ature. Here in fact we have a French author, who not only does not believe that it is an Englishman's custom, when tired of his wife, to put a halter round her neck, and lead her into the market-place to sell her, but who, in a book of 180 pages, quotes such English writers as Carlyle, Dryden, Shakspeare, Robert Hall, and Moore, with others, whom to know, argues much love of dusty shelves, and musty manuscripts. Happily amongst writers in France, ignorance seems to be the privilege of writers in newspapers; and so it happens that an interesting and instructive French book is rendered more gratifying and more complete by the intimate acquaintance which its author exhibits with English literature, current and past.

HENRY MAUDSLEY.

On General Paralysis. By HARRINGTON TUKE, M.D.

(Continued from page 205).

Among the symptoms of apoplexy, says one of the most distinguished of our recent writers on medicine, that are more especially of evil omen, are those which can be traced to the involvement of the automatic functions of the cerebro-spinal axis; nineteen out of twenty patients will die, in whom the phenomena appear which indicate derangement of this portion of the nervous system. I fear that in cases of the special disease we are now considering, the loss of power over the "sphincters" is almost of equally fatal import, but still it very naturally differs from the same symptom in ordinary apoplexy, inasmuch, as it may exist for many months, before the fatal issue of the complaint. Apparent want of power over the sphincters may arise in general paralysis from various other causes besides absolute lesion of the cerebro-spinal axis, such as the presence of delusions, or the supervention of sudden spasm in the patient, and still more frequently from a want of attention on the part of the attendants, and these last are of course essentially distinct in their nature, and require a special treatment; but even in cases in which the loss of power has been sudden, even those in which paraplegia has appeared, and the patient, comatose and insensible, seems on the point of death, if they have before been suffering from

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general paralysis, they may, and often do rally; in fact, the prognosis is less gloomy when there has been long-continued disease of the brain of this kind, than in patients in whom the symptoms have supervened upon perfect health.

The question arises, how is it that a symptom of such grave import, indicating in cases of ordinary apoplexy, the absolute tearing or "ploughing up" of the substance of the brain, should occur in general paralysis without an immediately fatal consecutive result, and even sometimes entirely disappear? The answer involves a theory, but it is still a very simple one, and is at least susceptible of verification; it is because a much less amount of mischief, in the already morbidly affected brain of a general paralytic will produce these serious symptoms, than is necessary in the heretofore healthy nervous centres of the suddenly apoplectic. I have seen a very small meningeal clot, produce paraplegia, and palsy of the sphincters in cases of general paralysis, because being an addition to already extensive morbid changes, it acted with as much force as a ruptured vessel in a previously healthy brain, producing the same effect as would follow the breaking down the substance of the corpus striatum, or the effusion of a large quantity of blood at the base of the cranium. The practical fact to be deduced is, that the supervention of these acute symptoms is less dangerous in general paralysis than in apoplexy.

The consideration of the various forms of real or apparent paralysis of the sphincters belongs to another part of my subject, as bearing rather on treatment than prognosis, but it may be said here, that it must not be imagined that in general paralysis, in its early stage, there is always relaxation of the sphincters; on the contrary, there is sometimes retention of urine with severe spasm; and there is in some patients often a difficulty of passing catheters, from the exaggerated reflex action of the uretinal muscles which is increased by the attempt to introduce an instrument. Cases also must be carefully distinguished in which only the voluntary power over the bladder is lost, the reflex function continuing in its integrity.

The derangement of the excito-motory function which the paralysis of the sphincters indicates may then be present for a long time in cases of general paralysis, yet slowly and surely comes on at last the inevitable termination of the disease, and the remaining groups of involuntary muscles—those essential to existence—are in turn attacked.

I have already alluded to the singular effect produced upon the action of the heart, in some cases even in an early stage;

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as the disease progresses the powers of deglutition, digestion, and respiration are affected, coma sets in, and lastly the failure in the action of the orbicularis of the eye-lid, one of the most delicate tests of the continuance of the power in the cranio-spinal system, proves organic life to be at an end.

It might, perhaps, be difficult to prove that the constipation accompanying many cases of general paralysis depends upon the diminution of power in the muscular coat of the stomach and intestines, although no physician accustomed to watch these cases would, I think, dispute it, or doubt that the diminished peristaltic action fully explains the symptom. It may, perhaps, be only theory which ascribes the embarassed respiration to the origin of the pneumogastric nerve becoming involved in the progress of the malady, but there can be no doubt whatever that the derangement of the function of deglutition, invariably more or less present, is clearly to be traced to the absence of normal reflex action in the muscles of the pharynx. From this cause arises great difficulty in feeding those patients who have lived to the last stage of general paralysis, a difficulty hardly to be appreciated by those who have not had practical experience of it. A still more striking evidence is the frequent occurrence of even fatal accidents to the paralytic, from the inability of the pharynx to carry down the morsel introduced into the mouth.

I would not only advert to the peculiar catch in the breathing which, in the last stage of these cases, precedes death, as indicating the still more extended implication of the origin of the pnemogastric nerve, but I would point to a symptom, which is very remarkable in general paralysis, is almost universal, and, as far as I know, has not been explained, I allude to the singular deposition of adipose tissue which usually occurs in the second stage of the malady; the patients become visibly stouter, and are therefore thought by their friends to be improving. In some cases this may arise, or be aided by the enforced inaction which the progressive paralysis of the lower extremities must entail; but this would not be a sufficient explanation in those cases in which increase of weight precedes incapacity for locomotion. I believe it to be the first symptom of a diminution of the respiratory function; the automatic movements of the respiratory muscles become slower, the functions of the lungs are no longer duly performed, and much of the starch, oil, and other non-azotized compounds are deposited as fat in the tissues, instead of being excreted through the air-cells in the form of carbonic acid and water. The disease, as I have said, commonly attacks the

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most robust and powerful frames, men whose organs are healthy and digestion vigorous, the supply of aliment is therefore kept up, hence it is that almost mechanically an accumulation of fat takes place, from the failure of power in this important portion of the secretory apparatus of the body; the rapid émaciation which sometimes, although very rarely, takes place depending upon the existence of a tendency in the kidneys or other organs to take upon themselves compensatory functions of excretion.

The derangement in the functions of the skin in this disease must also assist in accumulating the components of adipose tissue in the body; excretion from the surface is almost at an end, it becomes dry and hard, a thick scurf forms frequently upon it, and the use of frequent baths and flesh-brushes, or coarse towels, becomes more essential to the preservation of cleanliness in these cases than in almost any other.

The paralysis of the reflex function of the nerves has been the subject of interesting experimental researches by Dr. Bucknill. I have, myself, nothing to add to his remarks upon the subject, which appear conclusive, and have been corroborated at his request by other observers; among them, by Dr. Manley, Dr. Boyd, Mr. Tyerman, and Mr. Ley. However, the talented and esteemed physician of the Morningside Asylum, Dr. Skae, at the Meeting of the Association of Medical Officers of Asylums for the Insane, held at Edinburgh, in 1858, controverted with considerable ability, in the discussion which followed my reading a paper on general paralysis, the views Dr. Bucknill entertains, and which he has published in the *Manual of Psychological Medicine*, upon this peculiar paralysis of the reflex function. Dr. Skae's remarks and Dr. Bucknill's reply will be found in the fifth volume of the *Journal of Mental Science*, to which I would refer those interested in the question. I agree entirely with Dr. Bucknill; but it appeared to me at the time, and the after perusal of Dr. Skae's observations did not alter my opinion, that the difference in the views held by these physicians is easily explicable: the brain being the seat of the disease, the reflex function is more or less universally affected, but in experiments as to the state of the reflex functions in the muscles of the lower extremity, those most remote from the diseased centre, very different results may be induced by the more or less dynamic condition of the spinal cord, in different cases, and the greater or less power of contractility in the muscular fibre in individuals. Reflex action cannot be entirely destroyed while life remains, yet nothing but the serious im-

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pairment of its powers can account for the effects upon the muscles of deglutition and of respiration, together with the loss of the excito-motory power of the sphincters which I have described, and the existence of which no observer can deny. The grey matter of the brain is certainly affected, in all patients attacked with general paralysis; the reflex function of the same grey matter in the cord will vary in different cases, since it does not necessarily follow, that the ganglionic system should be universally and equally affected, either directly or sympathetically. Dr. Skae's experience and judgment must, however, give great weight to his opinion, and his views upon general paralysis, shared as they are by many of the French physicians, must again be referred to and examined with respect.

There are several symptoms in general paralysis indicating derangement in the physical system, more or less, associated with the same want of nervous power that produces the paralysis, but still very distinct from it; and it will be well to advert to the most prominent among them before entering upon the description of the mental affection. The first of these is the sense of fatigue so often complained of; the muscles are tired simply by the weight of the body, this is shewn by a characteristic stoop, and by the desire of the patient to be allowed to go to bed. A patient suffering from general paralysis, at least this is my experience in private practice, will seldom sit up late; whatever his former habits may have been he will retire to rest, if allowed, at an absurdly early hour, probably finding relief from the horizontal position; it by no means follows that he will sleep; on the contrary, patients suffering under even the first stage of the malady, are very wakeful, and often talk and mutter to themselves the whole night long; there is excitement of the brain conjoined with muscular prostration. In ordinary mania there is usually increase of muscular power, but this is not so in general paralysis, at least the rule is as I have stated it. There is sometimes a restless irritability; the patient will spend the whole day arranging and re-arranging papers, or turning over the leaves of a book, or taking off and putting on his clothes, but a quiet inaction is the ordinary characteristic, or if action there be, it is not one involving much exertion. The usual and persistent voracity of the appetite for food is another indication of the exhaustion of nervous power that signalizes this terrible malady.

In all the cases, but one, I have ever seen there was an entire absence of sexual desire, and I have on several oc-

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casions ascertained that there had been this symptom before the disease had made much progress. Guislain, however, states that he has met with cases of an opposite description. The former being the more usual experience has probably led to the erroneous idea that general paralysis was necessarily attendant upon, or frequently accompanied, sexual excess.

The temperature in this disease, as in ordinary paralysis, of course falls, the sensations are blunted, and pain is little complained of. I have made no experiments myself upon the state of the skin as to the function of sensation; in private practice such experiments are not easily carried out. But an able article by M. Auzouy in the *Annales Médico Psychologiques*, gives the details of several ingeniously devised and carefully conducted experiments to elucidate this question through the agency of electricity, and the result he arrives at is doubtless correct; that the want of sensibility of the skin in all cases of insanity, is in definite proportion to the amount of diminution in the mental energy, and he finds, as might have been expected, a more decided want of sensibility in cases of dementia than in other forms of mental disease. M. de Croizart has called special attention to the failure of cutaneous sensibility existing in a marked degree at an early stage of general paralysis, and affording, therefore, a means of diagnosis. M. Baillarger, who quotes this opinion, does not appear to lay so much stress upon its value as its author; he, however, says that he has found the sensibility of the skin diminished in the greater number of cases he has seen, and this principally in the upper extremities, and comes to the conclusion that it may be an early symptom, but is more generally an indication of an advanced stage of the disease. The low state of vitality in the cutaneous surfaces in the progress of general paralysis, of which diminished sensibility is only an initial symptom, is shown by the tendency to sloughing of the skin and cellular tissue that is so frequent, and that is certain to lead to the formation of large and dangerous sores, without the exercise of incessant watchfulness on the part of the medical attendant. The danger of bed-sores in these cases is now understood, and prophylactic measures adopted, still the very slightest amount of continued pressure will occasion them. In cases of dementia, particularly in the dementia consecutive on general paralysis, I have even seen the bones of the pelvis exposed by large sloughs upon the nates, and in the old hospitals these terrible cases were not uncommon. The patients do not appear to suffer much pain, and a large sore

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may exist without producing fever or indication of feeling. This is doubtless from the diminution of sensibility already referred to, but it is important to remember this as pointing to the necessity for a daily examination of the points exposed to pressure in patients confined to bed in any stage of the general paralysis of the insane. Head-ache is a symptom mentioned by one French writer, which I have not noticed in general paralysis. Infiltration of the eyelids, and even of the ears with blood or serum, is not unfrequently seen, but these symptoms appear to be the natural accompaniments of congestion of the vessels of the brain, and need hardly be examined as being special or distinctive.

In the foregoing description of the physical derangement, marking the course of general paralysis, I have not intended to convey the impression that I consider any of the symptoms I have detailed, taken alone, to be necessarily evidences of disease of the nervous centres so extensive as to render it impossible that the mental functions could be properly performed. It may be that they may coexist with a perfect integrity of the reasoning faculty, and some remarkable cases on record would appear to give strength to this supposition, but I confess I think it unlikely, and am rather inclined to believe that those cases in which insanity is said to have supervened upon a paralysis, marked by such a series of symptoms as I have described, are only those in which the presence of mental disease has not been detected, either from a deficiency of experience in the observer, or from want of sufficient opportunity for investigating the particular case. I have myself seen instances of progressive and entire paralysis in which the mental powers were unimpaired; but the purely spinal origin of the symptoms, was clearly shown, the lower limbs were first affected; the speech was not impaired till towards the close of life, there were no convulsions, the limbs were wasted, and did not as in general paralysis present a fictitious appearance of health. In such a case the medulla oblongata becoming at last involved the brain may suffer secondarily, coma and even delirium may set in, but the patient is not a lunatic, and although he may be said to be generally paralytic, he does not suffer under the same disease as that which Calmeil and the French School of Medicine have taught us to recognize under the name of *paralysie génèrale*.

It has been said that there may be *impairment* of the mental powers, without delusion, associated with general paralysis, such as I have described, which I will call for the

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moment, paralysis affecting the brain proper, as contradistinguished from spinal paralysis. Now this assertion appears to me to turn upon the question of the *degree* of insanity that may exist, and to divert the discussion from the true issue, which is whether the patient, has or has not exhibited symptoms of unsoundness of mind; is or is not insane?

It will be at once seen of what momentous importance it may become that the acts of a patient labouring under the physical symptoms of general paralysis, should not be judged by the same standard as is applied to healthy brains, and moreover that the exact date should be fixed at which the impairment of intellect commenced, when undoubted delusion has first appeared, or dementia clearly shewn itself. I think the presumption should be in all these cases, that mental alienation had long existed, the former history of the patient should be studied, eccentricities of conduct, even acts of crime should be impartially examined, and if irreconcilable with the previous bearing and character of the patient, they should not be too hastily condemned as the acts of a responsible agent. It may be our own fault that we cannot discover the malady that, nevertheless, has throughout existed, and rendered the unhappy sufferer entitled to our utmost consideration and pity. It can be easily understood that general paralysis may supervene upon chronic insanity; or that paralysis of every limb, of every muscle, voluntary and involuntary, may be present without intellectual lesion, may be conceded: but it is obvious that such a state of things can but admit of negative proof, the supporters of such a doctrine can only say it is so, because they could not or have not discovered any symptom of lunacy; the question is practically important, for to allow it to be possible that delusions or dementia are likely to, or do accidentally supervene on cases presenting the physical symptoms of centric general paralysis, appears to me to be most unphilosophical, and a distinction drawn between impairment of mental power and insanity as evidenced by delusion, not founded upon logical premises. I would strengthen this view, which involves a point of such interest, by a familiar example; a child, unable himself to describe his symptoms, is brought to a physician in the spring, his parents state simply that he has severe cough; in the summer an attack of hæmoptysis seriously weakens him, and in the following winter he dies of undoubted phthisis; the lungs are found to be studded with tubercles, a cavity with a small ruptured vessel upon one of its walls

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accounts for the loss of blood; it could surely not be fairly maintained that tubercle, hæmoptysis, and death had supervened upon cough, because cough is often presented without producing these results; the physician on the contrary would infer, that the parents had overlooked the rapid emaciation, the night-sweats, the general weakness of their child, that probably had been present, and conclude, that even in the spring, the existence of tubercle was certain, although they had not suspected its existence, enquired for its further symptoms, or recognised the cough as its warning signal.

It may be truly said that such a case is hardly possible, it would be unpardonable in an educated practitioner to overlook so serious a disorder in the lungs as the one supposed; his enquiries would be at once directed to the symptoms that usher in pulmonary pthisis; and his experience would tell him what symptoms to enquire for, and what deduction he ought to draw from their presence or otherwise. It ought to be equally impossible that a practitioner called in to, or accidentally meeting, a patient presenting the early symptoms of paralytic insanity, should not at once suspect, even if he fail to detect the presence of mental affection, and be able to refer the change in the morale of his patient to its proper source; but, unfortunately, for the reasons already stated, the general physician has not studied, or has no knowledge of such cases; the early mental symptoms are therefore overlooked, and the nature of the patient's disease is only suspected when it is too late to arrest its course, or when some act, more or less insane, has damaged his fortune, and brought misery and ruin upon his family.

But strong as my own conviction is of the special nature of 'general paralysis,' and of the fact that it cannot co-exist with healthy action of the intellect, I can hardly venture to dispute the occurrence of some anomalous cases of the disease, in which the intellect has remained clear in spite of the presence of such physical symptoms as I have described, since it is attested by so capable an observer as Dr. Skae. In the French medical schools, M. Pinel and others also strongly assert the same fact, and even make two classes of the affection, one simple, the other complicated; the first existing without mental disturbance of any kind, and being in fact the general paralysis described by our medical writers, the definition of which I have already quoted from Dr. Copland. Admitting then this as being possible, it must still remain as only negatively proved, and

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the disease certainly must be very uncommon Another question of practical importance is, whether the mental symptoms ever supervene upon the paralysis, as the paralytic symptoms certainly do upon the mental disorder? The great names of Esquirol and Calmeil are quoted in support of the hypothesis that the paralytic symptoms precede in some instances the mental ones, and the question is worth examining, premising only that neither of these two authors speak of general paralysis as existing at all, except as a complication of insanity. Esquirol, speaking of the malady, says, "*elle eclate tantôt avec les premieres symptômes du délire, tantôt elle précéde le délire, tantôt elle vient en quelque sorte se joindre à lui,*" this taken alone would appear conclusive, to those who reverence, as I myself do, the accuracy of Esquirol's descriptions; but it would appear to me that Esquirol does not intend to assert, that the mind is sound after the paralysis has appeared; it becomes with him a question of degree, and he would probably be found to agree in Dr. Skae's distinction between absolute delusion and an impairment of mental power. Monomania or violence may not indeed appear for some time after the development of paralytic symptoms, but Esquirol may be taken to admit some amount of mental affection being present at the commencement, as he goes on to say, that the disease "progresses in a way peculiar to itself, always increasing in intensity as it proceeds, while at the same time the understanding becomes weaker." And this *pari passu* advance would seem to be the meaning Esquirol intends to convey, as he afterwards uses the word paralysis generically to express mental and physical affection together, in the sentence *cette paralysie quelque soit le caractère du délire fait passer promptement à la démence chronique.*

Calmeil leaves us equally uncertain as to his opinion, although if his words are not examined carefully, they may be mistaken, and indeed have been, as decisively in favour of the opposite opinion to my own, and to that generally taught, it becomes important, therefore, to examine his words carefully. In page 337 of his work, *On the General Paralysis of the Insane*, Calmeil observes, "during a long time I was under the impression that the paralytic symptoms never preceded the insanity; in five or six cases, the relatives of the patients have told me that they had noticed the staggering gait of the sufferers, long before the symptoms of madness had appeared, but on cross examination, it always appeared that they used the word madness in the sense only of violence

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or fury. *It is now certain, however, that the brain lesion which occasions general paralysis, may exist before the mind is affected.—See Case XVI.*" This would appear conclusive, but the very case quoted, p. 61 *ibid*, exactly resembles the five or six cases already mentioned, for the existence of the paralysis for four months, without the appearance of mental alienation, rests only upon the fact, that Calmeil was assured that this was the case by the relatives of the patient. Calmeil did not speak from his own experience, and the next sentences show that he had only adopted the opinions of Esquirol.

The opinion of Guislain upon this subject, is strongly expressed, but, in my judgment, is invalidated by the want of precision in his account of the intellectual state, thus leaving it as Dr. Skae has done, a question of degree. Guislain says: "Since reading the recent publications upon general paralysis, I have had recalled to my recollection several cases which might really be classed among instances of this malady, existing without mental alienation. One such case was that of a young lady who died of general paralysis, but in whom during the whole course of the disease, there was no confusion of ideas, *seulement il y avait, chez elle une espèce de fatigue de l'esprit, une inaptitude aux travaux intellectuels.*" Guislain goes on to state that in his own private practice he has seen cases of progressive paralysis of the muscular system, without any sypmtoms of lunacy; but I have already alluded to these cases, and pointed out the difference between them and paralytic insanity, the one presenting spinal, the other mental symptoms.

The question in dispute is one of great practical importance, it may happen that a patient who has long presented symptoms of paralysis may commit some crime; undoubted lunacy of the particular kind Calmeil has described may supervene, while his trial is still proceeding; who among us will take upon himself to say, such a man is a responsible agent. There is only mental weakness, or fatigue of the understanding, but an unsoundness of mind only consists in the presence of absolute delusion or delirium.

The manifestations of insanity, which in my opinion invariably precede, or are synchronous in their approach with the morbid physical phenomena of special general paralysis, present also a marked analogy with them in their rise, advance, and progress, and may, in their description, be regarded also as presenting three stages; but these divisions of

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the mental symptoms are by no means so easily demonstrable, or so clearly defined as the stages of physical debility, they are more apt to run one into the other, remissions of their intensity are more frequent, and they by no means constantly coincide; thus the last stage of mental derangement may co-exist, with the first stage of the paralysis, there may be very slight evidence of insanity with very marked loss of muscular power, or from the beginning there may be complete imbecility, terminating in the complete prostration of the physical and mental faculties.

In the course of Dr. Conolly's clinical lectures at Hanwell, I first heard the apt comparison of the progressive symptoms of cerebral disease in general paralysis to the stages of vinous intoxication, which gives so vivid an idea of the mental and physical phenomena presented by the malady. This exact and happy illustration, repeated in the Croonian Lectures for 1849, and since so frequently quoted, was, I believe, first employed by Dr. Conolly, and no one conversant with the disease, can fail to recognize and appreciate the justice of its application. The writer of an elaborate and clever article on general paralysis, in the *Psychological Journal* of last year, even believes that the "study of the phenomena of drunkenness will tend to throw much light upon the symptoms attendant on its early or congestive stage." The only difference between them being that "the one state is transitory, the other is progressive and permanent."

Although I cannot quite concur in this last opinion, I am quite prepared to admit to the fullest extent the analogy between the symptoms of alcoholic poisoning, and the slower progress of paralytic insanity, and I would apply this similitude as Dr. Conolly does, not only to the congestive, but to all stages of the disease. Dr. Conolly and the author whom I have quoted, are rather considering the physical than the mental symptoms of the malady, or at least lay no special stress on either; in my own opinion, the stages of mental alienation are even more signally like those of intoxication, than the stages of physical weakness, and while the clipped syllables, the gradually powerless extremities, the final immobility of the toper wonderfully mimic the gradations of paralytic disease; still more irregularly do the excited extravagance of the first, the wild folly of the second, and the entire extinction of reason in the last stage of drunkenness, find their analogues, in the mental symptoms that mark the course of the general paralysis of the insane.

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It must, however, be remembered that while there is little discoverable difference between the bodily organs of one strong man and another, and that, therefore, under the influence of the same form of disease there will be a great resemblance in the bodily symptoms it produces, the case is far different with their minds. The varieties of idiosyncracies, the presence or absence of culture, the variable powers of self-control, of judgment, of memory, the differences of temperament in all of those attacked by general paralysis, alter, obscure, or exaggerate the manifestations of morbid mental action; and just as one man in his cups becomes quarrelsome and taciturn, a second, amiable, and talkative, yet both unmistakably intoxicated, so in paralytic insanity, one and the same cause produces diverse effects upon the intellectual faculties, although, if examined, they will be found reducible to the same type, and are, indeed, the results of an identical disease.

For this reason I am inclined to think that M. Jules Falret, in his admirable work *Recherches sur la Folie Paralytique*, has laid too much stress upon the division of the disease into varieties; the disease is indivisible, and Bayle is nearer the truth, and he has given the type of the disease better, in making it to consist in a *dèlire ambitieux*, falling at the same time into error, in considering the mental phenomena of general paralysis to be necessarily of the same character in all cases; a mistake apparently arising from his desire to force the symptoms to coincide with his theory of an invariably similar pathological condition in the brain.

The physician, unfamiliar with the various types of insanity will be surprised in going round the wards of Hanwell, or any other asylum in which the disease is not refused admittance, to find patients presenting almost every imaginable form of mental alienation, pointed out to him as suffering under general paralysis; he will wonder to see cases that appear to him simply those of mania or melancholia, rejected at the gates of Bethlem and St. Luke's, because rightly considered to be affected with this special form of malady, which their rules compel them to exclude; he will fairly ask how the diagnosis is to be made, what is the type of the uncomplicated disease, what is its effect upon the moral and intellectual faculties? and how is it to be distinguished from other affections of the brain? I do not know that I am justified in saying that in every case of general paralysis, the mental symptoms can be considered as peculiar in their nature; but, certain it is that

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in most cases, at some period, they are as pathognomonic, as the special form of paralysis I have described, and if they exist, sooner or later muscular debility must supervene. It is only by long experience that the psychological physician can detect, in the raving of the violent maniac, or in the tearful complaints of the hypochondriac, the insidious approach of general paralysis, and it is difficult to explain the mental process by which he arrives at a correct conclusion. Esquirol instances a patient in whom he diagnosed the presence of general paralysis, from the facility with which he submitted to the restraint of an asylum. M. Jules Falret acutely points out that the delusions of the general-paralytic are more coherent and plausible than those of the insane; and Guislain follows Esquirol in stating that the patients attacked with general paralysis, however violent, are more amenable to discipline, and more easily manageable than in ordinary insanity. Their melancholia, also, is of a distinctive form; it is more allied to dementia than the acute form of melancholic disease, and resembles rather the *melancholia attonita* of the ancient physicians.

The great majority of the cases of general paralysis which crowds our English private and public asylums is in the second stage, and at this period the mental symptoms when once discovered, are easily recognizable; they present the features of a special form of delusion, which constitutes the *délire ambitieux* of Bayle, the 'expansive' variety of Jules Falret, the 'peculiar delusions' which I have alluded to in my attempt at a definition of general paralysis. Recurring to the analogy between intoxication and progressive paralytic insanity, we may consider the three stages of the disease to be,—first, excitement of brain and bewildered judgment; secondly, ambitious mania; and finally, dementia.

The last, as far as diagnosis is concerned, is not practically, of much importance, because in most cases in which dementia has set in, the former history of the disease will be ascertainable, and afford a sufficient guide to its nature and treatment; but even in this closing phase of the malady there is some degree of difference between the patient afflicted with chronic dementia, and the general paralytic; the expression in the face of the latter will be happier, and rather indicative of stolid indifference than of stupidity, and if any articulate sounds can be uttered, they will evidence the existence of contentment and satisfaction; the ruling

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idea is still persistent, and such patients will die declaring to the last that they are quite well and quite happy.

The second stage, although confused with the usual symptoms that accompany much impaired power of memory and feebleness of judgment, is characterized by the same happiness that continues to be so remarkable to the very close of life; no sense of suffering is ever present, the restraint of an asylum is not needed, the departure or coming of friends is a matter of almost equal indifference; their own too often wretched physical condition is entirely ignored; such patients pass their lives in a dream of bliss, possessed with their own self-importance, absorbed in their ideas of long life, wealth, and grandeur, they amuse themselves with schemes for the future, or enjoy the present, with a delight that becomes painful to the observer, who recognizes the omen he cannot avert.

"I am," said one of my patients frequently, "Duke of Devonshire and Marquis of Westminster; I shall marry the Countess of Blessington, and live in the Vatican, which I have ordered to be pulled down and rebuilt at Kensington. My wife is the handsomest woman in the world, she and I are the best singers; I am to appear in Othello to-night. I have won five millions on the Derby; I am the strongest and the happiest of men."

Dr. Conolly, in his Croonian Lectures, refers to the case of one of his patients, who described himself as having "five wives, Jenny Lind being one, the Queen another. He further declared that he was a major in the army, a captain in the navy, a medical man, one of the judges, and High Constable of England, and particularly mentioned that he once held a capital place, being head Commissioner of the Customs, for which he received £12,000 a year, and had sometimes nothing to do."

I one day asked a patient under my own charge, afflicted with this terrible disease, whether he was fond of animals? With an air of profound conviction, he returned his usual and characteristic reply, "this kid that you call yours, and I am now feeding, I brought by a stamp of my foot from under ground; I have but to whistle, and thousands of giraffes, wild boars, and elephants would come over the walls; when animals die I can bring them to life again; I am going to make all England into a large Zoological Garden, and I shall be the richest man that ever lived, and yet you are silly enough to ask if I like animals?"

It is true that these are selected cases, but they well show

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the type of the disease, and will be recognised as fair examples of it by every alienist physician; the delusions, however are sometimes more consonant with probability, and less easy to detect. "I can walk with ease eight miles an hour," was the assertion of a patient in whose case I was consulted, which gave me an instant impression that his disorder might be general paralysis, inasmuch as he was a merchant in the city of London, and obviously unfitted for pedestrianism. My suspicions were confirmed, when, on another visit, he shewed me a plan for making a new front to his warehouses, entirely of cedar wood, and expressed his conviction that he should be soon elected Lord Mayor. These delusions led me to the conclusion that the paroxysms of mania which he had suffered under were the initial symptoms of a special and perhaps hopeless form of insanity, and the result proved that my forebodings were correct.

The nature of the delusion agrees sometimes singularly with the former desires, pursuits, or habits of the patient; the lawyer imagines himself Chancellor; the rector becomes a bishop; and the sportsman shoots two hundred stags, and one hundred hares, in an imaginary day, with his own gun. "I am to be made commander of the forces in Ireland," said a captain in the army. " a patient whom I saw with my friend Dr. Meyer, "you, sir, shall be Inspector-General of Hospitals, and have £800 a-year; Dr. Tuke shall be Deputy Inspector, but shall have the same salary." "I am going to leave here to-morrow," said a paralytic to me at the asylum at Exeter; "I am to have £30 a week to be the Queen's coachman, and I shall drive her Majesty in an omnibus, *tandem!*" This man had been a coachman, and thus his delusion took the stamp of his former pursuits.

It would be a curious statistical problem if the materials were at hand, to enquire into the comparative frequency of delusions of this nature in insane of different nations. In France it seems more common than in England; it might be surmised that the temperament of the Gascons, would predispose them to this disease; and were such an enquiry possible, the sanguine disposition and mercurial liveliness of the natives of our sister land, would lead to the supposition that they were particularly liable to general paralysis. In American asylums, the malady is common and well known, and some of the cases quoted by Dr. Pliny Earle, in the *American Journal of Medical Science*, show the extravagance of the delirium more strongly than any I have yet quoted. That the type of the delusion is the same in

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the New World as at home, a few specimens will suffice to prove. "Mr. —— declares that he is to be the next President, that he is the Duke of Gloucester, and heir to the English throne, that the Supreme will come down at his birthday, that he will give to each of his attendants a carriage, horses, and twenty thousand dollars to start upon, that his legs are made of iron, that he wound up the sun yesterday; the last words he uttered contained an assertion that he was one of the personages of the Old Testament."

These examples are sufficient to show the type of the malady in its second stage, which, in default of a better term, I have called that of ambitious mania; they will also serve to show its great analogy to the delirium of intoxication; its resemblance, indeed, is so striking, as to have led to the expression of the hope I have already quoted, that the study of the progress of alcoholic poisoning may throw some light upon the nature of paralytic insanity. In describing ambitious mania as the characteristic of the second stage of general paralysis, I by no means intend to follow the clearly erroneous doctrine of Bayle, who wishes to prove that all cases of general paralysis must present first, monomania; secondly, mania; and, thirdly, entire dementia. This is certainly sometimes true, but not universally so, and I do not adopt his opinions in taking his expression *dèlire ambitieux*, giving it, however, a wider significance than it has generally received, for I think Bayle has been misunderstood in having had the words in question too rigidly taken as synonymous with delusions of wealth and grandeur; it appears to me that the *dèlire ambitieux* is the true and essential type of the disease, if only we take it in its fuller meaning; for even in cases in which the disease has been so severe at its outset, that imbecility becomes an initial symptom, the special nature of the imbecility is apparent in its happy type as well as in its rapid progression towards entire dementia. This feeling of self-contentment, this *bien-être*, this indifference to isolation, to physical pain, this unconsciousness of woes, present or to come, seems to me to be peculiar to the malady; it would be easy to coin a word to express this, but as the expression chosen by Bayle to designate the delirium is so constantly correct, it may be as well to adopt it, taking it to express the existence of delusions of gratified wishes, whether those of ordinary ambition or otherwise.

I believe that ideas of riches and grandeur are so fre-

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quently pathognomonic of the disease, because they are the leading ideas in the minds of so many men absorbed in the pursuit of wealth, who fancying happiness to consist in its possession, naturally consider themselves wealthy and powerful, when attacked by a disease of the brain, whose essential symptom is a visionary happiness and success. The delusions will vary with the desires of the patient, but they present the same character; thus (and I am quoting from actual observation) the valetudinarian, in addition to all other blessings, becomes in imagination the most robust of men; the struggling professional man becomes possessed in idea of boundless wealth; the millionaire, to whom money can hardly be a want, deems himself a marquis; while the coachman is quite content with the illusory possession of thirty pounds per week to drive the Queen in an omnibus!

The wider acceptation of the term *délire ambitieux* may be taken as embracing all these varieties of day-dreamings. I cannot pretend that my own experience will go far to decide the important question of the greater or less identity of delusion in all cases of paralytic insanity, but I never myself saw a case of the disease, in which 'happiness' did not seem the characteristic feature. I am not dismayed by the peremptory *dictum* of Calmeil, who declares that the attempt to assign a constant form of delirium to cases of general paralysis, argues "*un mauvais esprit d'observation;*" and in the absence of statistical records will quote some of the authorities on the subject who support my view of the question. The opinion of Bayle I have already given. Esquirol, who says that paralysis *may* "complicate melancholia, mania, and ambitious monomania," adds that it more frequently accompanies the latter, and, as I have already mentioned, arrived rapidly at the conclusion that a particular case was one of paralysis, from the suspicious readiness of the patient to remain under restraint. "General paralysis, says Dr. Conolly, is so frequently associated with ideas of wealth and grandeur, that when these prevail strongly, we expect that disease to supervene." The expansive variety, observes M. Falret, is the most frequent form of general paralysis, and, under the name of the expansive variety, he describes the same symptoms as those Bayle has classed under the head of ambitious delirium; and Dr. Bucknill's opinion is still more strongly expressed; he says, "the form of intellectual disorder is frequently of a most remarkable kind; the patient fancies himself possessed of wealth and power illimitable, and is often fantastically imaginative. . .

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When a patient exhibits this imaginative extravagance of idea, accompanied with slight emotional disturbance, any loss of clearness in vocal articulation will suffice for a positive diagnosis."—*Manual of Psychology*, p. 385. Even if we recur to the work of the first and greatest writer upon the disease, in spite of the trenchant opinion I have quoted, we shall find Calmeil himself admitting the existence of a "peculiar delirium" which, however, he strangely describes as "masking" the intellectual feebleness; this exists he says in a great number of patients, and he gives the following striking example of that which he himself names the *délire exclusif:* "A general paralytic will assert; I am the most powerful of Emperors, in four hours I shall build a new Paris, the streets paved with gold, a bazaar, with galleries around it, shall occupy the centre, everywhere will be found columns of marble, statuary and bronzes; I shall have a seraglio, the beds are to be made of rosewood, the curtains are to be mirrors, fixed to the four corners upon curtain rods *(quenouilles)* of diamonds."

It may then at least be admitted that in the majority of cases, delusions of an ambitious type are prominent; whether they are or are not invariably present, in a greater or less degree, remaining as a question open to further examination; but it seems certain that if with such delusions as I have instanced, the physician detects in his patient the characteristic and fatal embarassment of the speech, or tremulousness of the hands, or symptoms of paralysis in the lower extremities, or even the dilatation of the pupil of the eye, the nature of the case should be patent to him; he may fear and anticipate that the delusions will rapidly increase in their number and intensity, that the powers of locomotion and prehension in the patient will become each day more feeble, and that the last period of this stage approaches, in which, before complete dementia and immobility set in, the patient will present the spectacle of a tottering imbecile, sometimes expressing the wildest delusions, at rare intervals singularly rational, yet always insanely happy, and full of confidence in himself and his fortunes.

Throughout the second stage of general paralysis; even in its worse phases there are occasionally extraordinary remissions of the malady—even delusive recoveries; these *pseudo* lucid intervals are of great importance, and will merit attentive consideration.

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