

limits of accuracy to say that twenty years ago not more than six men in this country knew how to make a satisfactory microscopic section of nervous tissue, and it was not always easy to extract from them a description of their systems of manipulation, and a vast amount of labour was thrown away in individual efforts to procure thin sections. With Bevan Lewis's book before him, the student of to-day has everything he can possibly desire, down to the minutest directions, and it is his own fault if he does not prosecute inquiry to the uttermost.

It is quite unnecessary to detail here the contents of the various chapters of this book; we merely repeat that its presence is an absolute necessity in the pathological department of every asylum and hospital.

Much as the author has to be congratulated on the publication of his manual, we look to him for something even more important—the tabulation of the results of his experience gained by the prosecution of these systems of observation.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *French Retrospect.*

By D. HACK TUKE, F.R.C.P.

Archives de Neurologie, Juillet 1881 to Juin 1882 ; L'Encéphale, Mars 1881 to Juin 1882.

Among the many valuable articles in the "Archives" there is a series of papers on Hysteria and Hypnotism by MM. Charcot and Richer. They describe at great length the signs and conditions of neuro-muscular hyperexcitability. Some subjects are found to present the phenomena from the first time they are hypnotised. The greater number, however, require a certain period before the perceptibility is developed.

Neuro-muscular hyperexcitability which characterises that form of hypnotic sleep, called by Charcot *induced hysteric lethargy*, consists in a special aptitude of muscle to contract under the influence of a mechanical stimulus. This stimulus is preferred to electricity or the magnet, as with slight exception, it only acquires its power during hypnotism.

It should be observed that the exaggeration of tendon reflexes is common in cases of the "grande hystérie," and is usually associated with the anæsthesia and anyosthenia which mark the intervals be-

tween the crises, and is localised or most intense on one side of the body. It is not surprising, therefore, that in the hypnotic lethargy or artificial sleep, there should be marked exaggeration of the reflexes, an exaggeration which is the basis of neuro-muscular hyperexcitability. In induced hysterical catalepsy, the tendon reflexes are, on the contrary, abolished.

MM. Charcot and Richer classify all the phenomena which may occur in this exaltation under two heads, the diffusion of the reflex, and the modification of the reflex contraction which follows the blow on the tendon—as when more lively without being of longer duration; or longer and thereby tending to tetanism or contracture.

Tracings were taken by Marey's graphic apparatus, of these reflexes, and are given in the fifth number of the "Archives" (Juillet, 1881).

It has been found that kneading the muscles, friction, or simple pressure are more certain to cause localised contraction than a blow on the tendon, and are therefore more serviceable for the purpose. It would carry us beyond our province to enter into these details of the experiments, interesting as they are.

MM. Charcot and Richer draw a parallel between this mechanical excitation in hypnotism and localized faradisation. Thus the points in which they are similar are (1) The possibility of localising the excitement to a single muscle or a group of muscles. (2) The possibility of exciting a muscle, either *directly*, by directing the excitement to the fibre itself, or *indirectly*, by directing it to the proper nerve in some parts of its course. On the other hand the differences are (1) The non-similitude of the result obtained; contraction with faradisation, contracture in the case of hyperexcitability. This, however, is only true of the muscles of the limbs, for mechanical excitation of the face in hypnotism causes only contraction—not contracture. (2) While it is easy to localise the electrical excitement to only one part of a large muscle, total contraction of the muscle is induced by mechanical irritation of one part of it. (3) In regard to the propagation of the excitement in the state of hyperexcitability, the movement of a muscle is usually accompanied by the action of those in immediate relation to it, which is not the case in applying the faradaic current. (4) A specially exaggerated tendon reflex is present to commence with in hypnotism, and not in persons awake and in health to whom faradaic excitation is applied.

In the application of mechanical excitation or pressure to the isolated muscles of the face, MM. Charcot and Richer have had the same difficulties to contend with as Duchenne, but like him, they have overcome them. The results are extremely interesting, and reflect great credit upon the experimenters.

The conclusions of Duchenne as to the parts played by the various facial muscles in expression are confirmed by the experiments made during the hypnotic sleep, in a manner that was not expected at the time Duchenne worked.

The effect of opening one eye in certain subjects in the hypnotic

sleep, in producing hemi-catalepsy is known to those acquainted with M. Charcot's service at the Salpêtrière, but it may not be so generally known that this one-sided catalepsy causes all trace of neuro-muscular hyperexcitability to instantly disappear on that side, in spite of our continuing to excite the same motor points on the face. One remarkable fact ought not to be omitted, namely, that in one subject the hyperexcitability held good of the muscles of the ear which are so rarely subject to the will, and were not so in this case. The muscles responded to both direct action upon their fibres, or indirectly by exciting the temporal branch of the facial.

Neuro-muscular excitability is marked in the first degree by a tendency in the tendon reflexes to excite more or less general contraction. Thus the locality of the contraction is established; partial contraction of different muscles may be obtained, and the different processes by which it is produced may be classed according as they appear to be efficacious. It is the excitement of the tendons which first succeeds, then that of the muscles themselves, and lastly that of the nerve-trunks. It is only in the best developed cases that this increased susceptibility can be induced in the face. A case will best exemplify this condition.

C., aged 20, hystero-epileptic, with left hemiplegia and achromatopsia. She had not been hypnotised by Charcot, and seldom by others, while the phenomena of hyperexcitability had never been elicited. When awake the tendon reflexes were exaggerated at the knee, but without extending to the upper limbs. There was elbow tendon reflex, but scarcely any at the wrist.

The patient was quickly sent to sleep by being made to stare at an object. It was then found that the wrist reflex was markedly exaggerated, but no contraction followed at first. By repeating the blows on the tendon, however, the contraction developed. Ten raps on the tendon rendered the joint quite immovable, as if permanently contracted. Friction of the antagonist muscles as easily removed this condition. Kneading the muscles of the forearm, which had failed before to produce contraction, now succeeded completely; awakened by blowing on the face, C. was found to exhibit still more exaggerated wrist reflex. In these experiments, therefore, we witness the three degrees of muscular hyperexcitability which have been described. In a second experiment, made next day, more tendency to contraction was observed, and even more so while awake. The wrist reflex was well marked, especially on the left side. Patella reflex always much exaggerated. A blow repeated on the front of the left wrist immediately caused contraction of the left, but not of the right joint. As when asleep, so when awake, it was dispelled by friction of antagonist muscles. C. was then thrown into the hypnotic sleep, and in the left arm contraction was easily induced by exciting the tendons, by muscular kneading, and irritating the nerves. Pressure on the ulnar nerve at the elbow caused contraction of the hand *en griffe*. In the right arm,

exciting the tendons and muscles, gave similar results, with some modifications.

The *main en griffe* having been produced on the left side, a magnet was placed near the right forearm, with the object of transferring this condition to the right. Ten minutes passed without any transfer. The right arm retained its flexibility, and it was observed that the contraction of the left, instead of disappearing, was still more marked. Thus the right ulnar could not be excited. Hyperexcitability was not developed in the face until several months afterwards. Of the contraction thus produced under hypnotism by touching various muscles at their insertion with a pointed instrument, photographic illustrations are given. The illustrations in this and other examples are of great interest, and the assiduity and ingenuity with which these experiments are carried out at the Salpêtrière under M. Charcot are extraordinary. The aid rendered by photography is enormous.

In the next case a difference between the two sides of the body was also exhibited.

E. P. Hystero-epileptic, totally anæsthetic, ovarian tenderness, &c. Hypnotism succeeded exceptionally well by means of staring at an object. She at once entered into the cataleptic state, which would last indefinitely, and then sleep could only be induced by closing the eyes. The catalepsy ceased the moment she became lethargic. The neuro-muscular hyperexcitability characteristic of the lethargy, presented the following conditions on the day on which the observation was made:—

1. Energetic kneading of the muscles was requisite to produce contraction.
2. It appeared more easily after exciting the tendons. But it is necessary to repeat the blows, and the contraction is observed gradually to increase. Simple pressure on the tendon is useless.
3. Hyperexcitability is more developed on the left than the right arm.
4. When excitation is insufficient, contracture more or less prolonged is only obtained, or rather a contracture, which soon passes away of its own accord.
5. Contraction once induced remains after the patient is awake.

MM. Charcot and Richer state that in the case of one patient whose neuro-muscular susceptibility was easily excited, the particular muscular condition suddenly disappeared, to be replaced by a state of paralysis on one side, which continued when the patient was awake. In a short time, by certain manipulations, the paralysis was removed.

Of the true hypnotic catalepsy and the cataleptiform condition (in hypnotism) the authors of this article speak at some length, and we shall proceed to present a short résumé of their conclusions on these most interesting states.

First with respect to true catalepsy, it may follow the sudden impression of a bright light on the retina, with electric light, or Bourbouze lamp, the unexpected blow on a gong, &c. It may also succeed

to the hypnotic sleep caused by fixing the eyes on any object. It is sufficient, in this case, to raise the eyelids to induce the individual to pass from his lethargy into a state of catalepsy.

The characters of the cataleptic state when thus induced are as follows:—

1. The eyes are open, and there is a fixity of look which is considered one of the most important signs. The physiognomy is at once inexpressive and expressive; the patient appears absorbed. The expression resembles that of the *extase cataleptique* of authors.

2. The winking of the eyes has disappeared. The conjunctiva is red and generally insensitive; the tears sometimes fall on the cheek. The state of the pupil varies.

3. The limbs retain the position in which they are placed. They appear very light when one raises them or changes their position. *Flexibilitas cerea* is not present, but the limbs can be placed in any position with great facility, and remain so for long. Massage or friction of the muscles does not affect them.

4. Neuro-muscular hyperexcitability is not present. Tendon reflexes are completely abolished.

5. Cutaneous anæsthesia is complete. The senses remain partially intact.

6. Suggestion. Influence of gesture upon the physiognomy; psychic phenomena; automatism; hallucinations may be induced.

This cataleptic form of nervous sleep is quite distinct from the induced hysterical lethargy of which, as we have seen, neuro-muscular hyperexcitability, constitutes one of the principal characters. The two forms may follow each other in the same subject or even appear simultaneously in only affecting one half of the body. The hypnotic sleep may not, however, present these typical forms, and cannot always be divided into two distinct periods, but may present a mixed form—a lower phase—in which the two orders of symptoms are present at the same time, and then the cataleptiform as distinguished from the cataleptic state is observed. An illustrative case is given by the authors, and the following summary is added of the symptoms of the cataleptiform condition, in order to differentiate it from true catalepsy.

1. The eyes are generally closed; if they are open the spasm of the eyeballs prevents the patient looking steadily at anything.

2. The aptitude of the limbs to preserve the position imposed upon them presents the following characters:—

(a) Frequently this attitude is unequally developed in different segments of the body.

(b) The limb is heavy to lift, and there is present in the joints a certain amount of *flexibilitas cerea*.

(c) In order to retain the limb in the position in which it is placed, it is necessary to retain it there a few seconds.

(d) In the majority of cases the limb soon falls down by itself.

(e) Lastly, friction and massage of the muscles always induce the resolution of the limb which falls powerless.

3. Neuro-muscular hyperexcitability is present to a certain extent. The tendon reflexes are exalted.

4. Whether the eyes are open or shut the muscular state remains the same, always presenting this double character of hyperexcitability and the cataleptiform state.

MM. Charcot and Richer, in explaining the relation between these two last mentioned conditions, observe that the limb which appears to be cataleptic is in reality only contracted, or more correctly contracted, the contraction is developed under the influence of the manipulations of the experimenter who desires to produce it. In attempting to modify the position of the limb rigidity, which is a certain indication of contraction, is produced. This contraction yields to the influence of kneading the muscles of the limb.

The following case brings out in relief the points of difference between the cataleptiform condition, and true hypnotic catalepsy, and the relation between the former and the phenomena of neuro-muscular hyperexcitability.

C. is easily sent to sleep by pressure over the eyeballs and the temples. This state is characterised by the exaggeration of the tendon reflexes and by the tendency of the muscles to contract under the influence of the mechanical excitation of either the tendons, the nerves or the muscles.

Neuro-muscular hyperexcitability is not general with C. It is not present in the face (but this was subsequently induced). It was attempted to produce the cataleptic condition by opening the eyes. The eyelids were easily raised, but the eyeballs were spasmodically fixed upwards, and to the right. The cataleptic condition thus observed was imperfect, the limbs remaining in the position in which they were placed, but frictions on the surface of the limb restored them to their former condition; neuro-muscular hyperexcitability is preserved, and the tendon reflexes remain. There is here the cataleptiform condition. In forcibly opening the eyelids the balls are fixed in a downward direction from the time the catalepsy is perfect. The limbs are supple, easily moved; the attitudes imposed are no longer modified by the friction of the limb; there are no longer tendon reflexes nor neuro-muscular hyperexcitability.

In the course of the same séance the authors made an experiment calculated to throw light on the relations between the cataleptiform condition and the hyperexcitability referred to, namely, by inducing upon a segment of a limb the cataleptiform condition during the phase of lethargy. For this purpose it is sufficient to gently knead the surface of this portion of the limb to obtain in place of a localized contraction a sort of general stiffness which allows this part of the limb to preserve any position in which it is placed. It is then that on attempting to vary the positions of the limb the true *flexibilitas* is observed, or rather the rigidity of the lay-figures of painters.

It seems, then, that this form of the cataleptic state is chiefly due to a slight degree of neuro-muscular hyperexcitability, developed by

manipulations ; for it suffices to employ frictions upon the limb to remove all rigidity, and at the same time all appearance of catalepsy (No. 9, p. 318).

The seventh number of Vol. iii, contains an interesting paper by Dr. H. Blaise on pachydermic cachexy, *i.e.*, myxœdema, and records a case of myxœdema with mental alienation. He first, however, passes in review the observations of Sir Wm. Gull (on a Cretinoid State Supervening in Adult Life in Women, "Clin. Soc. of Lond.," Vol. vii). Dr. Ord, in 1877 (on Myxœdema, "Medico. Chir. Trans.," Vol. lxi, and "Brit. Med. Jour.," May, 1878), M. Olive in 1879 (Sur le Myxœdème, "Arch. Gén. de Med." i, p. 677), Dr. Savage (in this Journal. Jan., 1880), Dr. Goodhart, in 1880 (Cretinism Sporadic and Myxœdema, "Med. T. and G." May 1, 1880), Dr. Hadden, in 1880 (on Myxœdème, "Progrès Medical," Nos. 30 and 31, 1880), MM. Ballet, and Thaon. Bourneville and d'Olier published a case of Myxœdema with Cretinism and Idiocy ("Progrès Med. 20 août, 1880), in a youth of 19. Dr. Inglis contributed two cases of Myxœdema in the "Lancet," Vol. ii, 1880, and Dr. Dyce Duckworth two more in the same Journal, Vol. ii, 1880. Hammond published a case in the "Neurological Contributions," Vol. 1st, 1881. Lastly, Charcot gave a clinical lecture on Myxœdema, which appeared in the "Gazette Médicale of Paris," No. 51, 1880.

The case detailed by M. Blaise, and which occurred in the service of Professor Grasset, Montpellier, in 1880, was that of a woman aged 34. She had always been very stout since menstruation at 11, and about 21 the affection commenced. Her character, which was boisterous up to 12, changed and became gentle. She led an active life up to her majority. Her intelligence appeared lively and her speech was exceedingly rapid. Up to 27 she presented the same appearance. Then different parts of her body, or rather the integuments progressively increased in size, while she experienced strange sensations, pins and needles, cold, heat, &c. She had frequent headaches, and pain in the malar bones. Her character altered, she became restless ; the speech slow, thick, and with a peculiar *timbre*. This vocal change was associated with a certain slowness in the ideas, and rapid intellectual fatigue. First the taste, and soon after the smell and hearing became affected. She entered the Montpellier Asylum January, 1878. At first her judgment rectified the errors of sense, but by degrees she began to believe in her illusions and hallucinations, and she addressed people in the street whom she fancied insulted her. At last she fancied she wore a mask, and that her head was transformed into the head of a dog. Ideas of persecution supervened. The cutaneous swelling also progressed to a frightful extent. It became difficult to close the mouth, and the voice was strongly nasal. The swelling, however, at last receded, and simultaneously the mental condition improved, her hallucinations and delusions vanished, and she was discharged in October, 1880. She had been treated with iron, quinine, iodide of potassium and sulphur baths.

M. Blaise thinks this case supports Dr. Ord's view of the nature of

the malady. It shows a complete subordination of the nervous disorder to the cutaneous affection. The former develop in proportion to the myxœdema. Subsequently the two progressively improve. As to the nosology of myxœdema, Professor Grasset thinks that it should be placed side by side with the sclerodermata, or rather the œdematous sclerodermata. "In them, as in myxœdema, the chief lesion is in the subcutaneous conjunctive tissue; it only differs in the nature of the œdema. In both the skin presents changes; hardness, desquamation at various places, peculiar colour, anæsthesia, fall of temperature, diminution of the sebaceous and sudoriferous secretions. Lastly, in scleroderm there has been observed, as in myxœdema, hallucinations and mental disturbance, advancing to actual insanity." (No. 8, p. 158).

Two curious papers on witchcraft under the title of "Le Sabbat," are contributed in the seventh and eighth numbers by Bourneville and Teinturier, and illustrated by a number of woodcuts representing the flights of witches and the metamorphoses of the Evil One. These papers are written in mediæval French, but no explanation is given of their date or authorship. We are left to conclude that the above authors have betaken themselves to writing old French, until the origin of these documents is explained.

L'Encéphale.—Professor Ball contributed to No. 1, 1881, of the above journal a paper on a very important condition of mental disorder, one which is by no means rare, and yet one in respect to which we employ no uniform term. "Impulsions intellectuels" express this morbid mental state in French, and the Germans might comprise it under the expressive term "zwangsvorstellungen." But we are not accustomed to speak of intellectual impulses or irresistible thoughts, and we rarely talk of imperative ideas. Were we to say involuntary thoughts, it might be urged that our thoughts usually are so. What is the difference between involuntary thoughts about doing something pleasant and good, and something disagreeable and bad—*quoad* their involuntariness? None whatever. Their morbidness is determined by their character and irresistibility, not their spontaneity. Irresistible morbid thoughts, or if they take the form of prompting, irresistible morbid suggestions appear best to convey the nature of the disorder. A man at church is disturbed by blasphemous expressions and thoughts arising in his mind wholly against his customary habit of thought, and greatly to his amazement and horror. They are at once morbid and irresistible. The next day they may in the same person take the form of suggestions to murder his children. Had the form they assumed been that of conferring some good on his children, they would have been customary and normal, even if involuntary, so long as not irresistible. But their character determines them to be the result of disease. They are morbid suggestions, and may become rapidly irresistible. They may assume a more or less imperative character. We prefer the term irresistible thoughts or suggestions to Professor Ball's intellectual impulses. Whatever term we employ, however, the

fact remains indisputable that men may labour, not under delusions, but irresistible thoughts, suggestions, and words, from which they recoil with disgust or abhorrence, and of the unnatural character of which they are only too conscious, although they are in the habit of attributing them to an evil power instead of a disordered brain. In fact, obsession might, rightly understood, be a synonym. Some cases which are classed under moral insanity are of this description, and it would, in truth, be no easy matter to distinguish in certain instances between intellectual impulses, or as Professor Ball also calls them, "impulsions morbides," and irresistible impulses, and he points out that they may manifest themselves by acts. What are called irresistible impulses are not, however, what the Professor has in view in this paper. They constitute a very painful form of mental disorder, as every alienist will admit. In his experience such cases have not improved, but the morbid thoughts have become more and more tyrannical, while, on the other hand, the patients have not passed into dementia nor indeed into other forms of insanity, and they have retained a consciousness of their abnormal intellectual condition.

Professor Ball, among other articles contributed to this journal, has one on "cerebral torpor." The cases which are recorded exhibit a general suspension of the intellectual powers, especially the memory, attention, and interest in former pursuits, and the conclusions are thus summarised by the author.

1. As a consequence of very different causes, there may be developed, in certain persons, a peculiar state of torpidity of thought, to which we propose to give the name of *cerebral torper*.

2. The evolution of this morbid condition is essentially slow, and may extend over several months or even years.

3. Cerebral torper differs absolutely from hypomania by the absence of delusions and hallucinations, by the rectitude of the judgment and the preservation of physical health.

4. It differs from reasoning hypomania by the slowness and difficulty of the intellectual operations and vacuity of mind.

5. It differs essentially from an analogous state which often marks the onset of general paralysis and certain grave forms of insanity, and presents an almost always unfavourable prognosis.

In short, in the great majority of cases, cerebral torper is cured after a certain time, although the Professor adds that the intellectual range of the patient is frequently in favour to what it was before the attack.

Under the title of "La pathologie dans l'histoire," M. Jules Soury has prepared several articles of interest, having reference to the fames of Augustus, to Martin Luther, &c. They contain much valuable matter. (*Vide* Vol. 1, Nos. 3 and 4).

We would, in reference to the comments by Professor Ball on the case of Lefroy, venture to hope that the article in the "Journal of Mental Science" upon this assassin, which appeared a month later than the number of "L'Encéphale" we refer to, may be considered as

a reply. It is notorious that, in this case, the plea of insanity was regarded by the defence as so weak before and at the time of the trial after obtaining medical opinions, that it was not ventured upon. The prisoner would have been only too glad to escape on this plea, had not he and his counsel been aware that it was untenable. In the case of Lamson, also, to which Professor Ball refers, and regrets that he had not been consigned to an asylum, we have reason to know that the Home Secretary was assisted by a mental expert in carefully examining the mass of papers that were sent in to him with a view of proving the convict's insanity. It is satisfactory to be able to add that the wretched man, unaware of the efforts made on his behalf, made a full confession of his heinous crime, and admitted the justice of his fate. We were lately in a city where we learnt that the sheriff had received a letter from Marwood during the assizes offering his services in the event of an execution being required, adding as a recommendation that he had hitherto been successful in giving satisfaction "to all parties." We certainly thought this open to question as regards one of the individuals concerned. In the case of the miserable Lamson, however, it may have been correct, and as he himself, as well as law and medicine, considered that he was most justly punished for his cowardly and atrocious crime, we do not think that any hesitation need be experienced or regret entertained as to the punishment he suffered.

M. Luys has an article "On the danger of premature discharges of suicidal patients" (No. 4). When this is likely to occur from the action of friends anxious to liberate the patient, M. Luys recommends a commission of competent physicians be empowered to decide whether a discharge is safe.

The writer, after enumerating several painful examples, concludes with observing :—

"Each of us, in proportion as inquiries are directed to the point, will be able to swell the list of suicides which I now commence, and add a new name to this long martyrology of unhappy suicidal patients who have been left too soon to themselves, and who, for want of care and practical knowledge, have been doomed to a fate from which they might have been saved."

He then maintains than an asylum conducted on modern principles is the right place for suicidal lunatics in order to protect them from themselves. M. Luys ought to have given us the number of suicides committed in asylums in France. We suppose that as in England they sometimes occur even in "les asiles modernes."

"Insanity in certain determined cases, may be regarded as a cause for divorce." Such is the proposition supported by M. Luys in the discourse delivered before the Academy of Medicine in Paris, and published in the second volume of "L'Encéphale," No. 2. It is a rejoinder to an address delivered before the same assembly by M. Blanche.

In replying to M. Blanche's principal argument against divorce, namely, that a supposed incurable patient occasionally recovers, M.

Luys gives an alarming catalogue of the changes the brain of a chronic lunatic undergoes, and adds, "It is thus dementia arrives by degrees in consequence of chronic lesions, and one is thus obliged to conclude that a human brain, at least in our age, and in the midst of Parisian life, is incapable of resisting more than for four or five years the destruction effected in its tissue by the various disorders of the circulation which interfere with its regular nutrition." After speaking of the certain course of general paralysis, M. Luys proceeds to observe that other forms, hallucinations, lypemania, mania, and hysteria, once the disease has taken possession of the land, upset everything, and dig their fatal furrows. In spite of resistance, the enemy is not dislodged, and the result is always the wearing out of the brain, and incurable dementia. If any lunatic has been four or five years under observation, a physician may always, in the opinion of M. Luys, decide upon the future course of his malady, whether incurable or not, so as the law could determine the question of divorce. To the picture drawn by M. Blanche of the pitiable condition of a recovered lunatic returning, like Enoch Arden, to his home, to find it no longer his, but another's, M. Luys replies that this is a sentimental argument, and would be very touching if true. "This is evidently a creation (on the part of M. Blanche) for the purpose of acting on the feelings, but one which in practical life cannot be realized." He then endeavours to draw another picture, that of the family which is hopelessly tied to a lunatic. "In the name of indissolubility of the conjugal tie, in the name of a false medical opinion as to the period at which dementia occurs in insanity, you condemn a healthy person, in the prime of life, to be bound to a decayed being, who has lost the noblest part of himself, to, in short, a true living death."

When a case has lasted a year or two, it seems long to the sane husband, who begins to ask the doctor when the situation will end, and the work of destruction be accomplished. It is "the psychological moment" when he begins to consider his needs. If he is young and well, and has the courage to recommence life, he does so when occasion offers. It is thus a new family arises by the natural course of human passions. It may be illegal, but it is "fatale et necessaire." M. Luys admits there are instances in which, indeed, to the very last the husband has cared for his insane wife with a solicitude "digne de tous les éloges." Well, we say, is it not the duty of the physician and moralist to support a line of conduct which is worthy of all praise, rather than favour the course of human passion, which, with such examples before us, is shown to be the reverse of fatally necessary?

M. Luys proceeds to propose the formation of a commission of arbitration composed of three alienists attached to asylums, who should examine the lunatic in question once a month for a year, and decide upon his or her incurability. If decided in the affirmative, divorce should be permitted, full guarantees being obtained as to the maintenance of the patient.

Our distinguished *confrère* argues ably in favour of his proposition, but we confess we think M. Blanche has the best of the argument. One very important point against divorce is that, however satisfactorily the financial matter may be settled, the patient would no longer leave husband or wife as the case might be, to look after his or her proper care and comfort. This is or ought to be the life-long duty of the consort who remains sane; a painful and self-denying one, no doubt, but still a solicitude "digne de tous les éloges."

2. *German Retrospect.*

By W. W. IRELAND, M.D.

(*Analysis of Goltz's Work,* continued from p. 290.*)

When the spinal cord of a dog is cut through, the hind legs, bladder, rectum, and erectile power seems to be quite paralysed, and on tickling the skin of the paralyzed posterior extremity of the dog's body, no reaction follows. This led to the conclusion that the centres for the motions of the bladder, rectum, &c., were situated in the brain. In reality these centres had their seat in the dorsal portion of the spinal cord. Owing to the section of that organ the functions of the parts below were suspended; but after some weeks the inhibited functions again returned. One must, therefore, be very careful in distinguishing the phenomena of inhibition from the residual effects of a vivisection. If one, he observes, pinches the left hind foot of a dog which has just suffered the loss of a portion of the right hemisphere, the animal shows no sign of pain; but neither does he show any trace of other reflex action. If one makes the same experiment with an animal whose spinal cord has been cut through several months before, he draws back the pinched paw very promptly. The centre for this reflex action lies in the dorsal part of the cord. But why does this reflex fail with the dog which has the spinal cord uninjured, but a fresh wound in the brain? Clearly because the reflex centre on the right side of the cord has suffered inhibition from the fresh wound given to the left hemisphere of the brain.

Goltz believes that any part of the nervous system may suffer inhibition after a lesion of the cerebrum. He does not make it so clear what are the parts which actually do suffer in the cases in point. He, however, mentions that in the first place after a wound, the remainder of the brain is in danger of being inhibited more or less. The cerebellum and cerebral ganglia are also in danger of having their activity suspended. It is likely that Dr. Goltz's adversaries may

* "Ueber die Verrichtungen des Grosshirns." Bonn, 1881.