave me a sensation of cold, notwithstanding the actual warmth of her skin."

Dr. Ochorowicz says that with exhausted or wornout patients he had the same sensation of cold. In
the case of one patient suffering from ataxia, the contact of a magnet or of the doctor produced a sensation
of cold on the left side and of warmth on the right,
without the patient himself having experienced anything particular. In other ataxic patients the contrary
phenomenon was produced. Dr. Ochorowicz has perceived a resonance limited to the exact course of the
one affected nerve.

"On the other hand," he says, "I have remarked another kind of sensation, that has given me more positive results. I have removed headache from hundreds of persons, by the simple imposition of hands. Notwithstanding the simplicity of the process, this is a complicated phenomenon, and it is not my intention at this moment to touch upon its theory. Two facts however, are certain: 1st, by these means, as old as the bills, I can, in eighty cases out of a hundred, dissipate a headache in a few minutes; 2ndly, I am very often able to state the exact moment when the pain diminishes and disappears under my touch. The manner of proceeding is easily explained: the painful head is either hot or cold, everyone is aware that a headache may be brought on by different causes. But independently of these differences, one peculiarity exists, perceptible only to the operator, that is, a sensation of increased warmth under the hands as the pain disappears, and the lack of this sensation if the pain persists. If the operator himself suddenly feels a headache, without being aware that the person he is magnetizing has one, and if the subject's pain disappears at the same moment as that of the operator manifests itself, it is to be presumed that it is merely a case of physical nervous contagion."

Bué, who was a well-known mesmerist, made analogous observations; and I have myself been able to dispel headaches, and to announce beforehand the

advent of the phenomenon; but I am not prepared to say whether this was due to imagination, suggestion, or a real transmission of radiating nerve force.

Every magnetizer is aware that certain individuals never can induce sleep even in the most easily hypnotisable subjects. They admit that sympathetic fluid is necessary, and that each person may eventually find his or her hypnotizer, even when numerous attempts at inducing sleep have failed. However this may be, the impossibility some individuals find in inducing sleep in trained subjects, proves at least the existence of a negative force.

How often we think of our absent friends at the very moment these latter are either suffering, or writing to us, or thinking about us. We find an interesting fact of this kind related in one of Monsieur Ferdinand de Lesseps' letters. Abd-el-Kader had written to several Arab chiefs, recommending them to pay him every attention; a certain number of these chiefs, who could not by any ordinary means have received notice under four days, were ready—and knew the contents of the letter—to greet Monsieur de Lesseps on his landing, eighteen hours after it was written.

The English reports of the Sepoy mutiny, mention the fact that the results of the battles were known in the Native bazaars two hours before the telegraphic

information was received. This may have been a coincidence, but it was a strange coincidence and one that was constantly repeated. An English book published under the patronage of the most eminent scientific men of England gives the account of eight hundred apparitions of supposed to be living persons, who have appeared to their friends or relations at the precise moment of their death. Camille Flammarion has reproduced some of these stories in his book Uranie. This would lead us to spiritism, and may call up a smile: but while we do not admit these theories, we have quoted authentic facts easy to verify. Moreover, it seems very probable that many of the phenomena attributed to spiritism are in reality due to a particular state of hypnotism. In both cases we find changes of personality, eestasies, and visions.

There is the unexplained action of our two nervous systems: the life of relation and the great sympathetic nerve; this latter, more specially, would constitute the perisprit of the spiritists, and would play a considerable part in the production of facts (Papus). The universal contagion of health and strength also comprises that of the mind. Thus we have the phenomena called mental suggestion, and transmission of thought. There are vibrations that seem to spread to a distance; the probability of mental suggestion, of which Professor Richet has made a special study, may according to him be represented by the co-efficient

 $\frac{2}{3}$. The theory of unconscious movements is not sufficient to explain all.

A number of experimentalists, Messieurs Ochorowicz, Pierre Janet, Comte de Maricourt, Myers, Camille Flammarion, Baron du Potet, Ch. Lafontaine, and Papus have ascertained that the subjects could see into the brain of the magnetizer, read his thoughts, and sometimes also could see at a distance, through time and space, that is, possessed second sight.

To forecast the future, and more especially to see through opaque bodies, are facts recognized by many observers. One of my colleagues and friends has, however, made the following experiment.

A magnetizer, whose subject read perfectly well with his eyes bandaged when in the presence of a numerous audience, came one day to try an experiment of the same kind in my friend's study. This latter copied out a dozen phrases, taken from different books, on twelve sheets of paper identically the same, put each into an envelope, and sealed them with his coat of arms. The subject made three different attempts to read them, and as he would have gained a comparatively large sum, made every effort, but without success. It is therefore probable that a tiny ray of light obliquely reached his eyes during the public performances.

I have myself, in presence of similar results, had the idea of trying the black spectacles or wadded bandage used by the subject, and I have always succeeded in reading, the light reaching me side-ways.

I have also seen subjects read when their eyes were stuck together with sticking plaster; but I cannot be sure that they were not partially unstuck.

Although there may be simulation, we must not necessarily infer that this always exists. Imitation is only a copy of what already exists; it is true that sometimes things are also invented. Nevertheless, in presence of the marvellous facts that are related to us—the foretelling of the future, and sight at a distance—it would be well to meditate over Arago's phrase, that Dr. Ochorowicz has placed as an epigraph to his book: "He who, outside of pure mathematics, pronounces the word impossible, lacks prudence."

Most assuredly, we must needs think over this phrase in order not to smile with pity on reading certain documents concerning various prophecies, or relating sudden and unexpected cases of sleep induced at a distance of several miles off; this would indeed be divination, or a very powerful contagion of thought and will. And yet, when we examine these studies, we find evidences of the sincerity, sagacity and often seriously scientific researches made by the experimentalists; we may still doubt, however, but with due reserve, for we may be on the eve of some great discoveries in the domain of the marvellous.

CHAPTER XVII.

POLARITY-COLONEL DE ROCHAS' THEORY.

The ancient magnetizers were convinced that the effects of magnetism were due to a particular agent emanating from the human body, and which they called the *Fluid*. Almost all of them admitted that man, in respect to the emission of this fluid and the perception of its effects, possesses properties and sensibilities of an opposite character, like the two poles of a magnet.

The earliest researches entered upon scientifically in this line of study date as far back as the year 1845, and are due to Baron de Reichenbach, a highly distinguished Austrian chemist, who devoted nearly thirty years of his life, and a portion of his large fortune, to this pursuit.

Reichenbach recognized in the first instance, by the aid of sensations of heat and cold produced on certain subjects, and subsequently by that of luminous impressions sustained by the same subjects after being kept for a long period in profound darkness (the same luminous sensations having been also produced on

almost every subject and in full daylight, when submitted to a suitable degree of hypnosis by Monsieur de Rochas)—that animals, vegetables, crystals and magnets, in a word, all bodies whose molecules exhibit a decided orientation, give out effluria imbued, like the electric fluid, with contrary properties, in proportion to the repartition of those fluids in the bodies which emit them. Monsieur de Reichenbach further established the production of these effluria in luminous, calorific, chemical, mechanical, electric and magnetic phenomena; that is to say, in all action tending to modify the vibrating properties of matter.

To this force he gave the name of Od (from a Sanserit word signifying "all-penetrating"); and he designated as "Sensitivity" the faculty of the "perception of effects"—a faculty possessed by the nervous system of certain subjects.

The repartition of the Od in bodies takes effect, as regards superior organizations, according to laws of a sufficiently complicated character, which it is not necessary to refer to further here. It suffices to say, generally, that the right side of a man possesses a polarity, that is to say a kind of Od, differing from that of the left side; and the front of the body one differing from that of the back; these two polarities crossing and interlacing, but without influencing each other.

"They act upon the structure of the body, take part in its development and configuration, and are a chief factor in securing the regularity of its functions.

"If the odyllic equilibrium is affected internally, symptoms, more or less marked, of sensitivity are developed; and if this affection becomes more considerable, it constitutes real disease; and in that case, contractions, catalepsy, somnambulism, and in extreme cases, insanity are the result.

"A certain degree of influence over the Od when distributed in the interior of the body has been obtained by means of passes—of which the use has been known from time immemorial—made by the hand along the whole length of the body. This modification of the odyllic influence constitutes, in some cases, a valuable therapeutic agent; and often saves the patient when all other remedies have proved to be ineffectual.

"The causes of the formation of Od in the human body are partly mechanical, partly chemical. The circulation of the blood produces by friction positive Od; or that which, according to Reichenbach, produces the same effect upon the nervous organisation as the south pole of the magnet; and the same may be predicted of every sort of motion. The chemical action of the respiration, of the digestion, of the secretion of the glands, produces negative Od. The brain and the ganglions appear to be the principal centres both of its production and its solution.

"Odyllic motion, or what is called the current, issues

principally from the brain; it runs along the course of the nerves, and follows them out to the farthest ramifications; until it finally exudes in the air, and makes its presence felt by the impression which it produces upon sensitive subjects. Such individuals as are easily affected, discern immediately, even in the dark, the course of the blood, and the ramifications of the nervous system, by virtue of the intenser light which they themselves emit."

Reichenbach further recognized the fact that the Od traversed certain bodies and was intercepted by others; also that it could be both reflected and refracted, and, consequently, concentrated by means of mirrors and burning-glasses.

These experiments have been reproduced, first by Dr. Ashburner, to whom we owe an English translation, with commentaries, of *Physical and physiological researches on dynamics*, &c.; one of the most important works of the Austrian chemist; and more lately, and also in England, by Gregory, Smith, Barett and other men of science of the Reichenbach Committee.

Analogous researches have also been made in Switzerland by Monsieur Martin Ziegler; in France by Messieurs Durville, Pelletier and Dècle, and the Drs. Chazarain and Baréty, who appear to have known little or nothing of the investigations of Reichenbach.

All have equally agreed in recognising the existence of a polarized fluid (or of a raliating neuric force,

according to the expression used by Dr. Baréty) capable of reproducing the different phases of hypnotism described by the School of the Salpêtrière, and acting under the influence of laws, the principal of which may be thus summarised: Od, of a determined polarity, produces upon organs charged with Od of the same denomination (whose action, that is, is expressed by equivalent terms) first anæsthesia, and then different degrees of sleep; it awakens, or produces hyperæsthesia, by acting upon organs charged with Od of a contrary designation (whose action, that is, is not expressed by equivalent terms).

These states differ from each other according to the repartition of polarity; no doubt because, according to the observation of Reichenbach, these polarities themselves are multiple and interlaced, some one or other of them being capable of predominating in a given subject, either in consequence of the peculiar conformation of that subject, or of the training which he has received.

It must not, in fact, be forgotten that the conditions under which the problem that is to be solved presents itself to us, are of an exceptionally complicated character. Not only have we for the subject whose action is to be responsive an individual endued with life, and consequently liable to voluntary or involuntary errors, on account of his physical or moral temperament, but, besides, the emission of Od which attends

most of the phenomena of Nature, outside of those more specially under observation, tends to complicate and perpetually falsify the manifestations of the laws which preside over such action.

The state of health or the disposition mental and bodily of the subject, the time of day at which he is operated on, the propinquity of certain bodies, constitute so many influences (not to mention those we hardly know of) which may result in giving apparently contradictory conclusions.

But there is no science which, at its first stages, has not had to encounter similar difficulties.

Monsieur de Rochas has endeavoured, as far as in him lay, to take into account these various causes of error; and has pushed his researches beyond his predecessors, while constantly pursuing the same path.

By prolonging the action of polarity upon highly sensitive subjects, he has been able, first, to reproduce the different phases of hypnotism, and, subsequently, most of those known to magnetizers. By using the Od, so to speak, in doses, he has been able to follow out its effects step by step; and has classed those conditions in the order in which they presented themselves (as by touching the different chords of a harp) in the persons of the majority of the subjects, and in proportion as the hypnotic state was better understood.

He has demonstrated, moreover, that these condi-

tions, with their characteristic properties, could be produced, not only by the human Od, but by the Od which is derived from all the sources indicated by Reichenbach, and, notably, by static or dynamic electricity and by magnets.

Thus, a subject through whom an electric current has been made to pass in certain proportions can be brought into a condition of rapport, in which he can neither see, hear, nor feel anyone but a person traversed by a current in the same direction. By changing the direction of the current the subject is brought back to the waking state, and goes through again, but in inverse order, all the phases through which he has passed in being put to sleep.

On certain sensitive subjects, Monsieur de Rochas was able to produce these states in the positive parts only of their organism, by charging them with positive electricity administered mechanically; and then, by replacing positive electricity with negative electricity, to bring back the same parts to their normal condition, and to put to sleep in their turn the negative parts.

In the same way he made the discovery of *inverting* glasses, which changed the odyllic or neurical properties of a given effluvia, without in any way modifying the other properties of the same effluvia. For example, the north pole of a magnetized bar of iron will affect the north pole of the needle of a compass exactly in

the same manner, with or without the interposition of the glasses in question; whilst its action on sensitive subjects will be reversed as soon as its effluvia has traversed one of these glasses.

From physical theories now definitely admitted by science, and from antecedent investigations, whatever degree of incertitude may still attach to them, the following conclusions may, it would seem, be deduced:

- I. All bodies, when definitely analysed, are found to be composed of atoms, that is to say, of infinitesimally small particles of ether, the unique substance which constitutes the universe. These atoms vibrate perpetually under the influence of the creative force—the force which ancient philosophers called the "Breath of the Eternal."
- II. The *molecules* of bodies are produced by the different groupings of these atoms; and in consequence of the diversity of these groupings the molecules vibrate differently, according to the nature of the bodies.
- III. Each of our senses perceive one or more of these vibrations, when they fulfil the requisite conditions of rapidity, form, and amplitude.
- IV. There exists an infinite number of kinds of vibrations which are not perceptible to our ordinary senses, and which are yet sentient to certain individuals and certain animal races, and thus constitute for them, and for their advantage, special faculties,

which have been qualified as intuitive revelutions or instincts.

V. The mode of vibration which Reichenbach has studied under the name of Od is one of those which is perceptible to the nervous system of sensitive subjects. When it acts upon their brain by the process now generally in use (by imposition of hands or passes), it appears to produce the different states described by Monsieur de Rochas, by diminishing progressively the activity of the external cerebral layers, and throwing back the activity upon the inner layers. Hence arises the inhibition of certain faculties and the development of new faculties, such as are generally latent in ordinary life.

VI. The first efforts of science ought to be directed to determine experimentally the physical and physiological properties of the Od; and this should be done by studying it by the aid of processes analogous to those which are employed in the study of other modes of the vibration of ether, and in bringing its action to bear upon the brain in different ways.

VII. We might then proceed to endeavour to transform into odyllic or neurical force the other forces of nature, just as, already, we transform mechanical energy into chemical, calorific, luminous, or other energies. And in this way it must be, no doubt, that we should arrive at the voluntary reproduction of most of those phenomena which we now

regard as marvellous, even when we admit their existence.

To the above conclusions must be added the further researches made on the curious phenomena of the transfer of contractions and maladies from one subject to another, under the influence of magnets, and the results which have been obtained respecting them by Dr. Charcot, who in 1878 was able to transfer contractions, and by Dr. Ladame of Geneva, who, operating independently of hypnotism, obtained a similar result. Dr. Babinski, of the Salpêtrière, first made the discovery of the transfer of maladies in 1886, and since then Dr. Luys has given a considerable impulse to this new therapeutic method.

CHAPTER XVIII.

SLEEP INDUCED IN ANIMALS.

MAN is not the only being in creation in whom sleep can be artificially produced. I have shown this in a recent work on the mental faculties of animals. from which I shall quote largely. As early as the year 1636, Daniel Schwenter hypnotised cocks and hens, and invented an amusement which soon became popular in many countries. It was, however, only in 1646 that this mode of investigation was followed up -at least authentically-by Father Kircher, the ingenious inventor of the Eolian harp, and of magic lanterns. He put hens to sleep by tying their legs together and placing them before a chalk line drawn on the ground. This recalls the magic circle of the amous magnetiser, Baron du Potet, who with a bit of charcoal or chalk would trace on the ground some geometrical figure which his subjects were unable to cross: for when Father Kircher released the bird it remained motionless.

Binet and Féré mention a curious practice of the farmers' wives in Normandy. In order to induce a

hen to sit on her eggs, they place her head under her wing and gently rock her to and fro. The bird falls asleep, and when she awakes will remain upon the nest she has been placed on. This method is used either to force the hen to sit, or to transfer her from one nest to another, without her manifesting any wish to return to the old one.

Colonel Albert de Rochas quotes several curious cases of hypnotism applied to animals. We will now give a detailed account of several of these experiments.

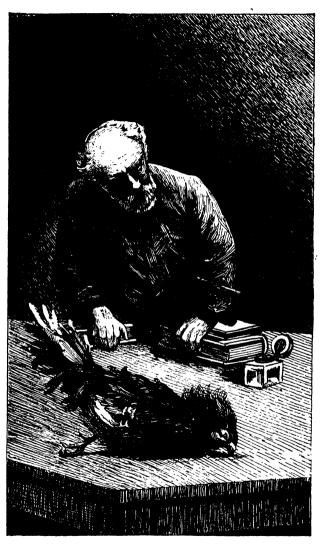
At Boston, in 1881, Bérard produced a cataleptic state in animals by means of fear, or a bright light, or music, magnetic passes, or a fixed gaze.

The magnetiser Lafontaine had already held public exhibitions in Paris, in which he reduced cats, dogs, squirrels, and lions to such complete insensibility that they felt neither pricks nor blows. He could throw lizards into a sleep that would last several days.

The Harvys or Psylles of Egypt impart to the ringed snake the appearance of a stick, by pressure on the head which induces a species of tetanus. (E. W. Lane.)

Monsieur Jacolliot tells us that the fakirs produce a cataleptic stiffness in snakes by soft and monotonous music, followed up by a fixed gaze and magnetic passes.

And as we have quoted the ex-judge at Chandernagor, we will now borrow from his book Voyage au



FATHER KIRCHER.

pays des perles, a few more remarks concerning the Aissionas, or serpent charmers, of the province of Sous (Morocco), who publicly performed at the Paris Exhibition of 1889. He states that the fakirs perform similar feats. We have mentioned the insensibility of the Aissaonas themselves, and will now treat of their action on serpents.

Their instruments are long reeds shaped like flutes, and pierced at each end. By blowing into one of the holes they produce a melancholy sound, which they prolong harmoniously.

"... The principal charmer began by whirling with astonishing rapidity in a kind of frenzied dance around the wicker-basket that contained the serpents, which were covered by a goat skin. Suddenly he stopped, plunged his naked arm into the basket, and drew out a cobra-de-capello, or else a haje, a fearful reptile which is able to swell its head by spreading out the scales that cover it, and which is thought to be Cleopatra's asp, the serpent of Egypt. In Morocco it is known as the buska. The charmer folded and unfolded the greenish-black viper, as if it were a piece of muslin; he rolled it like a turban round his head, and continued his dance while the serpent maintained its position, and seemed to follow every movement and wish of the dancer.

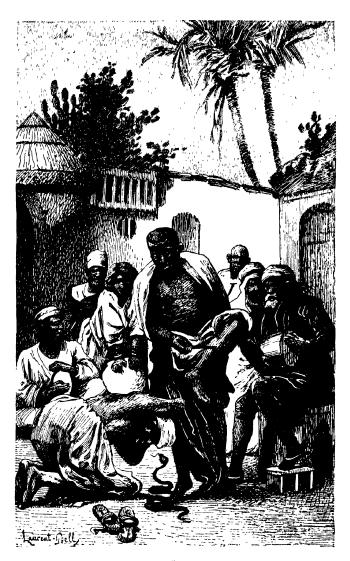
"The buska was then placed on the ground, and raising itself straight on end, in the attitude it assumes

on desert roads to attack travellers, began to sway from right to left, following the rhythm of the music. The Aïssaoua, whirling more and more rapidly in constantly narrowing circles, plunged his hand once more into the basket, and pulled out two of the most venomous reptiles of the deserts of Sous; serpents thicker than a man's arm, two or three feet long, whose shining scales are spotted black and yellow, and whose bite sends, as it were, a burning fire through the veins. This reptile is probably the torrida dipsas of antiquity. Europeans now call it the leftah.

"The two lefficles, more vigorous and less docile than the buska, lay half-curled up, their heads on one side ready to dart forward, and followed with glittering eyes the movements of the dancer. . . . Hindoo charmers are still more wonderful; they juggle with a dozen different species of reptiles at a time, making them come and go, leap, dance, and lie down at the sound of the charmer's whistle, like the gentlest of tame animals. These serpents have never been known to bite their charmers."

Having considered the power of fascination which the charmer possesses over reptiles, we may mention the same power that the serpent itself possesses, which enables it to fascinate its prey with the fixed gaze of its glittering eye. After a certain time the exhausted victim yields to the reptile.

We have often heard it said by country folk-



THE AÏSSAOUAS.

though we have had no opportunity of verifying the fact ourselves—that the common snake can fascinate in this way small birds, toads, and mice, with the result that the wretched little animals throw themselves into their enemy's jaws. The fear or ophidiophobia that produces this sensation is common to men and animals alike; it even attains in certain lower species a peculiar state of passive torpor. In such cases the brain is in a state of *inhibition*, or complete suspense; the motor muscles are paralysed, and cataleptic rigidity ensues.

The mere noise of the rattlesnake's tail has been known to render a man motionless and unable to escape. Travellers state that they have felt themselves forcibly impelled towards boa-constrictors.

In a letter to Sir E. Tennent—which he has published—Reyne relates that a charmer, whom he ascertained to have no tamed serpent about him, had on one occasion taken him to an ant-hill which he (Mr. Reyne) knew to be inhabited by an enormous cobra (Naja). At the sound of a fife the serpent appeared and danced, after having, however, bitten the knee of the charmer, who cured himself immediately by applying to the wound a serpent-stone.

Major Skinner was acquainted with a family at Negomba who used cobras as watch-dogs; the serpents were allowed to enter the apartments freely, and never hurt any one belonging to the house. Houzeau denies the possibility of charming snakes. He holds that the charmers extract the venomous fangs of the reptiles which, notwithstanding the steadiness of the look fixed upon them, often rebel. In 1862 he saw at Matamoras, a half-breed charm a rattlesnake which turned out to be a harmless serpent, to which the fellow had attached the rattle of a real crotalus. Broderip mentions that he has observed movements of self-defence in reptiles.

Houzeau relates that though it is impossible to catch a pigeon by going straight up to the bird, it can be done by turning round and round it. The pigeon turns upon itself, so as not to lose sight of the person who is trying to catch it, and, as it seems to lose the notion of space, can soon be seized.

Romanes, Pennant, Thompson, and Le Vaillant believe in the power of fascination, or rather in that of fear exercised by serpents on small animals. They have witnessed cases of death in squirrels, mice, and shrikes result from such fascination. Sir Joseph Fayrer maintains that fascination is only a synonym of fear. Dr. Barton of Philadelphia is very positive on the subject. He says that it is only the danger threatening their nests that causes fear in birds, and that fascination does not exist. Dr. Liébeault once saw a small bird fall to the ground in terror of a hawk. Montaigne mentions a bird which let itself fall, half-dead with fright, into the claws of

a cat. A partridge will remain motionless before the eyes of a pointer. It has been found, in London, that a rabbit placed in front of a boa, becomes completely paralysed.

Fascination—linked probably with a sentiment of curiosity—may also be produced by fire or a light. A moth will flutter round a lamp and dash itself against it. The Paraguay horse and the African donkey are attracted by camp fires. Dolphins are attracted by the fires lit by fishermen. Migrating birds will deviate in their nocturnal flight, to hover in serried masses over the lights of a large city, of a lighthouse, or of a conflagration. The nature of this kind of fascination may become purely emotional, when, for instance, a flock of sheep, mad with terror, will rush into a blazing shed.

This hypnotic fascination has often been made use of by man.

Thus Balassa in 1828 stated that the most vicious horse can be shod if a person looks at it steadily in the eyes during the operation. Rarey mastered restive horses by magnetic passes over the neck and muzzle, and the incessant repetition of words uttered in a caressing tone. Czermack in 1873 induced catalepsy in birds, salamanders, crayfish and rabbits by simply fixing an object (either the finger or a match) before their eyes, and holding them motionless for a few minutes. Dr. Liébeault has on two occasions

used the method proposed by Monsieur Morin for Martin's menagerie, to appease snarling and ill-tempered dogs. He gives the following account: "I fixed my gaze steadily on a hound, that showed me his teeth whenever I entered his master's house, at the same time pointing two of my fingers at him like a fork. He barked for a long time, then drew back and cowered between the legs of one of the persons present. Then I called him; he came to me, allowed me to pat him and lay down near me. I tried a similar experiment on another dog of the same species said to be dangerous. But this time it was in the street and he was loose; he barked a great deal, but did not dare to approach me."

Hypnotism was, however, in full force, even before the word existed, in wild beast shows. A wild beast never attacks a man in front. The tamer's art is nothing else than suggestion in the waking state, such as it is practised on man; and does not consist in implanting a will forcign to his own, as suggestion is generally defined, but calling into action the subject's own disturbed imagination. Only in this case it is always the same idea that is suggested to the animal by fear—that of a power superior to its own.

The suggestion made by the more or less powerful or glittering gaze of the tamer, is assisted by mechanical means of correction or intimidation, and—magnetisers add—by the magnetic fluid. The animals are weakened

Sleep Induced in Animals.

either by being deprived of sleep and food, or by an abundant supply of purposely chosen debilitating food. But the tamer must above all be possessed of presence of mind, a steady eye, and calm and imperative audacity. Surrounding circumstances also aid him; the eyes of the spectators riveted on the performance intimidate the lion, and excite the man; a sudden, vivid light dazes the animal, and a diabolical, mad strain of music, ever the same, cows the beast. The man then appears; everything is at once hushed, as at the approach of a master; and the trembling, uneasy animal gives way before the man, who now advances with a firm step, strikes a violent blow en the bars with the loaded whip he holds in his hand, and goes in and out of the cage, without taking his eves off the beast for one moment.

These performances go on for some time; then one fine day, we learn that the obedient animal has devoured his tamer; or, as was seen during a recent trial; that a young hypnotised girl who had been placed in a wild beasts' cage, has been torn to pieces.

The animal has taken its revenge, as was to be expected. Wild beast shows must be suppressed if we wish to avoid the repetition of similar accidents.

All the different degrees of sleep are to be met with in animals; *lethargy*, with complete inertia; *catalepsy*, with corpse-like rigidity; and *somnambulism* with the dreams and hallucinations of natural sleep, or the

suggestions produced by provoked sleep. Dr. Tissié mentions that he had a goldfinch which he taught to whistle by hearing him during its sleep.

Simulated death is frequently seen in animals, and is generally due to catalepsy. In this case it is involuntary and the result of paralysis of the motor power, occasioned by fear.

"In a dark library cupboard," Couch relates, "there were certain articles of food which the mice evidently considered more worthy their attention than the books. One day, on suddenly opening the cupboard, a mouse was seen on one of the shelves. The little creature was so transfixed by fear, that it looked dead, and did not stir even when taken up in the hand. Another day, on opening the drawingroom door, a mouse was seen fixed and motionless in the middle of the room. On going up, it was found that it presented all the appearance of a dead animal. except that it had not turned over on its side. On various other occasions, several mice were seen together, completely deprived of motion: None of the little creatures made the slightest effort to escape; and they could be leisurely picked up. They were in no way injured, for in a short time they entirely recovered.

"It is by no means easy, as we know, to catch a weasel asleep, or at least off its guard; it would therefore seem still more unlikely that a weasel would

allow itself to be rolled over, mawled about, and trampled on with impunity by a cat. This did however happen, for one day that pussy was lying quietly stretched out, seemingly regardless of all around her, a weasel most unexpectedly passed near her, and was in a second caught up and carried off to the house near at hand. The door, however, being shut, pussy deceived by the apparent death of her victim, laid it down on the doorstep and mewed according to her custom, for it to be opened. But, at this moment. the sharp little creature recovered its senses, and stuck its teeth in its enemy's nose. It is probable that beside the surprise of its sudden capture, the way in which the cat had held the weasel by the middle of the body, had till then prevented it from offering any resistance. By taking hold of these little quadrupeds in this manner, one can avoid being bitten; for it is difficult to believe that the weasel had the intention of deceiving the cat, all the time it was held in her mouth."

Professor Preyer has made some studies on hypnotism in animals, and declares that fear is a powerful predisposing cause of catalepsy (or mesmeric sleep) in animals. He even attributes the appearance presented by insects that simulate death, exclusively to a cataleptic state. This influence producing an analogous condition in the neuro-muscular system of a higher order of animals, even with the cray-fish,

which can be made, in an hypnotic condition, to stand on its head, it seems reasonable to attribute simulated death in insects to the same cause. Death and simulated death are easily distinguishable in every species of animal.

Insects, spiders, centipedes or death-watch, and crayfish fall into a state of complete insensibility (catalepsy) the moment they are alarmed, "but they recover," Romanes tells us, "directly the exciting cause of alarm is removed."

Duncan, after having remarked that spiders, which simulate death, will allow pins to be stuck in them, and even be cut up, without betraying the slightest sign of terror, adds, that if the cause of this phenomenon were, as is often supposed, "a kind of stupor induced by terror," the insect would not recover immediately the cause of its terror had disappeared. This is, however, really the case, for the cataleptic state continues even after the exciting cause has been removed. An owl, placed on its back, becomes insensible and remains so, even after it has been replaced in a natural position.

When the tail of a newt or the leg of a frog are suddenly pinched, the creature will remain for some time petrified, sometimes, indeed, for several minutes, and cannot move a limb.

To induce hypnosis in animals, it is necessary to make use of either gentle and prolonged, or strong,

short, cutaneous excitations. If the nostrils of a guinea-pig are gently squeezed with a pair of pincers, it will be found, after a certain lapse of time, that its stupor is so great that it can be made to assume the most whimsical attitudes, without being awakened.

Heubel made experiments on frogs. If a frog is gently held between the fingers with the thumb on its abdomen, and the four fingers on its back, at the end of two or three minutes the creature will become perfectly motionless. It can then be stretched out on its back, or be put in the most fantastic positions, without its attempting to resist or escape. A similar paralytic state may be induced by gently scratching the frog on its back.

Catalepsy, caused either by disease or in provoked sleep, produces such rigidity in a human being, that it seems as though he would break like glass if any attempt were made to bend him. And is it not an analogous phenomenon that makes the little reptile called the *slow-worm*, with its rudimentary limbs hidden under its skin, break when caught hold of, just like a glass stick?

Darwin, in treating of simulated death in animals, has compared it with real death; and has ascertained that there is a vast difference between the attitudes of real and the simulated death.

Wrangel says that geese migrate in the direction of Tuddras at the moulting season, and that they are then incapable of escaping. They simulate death so completely—in cases of danger—that "their legs and necks are stretched out stiff and stark," and he himself has believed the geese to be dead, on seeing them in this position. The natives, the wolves, and the foxes, are, however, not deceived by this.

Darwin relates that, in Patagonia, a frightened lizard simulated death by "stretching itself out on the sand, which was the same colour as itself, and closing its eyes; if again disturbed, it would rapidly burrow in the sand."

Lethargy—sleep with inertia—exists also during hibernation. It seems as though the condition of those animals, such as dormice, marmots and bats, that sleep long days and months, should come under the definition of phenomena attributable to induced sleep. It is almost an exaggeration to call the hibernal condition cataleptic sleep, as Dr. Liébeault has done in his book on sleep. No special rigidity, proper to this phase of hypnotism, has ever been noticed in animals thus asleep, neither can it be attributed to suggestion—as Dr. Forel of Zurich seems to think.

"The accumulation of fat in the tissues predisposes man to sleep, and may well be the organic cause of hypnotic suggestion in the dormouse, as has been already supposed. A gradual emaciation would therefore finally induce the suggestion to awake. The

theory of suggestive action is corroborated by the fact that in this state, sleep is succeeded by waking in a relatively abrupt manner, and vice versâ, besides certain intermittances of sleep observed before the final and definitive awakening."

The same experimentalist has observed certain reflex movements in the sleeping dormouse; he has, for instance, seen one hang from a branch in this condition, and instinctively climb down without awaking.



CHAPTER XIX.

INSENSIBILITY PRODUCED BY HYPNOTISM.

Sensibility may be annulled by provoking sleep, and the slumber thus induced facilitates surgical operations.

Anæsthesia is one of the characteristics of hypnosis, although it may exist independently of this state, and be one of the signs of neurosis. When this axiom is accepted, neither protoxide of azote, ether, nor chloroform will be any longer used; hypnotism will replace them. Nevertheless, it is necessary to repeat that this agent can only be employed in cases where it offers no risk, and when it has been already ascertained that sleep can be easily induced; otherwise we might be exposed to hesitation, uncertainty and failure. It often requires rather a lengthy preparation to induce sleep in healthy subjects, and many persons are entirely refractory to hypnotism.

Anæsthesia by hypnotism presents, however, this advantage over other methods of obtaining insensibility; that it can be localised in the diseased part, either by means of *passes*, or by suggestion.

In 1829, Cloquet amputated—without pain—the breast of a woman who had been magnetised. But the success of the operation was not recognised on account of the death of the patient, on the nineteenth day after the operation, from pleurisy caught on the seventeenth day, while walking out on a cold day.

A report of this case was communicated to the Academy of Medicine; Dr. Chapelain magnetised the patient, and could at will render her insensible to pain. Dr. Cloquet went to the patient's house accompanied by Dr. Pailloux and the medical students attached to his division at the Hospital St. Louis, and found her asleep, but able to speak, and perfectly calm; her pulse and breathing presented no peculiarity; she herself prepared everything necessary for the operation; and her insensibility was complete. (Dr. Gigot-Suard.)

Andral taught that magnetism rendered patients insensible; and Brivasac, at Condom, operated on an abscess without causing pain.

The following is a summary list of a number of operations performed in England, a record of which was made in the work of Dr. Charpignon, physician to the Orleans prisons, who has but recently died:—

In October, 1842, amputation of the thigh, on a man aged forty-two, magnetised without somnambulism by Mr. Topham, and operated by Dr. Ward.

In March, 1845, amputation of the thigh of a young man aged eighteen, by Dr. Fauton.

In September, 1845, amputation of Mrs. N.'s arm by Dr. Jolly.

About the same period, amputation of Miss L.'s thigh by Dr. Toswell.

The following are the most important and recent operations in France, the results of which have been made known to the medical world :-

In October, 1845, amputation of the leg of Mademoiselle Marie d'A-, performed at Cherbourg by Monsieur Durand, professor of philosophy; and Drs. Loysel and Gibon. In this case the patient was in a somnambulistic condition.

In May, 1846, dissection and excision of seven degenerated glands, some of which were as big as an egg, situated in the lower maxillary and cervical regions. The patient was a young man aged eighteen years. He was magnetised by Monsieur Debute, and was in the somnambulistic state. The operation was performed at Cherbourg by Dr. Loysel, who carried out the same operation in the month of September in the same year on a lady, Madame L-, aged thirty, the magnetiser in this case being Monsieur Durand. In 1847, a similar operation was again performed by the same medical man.

In 1860, Velpeau presented to the Academy of Science a "new method," and reported a case in which a very painful operation had been performed without pain, by means of hypnotic sleep, by Messieurs Broca and Follin in 1859. A few days later Dr. Guérineau of Poitiers, had recourse to the same means of producing anaesthesia to amputate the thigh of a patient.

"After the operation, which lasted a minute and a half," Dr. Guérineau writes, "I spoke to the patient and asked him how he felt? He replied that 'he felt as if he was in Hearen!' and he seized hold of my hand and kissed it. Turning to a medical student, he added: 'I was aware of all that was being done to me, and the proof is, that I know my thigh was cut off at the moment when you asked me if I felt any pain."

This, however, was but a transitory stage. It was soon recognised that a considerable time and a good deal of preparation was necessary to induce the patients to sleep; and medical men had recourse to a more rapid and certain method; that is, chloroform. Thus the year 1860 saw the rise and fall of Braidism as a means of surgical anaesthesia. At the Mesmeric Hospital in Calcutta it still continued in practice; and in 1872 a painless operation was performed at the Hôtel-Dieu at Lyons, thanks to hypnotic sleep, by Drs. Ollier, La Saigne, and L. Jullien. We are indebted to the latter—now one of the most eminent Paris surgeons—for a report of this case. Since the year

1878, and owing to the studies pursued at the School of the Salpêtrière, this process has been to a certain extent revived, teeth being extracted in this manner without pain.

Dr. Dumontpallier, head physician at the Hôtel-Dieu, also draws out in-growing nails; an extremely painful operation in a waking state. It is necessary to cut the nail down the middle, and violently tear out the two pieces that have become encrusted in the flesh. The patient is generally rendered insensible by chloroform; for the pain is sufficiently acute to bring on a syncope, which is sometimes fatal. With hypnotisable subjects, provoked sleep induces insensibility to pain. It seems useless to repeat the words, insensibility to pain; but it must not be forgotten that physiologists have found three different sensibilities on the surface of the body, giving three distinct sensations: contact, heat or cold, and pain. And in these cases the patient has no sensation of pain, but feels the cold of the steel.

This would lead to an extremely interesting analysis of sensibility, which Dr. Dumontpallier has investigated and communicated to the Hypnotic Congress, of which he was President.

In 1887, an hypnotisable morphinomaniac in Dr. Luys' division at the hospital *la Charité*, broke into her arm the tip of an hypodermic syringe. She only mentioned the fact after the lapse of a few days;

sleep was induced and Dr. Segond performed the operation. The tip had made some way through the tissues, and its extraction was necessarily slow and extremely painful. The surgeon afterwards stitched up the incision in the skin with Reverdin's needle, a still more painful process, but the patient never flinched. Yet, on awaking, she declared to those present, of whom I was one, that she had simulated sleep, and that she had felt the pricks of the Reverdin needle. It seems to be a regular mania with certain subjects to declare that they deceive the experimentalists.

The following case was published in 1889 in a report issued by the Academy of Medicine:

"At the last sitting of the Academy of Medicine, Dr. Mesnet, in the name of his colleagues of the Hôtel-Dieu, communicated the results of a very important surgical operation, made by the surgeon, Tillaux, on a young woman in a state of hypnotism.

"During this delicate operation, the patient, who was insensible to the action of the scalpel, manifested no pain. On awaking she had no recollection of what had taken place, and she is now cured without knowing how." A few days later at the Hypnotic Congress, my friend Dr. Fort, formerly professor of anatomy, made the following communication:

"On the 21st October, 1887, a young Italian tradesman, aged twenty, Jean M——, came to me and asked me to take off a wen he had on his forehead, a little



DR. FORT'S OPERATION DURING HYPNOTIC SLEEP.

above the right eye-brow. The tumour was about the size of a walnut.

"I was reluctant to make use of chloroform, although the patient wished it, and I tried a short hypnotic experiment. Finding that my patient was easily hypnotisable, I promised to extract the tumour in a painless manner and without the use of chloroform.

"The next day I placed him in a chair, and induced sleep, by a fixed gaze, in less than a minute. Two Italian physicians, Drs. Triani and Colombo, who were present during the operation, declared that the subject lost all sensibility and that his muscles retained all the different positions, in which they were put, exactly as in the cataleptic state. The patient saw nothing, felt nothing, and heard nothing, his brain remaining in communication only with me.

"As soon as we had ascertained that the patient was completely under the influence of hypnotic slumber, I said to him: 'You will sleep for a quarter of an hour,' knowing that the operation would not last longer than that; and he remained seated, and perfectly motionless.

"I made a transversal incision two inches and a half long, and removed the tumour which I took out whole; I then pinched the blood vessels with a pair of Dr. Pean's hemostatic pincers, washed the wound and applied a dressing, without making a single ligature. The patient was still sleeping. To maintain the dressing in its proper position, I fastened a bandage round his head. While going through the operation I said to the patient: 'Lower your head, raise your head, turn to the right, to the left etc.;' and he obeyed like an automaton. When everything was finished, I said to him: 'Now wake up.'

"He then awoke, declared that he had felt nothing, and did not suffer, and he went away on foot, as if nothing had been done to him.

"Five days after, the dressing was removed, and the cicatrix was found completely healed."

I have myself been able by means of hypnotic sleep to tear off any cicatrized adherences, or to remove them with thermo-cautery, without inflicting any pain on the patients.

We need dwell no longer on these facts, which are of sufficient importance to commend the use of hypnotism, always provided that the hypnotisation of the subject may be carried out without difficulty or danger.

CHAPTER XX.

HYPNOTISM IN LITERATURE AND ART.

THE love of the marvellous is one of the characteristics of the human race; and contemporary science does not tend to diminish this inclination. We treat our forefathers' beliefs as fables, and are satisfied to invent theories which will be treated in the same manner by our grandsons. Contemporary discoveries, by extending the limits of the impossible, appear to destroy it, and rendering us more credulous in regard to new ideas, produces in us a blind faith.

Every man, however sceptical he may pretend to be, however much he may be imbued with science, has at heart a leaven of faith and mysticism. If this leaven ferments in connection with science, the microbe of credulity will rapidly multiply, and invade the whole individual. In a like manner hypnotism, extolled by a few earnest believers, has disturbed the consciences of certain persons, and excited the imagination of others. Literary men have followed more especially the last mentioned line of thought, representing science as having sanctioned the most fertile

dreams of the marvellous, man as an automaton—as animals were considered in the time of Descartes—the dark spirit of crime governing all human action. Such a thesis might well excite the passions of our neurotic age.

Scientific vulgarisation has aided this fantastic development of vague ideas, so rarely established and so justly disputed. It is said that discussion throws light on a subject; this is, however, only the case when carried on by persons of equal intelligence, devoid of prejudice. Magnetisers have, in their time, been anothematized or glorified, scorned or honoured, pilloried or worshipped.

The men who have popularised science, arid in itself, have made it amusing and attractive. Those who have studied the more complex problems of our spirituality, have used hypnotism and magnetism to support their theories. They have draped abstract knowledge in the ample folds of their broad style of writing, and have thus aided the reader in acquiring essential knowledge. Among these may be mentioned Camille Flammarian, the poetical and scientific author of *Uranie*.

There is not a man of science, who, at the present day, has not consented to quit his pedestal, and meet the public half-way, in order to render popular a knowledge of the phenomena that excite and interest them. The following works are among the most noted: Sommeil provoqué et les états analogues, by Dr. Liébeault; Magnétisme animal, by Binet and Féré; Les forces non définies, by A. de Rochas; la Suggestion mentale, by Dr. Ochorowiez; Somnambulisme, by Beaunis; les Souvenirs d'un magnétiseur, by Comte de Maricourt; l'Art de Magnétiser, by Lafontaine; la Physiologie du magnétisme, by Dr. Charpignon; besides the works by Drs. Cullerre, Gilles de la Tourette, Paul Richer, Babinski, Richet, and many others.

By the side of these serious books, in which either the gay note, or the sad despairing vibration is lacking, we find novels with plots founded on hypnotism. From the new science, a pleiad of novelists have drawn fertile conceptions, inextricable and far-fetched situations, or the most comical imbroglios. The whimsical idea of the abolition of will have been turned to account. Unfortunately certain writers have thus contributed to the spread of dangerous ideas and propagated erroneous and unsettling opinions.

Alexandre Dumas led the way, and heralded the advent of anæsthesia by hypnotism. He has been the historian of the new science in the same manner that many of our contemporaries are the prophets of our future scientific discoveries. There can be no doubt that eventually it will be maintained that these imaginative men were not only great writers—which is true—but also that they were thorough men of

science—which is very doubtful—that they divined all the inventions made by posterity, that they were unappreciated in their own day, and died poor and ignored; for this is how history is written! However that may be, Alexandre Dumas certainly relates in his novel *Joseph Balsamo*, a painless operation made during hypnotic sleep.

Balsamo (or Cagliostro) and Marat—who is described in the book as a medical student—meet at the Hôtel-Dieu. A poor creature has just been brought in with a leg crushed, and amputation is deemed necessary. Cagliostro becomes interested in the patient, and tells Marat that he will prevent his suffering by sending him to sleep, not by any medicinal agent, but by the exercise of his (Cagliostro's) will. Marat expresses some doubts on the subject.

"Balsamo then said to the patient: 'Sleep;' and he gave this order not only in words, but by his glance, his will, all the power of his vitality, and the fluid of his body. At this moment the head surgeon began to examine the crushed thigh, and to explain to the students the gravity of the injury.

"But at Balsamo's command, the patient, who had raised himself up in the bed, swayed in the arms of the attendants, his head drooped and fell, and his eyes closed.

[&]quot;' He is fainting,' said Marat.

[&]quot;'No, Monsieur.'

- "'But don't you see he has fainted?'
- "'No, he is asleep.'
- "'What, asleep?'
- "'Yes.
- "Everybody present turned towards the strange doctor, whom they took for a madman.
 - "An incredulous smile hovered on Marat's lips.
- "'Is it usual to speak when in a swoon?' Balsamo then asked.
 - "'No.'
 - "' Well, question him, and he will answer you."
 - "'Hey! Young man!'
- "'You need not call out to him,' said Balsamo. 'Speak in your ordinary tone.'
 - "'Tell us what you feel, young man.'
- "'I have been ordered to sleep, and I am asleep,' the patient replied.
- "His voice was perfectly calm, and strangely contrasted with the tone in which he had spoken but a few minutes before.
 - "The spectators looked at one another.
 - "'Now,' Balsamo said, 'unfasten him.'
- "'That is impossible,' the surgeon replied; 'if he makes the slightest movement, the operation will fail.'
 - "'He will not move.'
 - "'Who can guarantee that?'
 - "'I can, and so can he. Ask him.'

- "'Is it safe to unstrap you, my good man?'
- "'It is.'
- "'And you promise not to move?'
- "'Yes, I promise, if you command it."
- "'I do command it.'
- "'Upon my word,' said the surgeon, 'you speak with such certainty, Monsieur, that I feel tempted to try the experiment.'
 - "'Do it, and fear nothing."
 - "' Unbind him,' said the surgeon.
 - "The attendants unbound the patient.
 - "Balsamo went up to the head of the bed.
- "'From this moment,' he said, 'do not move till I command you.'
- "The patient became as motionless as a marble statue reclining on a tomb.
- "'Now, Monsieur, you can perform the operation,' said Balsamo, 'the patient is ready.'
- "The surgeon took up his scalpel, but when about to use it, he hesitated.
- "'Cut away, Monsieur, cut away, I tell you,' cried Balsamo, with the air of an inspired prophet.
- "The surgeon, dominated as Marat, the patients, and the lookers-on had been, put the knife into the flesh. He cut away at the thigh, but the patient did not move, nor betray the slightest sensation.
- "'What part of the country do you come from, my good fellow?' said Balsamo, addressing the patient.



RELIGIOUS ECSTASY.

- "'I come from Brittany,' replied the man, smiling.
 - "'You are fond of your country?'
 - "'Oh, Monsieur, it is so beautiful!'
- "While this conversation was carried on, the surgeon was making the necessary circular incisions to expose the bone.
- "'How old were you when you left home?' Balsamo inquired.
 - "' Ten years old, Monsieur.'
- "The incisions having been made, the surgeon was about to attack the bone.
- "'My good fellow,' said Balsamo, 'what is that song the salt-marsh workers of Batz sing on their way home at night? I can only remember the first line.'"

Meanwhile the operation went on; the patient singing while his leg was being cut off.

This story, of which we have given a summary, shows that Alexandre Dumas was aware of Cloquet's operation in 1829, or that he had heard some still more marvellous stories on this subject, to which he lent life and action.

It was impossible for contemporary novelists to ignore the rich mine that hypnotism offered them. Some have turned suggestion to account, and have made of it the weapon of ambition and crime. The attitudes of the subjects, veritable automatons, have

excited their literary interest, and they have depicted characters alternately rigid, unnatural, insensible, and unconscious—that is in the somnambulistic state—or passionate and conscious—that is in the normal state.

To go forward, because obliged to do so, to follow an irresistible impulse, such is the favourite theme of authors who indulge in hypnotism. Many a tale has been woven on this canvas. Assassinations, the difficulties experienced in finding out the culprits, and innocent persons imprisoned in their stead, excite and thrill the reader.

A slight clue, a word, presumption or intuition lead to the discovery of the criminal, generally a female; novelists considering the weaker sex more interesting. Negation is carried to excess, for the guilty party retains no recollection of her crime. She must not remember the deeds of her active dreams; this at least is the theory of suggestion. These books excite a tremendous interest, which however errs in taking as accepted, facts that are debateable, contested, and even denied, by wholesome criticism. To wrench a secret from a person who will not speak, either by inducing sleep or transforming their physiologic slumber into provoked sleep, forms sometimes an episode in books, in which hypnotism holds but a very secondary place, as for instance in Hector Malot's novel called "Conscience."

Sight at a distance, or second sight, has likewise



ECSTASY AND RESIGNATION.

been made use of as the groundwork of some literary productions. Finding persons or things that have been lost, by means of induced sleep, has also been used as a plot for many of the thrilling stories due to the pen of contemporary writers. However these elements, which have been put in practice in several recent criminal cases, have not led to any serious results.

On the other hand we find the sceptics and scoffers of hypnotism; and among the most determined, must be placed the fervent occultists, mystics, or those accounted as such. These decline to accept the phenomena produced by old Europe, but hark back to those of the still older Asia. The magi and the Hindoo fakirs, permit of the imagination indulging in a belief of the fantastic. Some travellers whose veracity would appear unimpeachable, admit the truth of some of these strange doctrines. And it is certain that science, opening out new horizons, and unexplored regions, can but encourage the pursuit of a tendency inherent to human nature.

Inventions and discoveries, extending the limits of possibility, naturally lead to credulity. Denial pushed to extremes is as irrational, as an admission without investigation of scientific novelties.

Art makes use of hypnotism by availing itself of the ecstatic attitudes produced by catalepsy, which can be retained for a certain length of time. Without

-again referring at length to the ecstatic state, which we have studied with the second advanced hypnotic state, we will refer to its chief characteristics. According to the tone of music and its infinite variations, to the attitudes given to the subject or to his own physiognomy, religious ecstasy can be produced; either a phase in which the cataleptic subject strives to penetrate himself, as it were, with the sounds that captivate him is the result; or a mute and infinite contemplation may be produced, or an expression of timid grief and resignation may be induced. and Féré relate that the Greeks were acquainted with provoked sleep, and used it for this purpose. Neurotic subjects have in days gone by inspired both painters and sculptors. Certain scenes recall those supposed to be possessed of the devil, Doctors Charcot and Richet have written upon these in Les Demoniaques dans l'art.

Art Exhibitions have shown of late years some portraits of the masters of hypnotism and of their operations. In 1887, Monsieur Brouillet exhibited a picture called A clinical lecture at the Salpêtrière, in which Doctor Charcot is represented demonstrating before a numerous and select public, a subject in a cataleptic state. Among those present are: Mathias Duval, Jules Claretie—studying for his novel Jean Mornas—Senator Cornil, &c.

In the same year Monsieur Bergh exhibited "A



FASCINATED SUBJECTS AT THE CHARITÉ.

suggestion" which represents a person hypnotized by the gaze of the operator.

After this, three years elapsed before any other picture on hypnotism was forthcoming. At the annual exhibition of 1890 Monsieur Moreau, of Tours. the unrivalled delineator of hypnotism and neurosis, sent a picture representing Fascinated subjects at the hospital of the Charité. In a large ward, lighted on the left by big windows, ten or twelve men and women are grouped round a revolving mirror. Their physiognomies express, in a vivid manner, the different impressions produced on the subjects by the rotatory motion of the mirror, either admiration, fear, joy, pain, dreaminess, or an invincible attraction or repulsion; a little further back is a young woman, her arms upraised, contemplating the mirror in a kind of ecstasy. In the background, Doctor Luys and his pupils are attentively watching the different phases of the experiment.

At the National Fine Art Exhibition at the Champ de Mars, the power of fascination exercised by man over animals, more especially over snakes, is perpetuated. J. de Cala exhibits there his "Snake-charmer" and Dinet "The Laghouat Snake Charmer."



CHAPTER XXI.

THE DANGERS OF HYPNOTISM.

Hypnotism cannot be employed without danger. The impunity with which magnetizers experiment upon their apparently automatic subjects in public, might lead people to suppose that induced sleep is entirely harmless. The contrary is however the case. Recent laws controlling these experiments sufficiently prove the truth of this statement. Medical men have been accused of demanding these restrictive measures, and such action on their part was natural; but there is no reason for presuming that their demands were groundless.

Let us suppose, however, that hypnotism presents no danger; and confine ourselves to the question whether public exhibitions of hypnotism are calculated to benefit the public. Is it compatible with human dignity to figure in this way in public? Would one exhibit a lunatic to the public? Most certainly not. If such an exhibition would be repugnant, why exhibit experimental insanity, produced by exaggerated hypnotism?

It has been stated that hypnotic suggestion might become a dangerous weapon. This is an exaggeration, since it supposes the annihilation of will, and we have refuted this affirmation. We have also seen that frequently repeated orders enfeeble the subject's resistance, especially if his tastes and desires incline him to the accomplishment of the acts he is ordered to per-We repeat that to compel a subject to do as the operator wishes, it does not suffice to induce sleep on one occasion only; but what happens in the waking state, may happen in the hypnotic condition, i.e., an idea incessantly impressed on the mind will become an obsession. The subject is under a perpetual temptation, analogous to that of an epicure seated before a table loaded with his favourite dishes. He possesses free will, but has to struggle to resist his own desires, which in time will prove the stronger. The hypnotized subject, to whom a suggestion is frequently and repeatedly imparted, is in a similar position. The will may be augmented or diminished, but not destroyed.

Moreover will exists, and it is in the power of the patient, by never allowing himself to be hypnotized, not to place himself in this position of semi-dependence. Laws exist to protect the weak, liberty is limited by the interests of the community; it is the right and the duty of governments to define the social position of hypnotic subjects.

I am not of those who would push prohibition to extremes, and would intrude into private life with a view to prevent the use of hypnotism and magnetism. It is evident that this would be an overwhelming task, and that it is impossible to prevent persons hypnotizing at home, on condition that they do not injure their neighbours. But it is necessary to teach them and show them the dangers of agents erroneously considered harmless. Children are taught not to play with fire or gunpowder; and men—who are but grown-up children with regard to new discoveries—must be taught the dangers of these novelties. Such is the purpose of this present work.

The desideratum in this matter would be to prohibit all useless and theatrical exhibitions of hypnotism; and to allow, with a due word of caution, private performances, which it would indeed be difficult to reach. To demonstrate that which is good in magnetism: the influence—without inducing sleep—of the wife, the mother, the father, the friend, of affection under every form, and show how health can be infused, transmitted, bestowed by nervous transfusion; that is the ideal that should be realised. We have pointed out that this is possible; we will now show the dangers, especially those due to exhibitions, which have never cured anybody.

To those public magnetizers who are not of my opinion, I will oppose one of their own authorities,

Monsieur Lafontaine. They will perhaps say that accidents occur only with ignorant persons, but do they pretend to form, by their public exhibitions, a class of scientific magnetizers? And how many of the spectators, striving to repeat their experiments, will do harm?

Lafontaine tells us that these experiments may cause suffocation. Fear often results in congestion, or a rush of blood to the brain. If the digestion is not completed, more especially if the repast has been more abundant than usual, congestion may be produced and death be instantaneous. The most violent convulsions may result from too complete magnetization of the brain. A convulsive movement may be so powerful that the body will suddenly describe a circle, the head touching the heels and seeming to adhere to them. In this latter case, there is torpor without sleep. Sometimes it has been impossible to awake the subject.

A waiter at Nantes, who was magnetized by a commercial traveller, remained for two days in a state of lethargy, and for three hours Dr. Fouré and numerous spectators were able to verify that "the extremities were icy cold, the pulse no longer throbbed, the heart had no pulsations, respiration had ceased, and there was not sufficient breath to dim a glass held before the mouth. Moreover, the patient was stiff, his eyes were dull and glassy." Yet, although to all

appearance he had ceased to exist, Lafontaine was able to recall him to life.

Paralysis of one or more members, or of the tongue, may follow the awakening. These are the effects of contractions of the internal muscles, due often to almost imperceptible touches. The diaphragm—and therefore the respiration—may be stopped in like manner. Catalepsy, and more especially lethargy, produce these phenomena.

Idiocy, madness and epilepsy are also the consequence of hypnotic sleep unskilfully provoked. Lafontaine quotes several cases in which this occurred, and the Comte de Maricourt also mentions some cases in his Souvenirs d'un Magnetiseur. I have myself seen two interesting cases of veritable neurosis brought on by the ill-timed production of sleep, and I handed in a report of these at the International Magnetic Congress in 1889.

The first case under notice was that of a young professor at a boys' school. One evening he was present at some public experiments that were being performed in a tavern; he was in no way upset at the sight, but the next day one of his pupils, looking at him fixedly, sent him to sleep. The boys soon got into the habit of amusing themselves by sending him to sleep, and the unhappy professor had to leave the school, and place himself under the care of a doctor.

The second case was that of a young girl at the hospital of the Charité, in Dr. Luys' division (1887). She had become subject to frequent and violent attacks of hystero-epilepsy in consequence of a companion having hypnotized her, after witnessing a public exhibition of the same kind.

It may be alleged that in these cases there was a predisposition, a latent disease which was only waiting a propitious moment to break forth. But this malady might have remained latent during the whole of the subject's lifetime or have been cured by age, equally in a latent manner, in which case it may be said, that it would have been as if it had never existed.

It is argued that public exhibitions are useful, because experiments are necessary to acquire knowledge. This latter remark is true, but the former is erroneous. Sensational and extraordinary deeds bound to succeed are required by the public; these do not offer any interest from a scientific point of view. On the other hand, simulation is at a premium, the phenomena are always produced on the same subjects, and can never be used to formulate general laws. A doctor makes experiments in order to obtain a cure, but he cannot, nor ought he blindly to carry them out, as hypnotism forces him to do. First he works on animals, then on patients whose case is hopeless, and who themselves implore the use of any new method.

At the Salpêtrière and at the Charité, they only operate on half crazy patients; and it is uscless to augment this number, society having already more than its quota.

I am willing to admit that many doctors have not thoroughly studied magnetism, and that on the other hand many magnetisers have thoroughly investigated the question; but this objection, so often put forward by the latter, has nothing to do with the advisability of public experiments.

These have—as I said at the beginning of this book—attracted the attention of science, which latter has sought and still seeks to extract from hypnotism all the good it may contain. It may be said that this is a negative utility, to be compared with the properties of dynamite when it was as yet ignored by science, which properties, however, induced contractors to make use of it on public works.

It will be argued that the subjects on awakening do not complain of any fatigue, and therefore the daugers are null. They have dreamed, and nothing ever remains of a dream, neither mental disturbance nor fatigue. This is a strange error, for how often a nightmare leaves a sensation of enervation which lasts the whole day. My friend Dr. Tissié clearly shows this in his book "Les Rêves." "Give us the names of the persons whom hypnotism has harmed," the partisans of liberty at any cost say to the doctors,

"and we will believe you." But what would become of professional secrecy amid these sterile discussions?

I am aware that some conscientious operators, like Professor Delbœuf of Liège, for instance, have never during the course of their long practice known any danger result from hypnotism. This would not necessarily prove that none existed, for it may be due to their prudence, and even to their good luck. There are lucky series, as is said in medicine about new drugs, which at first are supposed to cure every disease.

Perhaps there have been cases unfairly reported, in which spite or personal jealousy may have played a part, at least this has been asserted. This would form legitimate material of the defence of the interested parties, but we must deem it insufficient as regards ourselves.

However this may be, public exhibitions of hypnotism are now prohibited almost everywhere. Italy first set the example, which was soon followed at Marseilles, Bordeaux, Poitiers, and then Paris. The active part taken by Professor Lombroso in Italy has made him the dread of all stage magnetizers. In connection with this matter, Professor Delbœuf of Liège, and Dr. Ladame of Geneva, have been engaged in a most violent polemic, the first one for, and the second against, the liberty of public experiments.

Dr. Ladame gives several cases of hypnotic neurosis brought on by these experiments. The subjects will in such cases sleep spontaneously. Magnetizers pretend—Lafontaine and Charpignon amongst others—that a subject who has been sent to sleep several times, cannot resist sleeping whenever his habitual experimentalist chooses to induce him to sleep. This disposition, by no means a desirable one, disappears, however, in time.

The mania for inducing sleep at random has spread everywhere; the army and navy even having taken it up. The newspaper *Le Temps* published on the 14th April, 1890, the following notice, similar to one issued two months previously by Monsieur de Freycinet, Minister of War:—

"Monsieur Barbey, Minister of Marine, has addressed the following circular to the Vice-Admirals and Commanders-in-chief:

" GENTLEMEN,

"'THE President of the Naval Board of Health has called my attention to the fact, that in certain naval hospitals, experiments with a view to the study of hypnotism have been put into practice; and that these experiments, for which the necessity of following the progress of science is the alleged motive, have more or less diverted the medical service from the

proper channels of the teaching and practice of really rational clinics.

"'On the other hand, as it is admitted, even by those who extol it, that hypnotism may expose the patients on whom it is exercised to certain dangers, I have accepted Dr. Bérenger-Féraud's remarks on the subject.

"'In consequence, I have the honour of informing you, that I absolutely forbid the practice of hypnotism in the naval forces. You will be good enough to order the medical staff under your command never to have recourse to it, for any motive whatever.

"'I remain, etc.,

These measures were violently discussed by doctors, more especially among civilians. However, the prohibition was urgently required. The weak man must be protected even against himself; and it is evident that a soldier desirous to please his chiefs, to be promoted and to avoid the fatigue party, might be tempted with this object in view to lend himself for experiments. Moreover, he cannot choose his doctor, on whom he is absolutely dependent. It was therefore urgent that certain measures should be taken, and as they do not apply either to officers or to civilians, but only to military and naval doctors, they are amply justified. A doctor in private practice, who has to

struggle for his livelihood, cannot be compared with a military doctor with regard to his clients. These choose him, pay him, and insure his prosperity; he must therefore devote himself thoroughly to them. In the army, the doctor is not dependent on his patients; and it was necessary to protect the men against a tendency good in itself, but easily liable to exaggeration. It was imperative to prevent any excess of experiments.

The following statement was published by the Bulletin Médical on the 30th March, 1890, after diligent inquiry had been made as to the opinions held by military doctors:—

"One of the doctors, an eminent man in the military medical profession, very independent both in thought and character, and ever ready to follow up any new discovery, said almost textually the following words:

"The partisans, not to say the fanatics of hypnotism, were actually indignant on learning that we were forbidden to make use of a practice which they believe efficacious in a number of morbid cases. But the soldiers confided to our care, are not to be deemed subjects for experiments, and we have not morally the right to test upon them all the innumerable novelties of therapeutic science.

"Morphia, cocaine, salicylate of soda, and many other important substances, were not admitted in military medical practice till sanctioned by learned societies, and notably by the Academy of Medicine.

"We must not in our prescriptions go beyond the formulary approved of by the technical Board of Health; and as hypnotism is not mentioned in it, we are powerless.

· "When it has been thoroughly tested, when the Academy of Medicine has decided that it really does render great services, and that it is suitable for such or such cases, then it will be time to see about putting it into practice. But we are far from having attained that stage; and once for all, our men are not animals to be experimented on, and our hospitals are not laboratories.

"Moreover, the question of hypnotism presents itself under a different aspect in the army, and one to which we must pay attention. It is certain, and the most determined partisans of hypnotism do not deny it, that suggestion can and does develop a state of hysteria, which till then had lain dormant.

"Now hysteria—which we know how to identify, whatever may have been said—is rare in the army, and I am persuaded that hypnotism would make it much more frequent. All this might lead us very far, with a lot of young subjects, massed together in considerable numbers, either in barracks or in hospitals.

"And again, besides the development of hysteria by imitation, we must in a regiment remember the shammers, all those who try to shirk duty, who would soon become excellent *subjects* for hypnotism and all its consequences. These military considerations are in themselves sufficient, I think, to warrant our eliminating the practice of hypnotism.

"Moreover, and until it takes its place in the Codex, its partisans will do well to remember that the Minister has not prohibited its use for all eternity. He has only said for the present."

After all these explanations, the question seems judged, I will not say without a future right of appeal, but without appeal as regards the present.

Magnetism exercised in private, passes performed in the intimacy of home life, and the cure of disease carried out in one's own house, concern only the interested parties themselves. The law can and ought only to interfere in public places, where it has a right of supervision. The only thing that it can, and does restrict, is a public exhibition of experiments.

The relations of hypnotism to legal medicine are less important than is generally supposed, suggestion being denied; nevertheless they do exist.

In lethargy and catalepsy, the subject is inert and passive, and may be the victim of any kind of attempt. It is evident that the traces will be similar to those of the waking condition, and that it will be impossible to ascertain the truth of the allegations.

On the other hand, the subject may easily assume the attitude of a victim, if he has remained alone with his magnetizer. This has already taken place. But it is easy to avoid a repetition; it will be sufficient never to magnetize except in the presence of relations—the husband, wife, father, mother, brother or sister of the subject. This will be the best way of preventing any ill-natured insinuation, or false accusation.

CONCLUSION.

THE arguments and facts brought forward in this volume tend to elicit the question: Does hypnotism exist?

Doubt is impossible: hypnotism does exist, and magnetism is equally underiable.

Discussion only begins when the question arises of the existence of free will in provoked sleep. We have shown the almost impossibility that governs the differentiation of real hypnotism and simulated hypnotism. We may have appeared somewhat too affirmative in our doubts, but we do not for one moment admit this. We might indeed have recalled, to the reader, the ideas we expressed in a former work, and have shown how facts can be differently interpreted; how scientific theories, which only group facts, are nothing else than mnemonical methods; how, in fact, nothing is absolute in the domain of positive science.

We have striven to apply the severest test, the

most rigorous scrutiny, the strictest and most impartial criticism, in order to demonstrate—what is our personal and absolute conviction—that human will is not a vain word, and that it does subsist. We have thus been forced not to bow down to the principle of authority, but to discuss all adverse opinions. In the heat of our argument, we may have put forth truths that appear somewhat paradoxical and severe towards our opponents; the importance of the subject must be our excuse, if any be necessary. Without the will, nothing can subsist. Society, morality, religion, and family become mere myths. All that we have held to be most holy and sacred, all that has sustained mankind from its origin, all the beliefs of past centuries, would suddenly disappear for ever. It would constitute a veritable cataclysm, which although carried out in good faith, would be nevertheless a public calamity. Without laying any pretensions to the vocation of an apostle, we have thought it necessary to protest loudly and positively, opposing facts to facts, setting testimony against testimony; and to affirm conclusively, without fear of repeating ourselves, that the will does subsist.

The less important conclusions of our work, are the

utility and efficacy of hypnotism, a sleep induced by physical agents, and more especially of human magnetism, the action of man on man. Affection, friendship, and love, are still and will ever remain the best auxiliaries of therapeutics. And a volume on the disturbing questions that have at all times excited public interest cannot be closed better than by a scriptural quotation which resumes all curative actions—independent of medical treatment—transmitted to us by history. This truth is addressed to all humanity, and the reader will say with us:

"Let us love one another!"

THE END.

Recollections of a

