The monograph concludes with 15 pages of carefully arranged tables.

From the above *résumé* it will be seen that the author has had a large material to work on, and has analysed it carefully and impartially. His work will be a solid addition to our statistical knowledge of the subject.

EDWARD G. GEOGHEGAN.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *American Psychological Literature.*

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

American Journal of Insanity. Vol. xxxiii.

January, 1877. No. 3. *Pathological Researches*, by Dr. John P. Gray. *Case of Mrs. Jane C. Norton*, by Dr. Ordronaux. *Reviews, &c.*

April, 1877. No. 4. *General Paralysis*, by Dr. A. E. Macdonald. *The Curability of Insanity*, by Dr. Pliny Earle. *Reviews, &c.*

July, 1877. No. 1. Vol. xxxiv.

Oct., 1877. No. 2. *The Functions of the Great Sympathetic Nervous System*, by Dr. Bucke. *Proceedings of the Association of Medical Superintendents. Reviews, &c.*

Pathological Researches, Dr. Gray.—This article consists of an instructive *résumé* of the main facts of cerebral histology, grouped, for the most part, under "infiltration" and "involution"—the products of the former being normal, but in excess, and only like dirt, "matter in the wrong place," those of the latter being a degeneration or metamorphosis of the tissue, commencing in the nucleus of the cell, thus developing a cell of a wholly different type, and capable of proliferation. The conditions of infiltration, fat, calcification, pigment, and amyloid bodies, marking chronic and progressive stages of insanity, those of involution being found more frequently, with the exception of colloid degeneration, in acute insanity. Dr. Gray rapidly traces what he conceives to be the order of phenomena in the pathology of insanity, commencing with hyperæmia and consequent anæmia, including dyscrasia. "Saturation" of the tissues follows, involving aneurismal dilatations, dissecting aneurisms, inflammatory action and softening, and of course diminished nerve force, embarrassed cerebral action—the conditions, in fact, of the genesis of insanity. When the circulation is arrested and stasis is caused, the processes of involution are set up, and the vessel, with its contents, is transferred into fat granules.

Hence, also, degeneration of the cells and neuroglia. Dr. Gray illustrated his paper (when read) by a number of photo-micrographs.

The only other article of importance is the report on the case of Mrs. Norton, by Dr. Ordronaux. It is too long to admit of satisfactory condensation.

General Paresis.—Dr. Macdonald, in this paper, which contains a careful description of the disease, based on a large number of cases, notes the curious fact that it was recognised in England 35 years before it was recognised in America. During the last three years, the percentage of cases of general paralysis to other mental disorders has been in America, 4·1 for men and ·4 for women, while in England it was, during the same period, 14·3 for males and 2 per cent. for females. The number of cases admitted into Dr. Macdonald's own asylum (New York City) during the last three years, was 34, 55 and 72 respectively. This apparent increase is partly attributed to greater accuracy of diagnosis, an explanation which one would hardly have looked for, but which is confirmed, to a certain extent, by the fact that fifteen cases have returned to the asylum who had been discharged as labouring under other forms of insanity. But after allowing for increased facility in detecting the disease, Dr. M. believes that general paralysis is "steadily and rapidly extending." Entering fully into the causation of the disease, he finds it to be more frequently due to heredity than is usually admitted to be the case. The belief in alcoholic intemperance being the chief exciting cause, is "strongly sustained"—116 out of 155 paralytics being habitual drunkards. Sexual excess was nearly as frequent a cause, but the difficulty of distinguishing an early morbid symptom of the disease from a cause, is here an extremely, and, we would add, a peculiarly, great source of fallacy. Syphilis was recognised in 45 cases out of the above number. In 83 cases, sun-stroke and injuries to the head were the causes in "a considerable number" of instances. The relative frequency of the disease in men and women (12·6 p.c. males, ·5 females) is referred to the difference in temperate and profligate habits. This view is confirmed by the greater frequency of general paralysis among women in districts and in classes where they are more addicted to drink. As to age on attack, Dr. Macdonald's figures show that the opinion that the disease is never seen after 60 is a mistake. He has never seen a case of recovery. He has not known a case living beyond the sixth year. We have known several. Dr. Macdonald confirms the observation of Dr. Clouston, that phthisis colours the symptoms in general paralysis—a decided melancholy element tempering the extravagance of the delusions, amounting, at times, to actual depression. With respect to temperature, the only fact clearly made out was, that it rose before an attack of maniacal excitement and convulsion and fell directly afterwards. There was an average difference of 1° Fahr. in the case of excitement, and of 1½° in that of a convulsive seizure. Athetosis is reported to have existed in a considerable number of

cases; the toes being more frequently affected than the fingers. Of the various post-mortem changes found in general paralysis, Dr. Macdonald concludes that not one of them has proved to be a primary morbid affection peculiar to this form of insanity. "In fact, they all represent only different stages of atrophy and necrosis of the tissues; in other words, they are the result of a diffuse but slowly-progressing atrophy and necrosis. By their *diffuse* character, the lesions observed are distinguishable from those of other chronic forms of insanity. From all acute cases they differ anatomically in their products."

The Curability of Insanity. By Dr. Earle.—This article has attracted, as it deserved to do, a large amount of attention. It is calculated to dispel at least one fallacy which has crept into the statistics of insanity. With few exceptions, recoveries have been calculated upon the total number of admissions, including, therefore, re-admissions. The result thus obtained is not to be despised; it tells us how many *times* the treatment pursued has been followed by recovery; but it does not tell us how many patients have been restored to society cured, the point of most importance to ascertain. And the mischief is that by professing, or appearing to give what they do not, these statistics, unless explained and accompanied by a calculation of persons who recovered upon single admissions, lead to the belief that insanity is much more curable than it really is. We might enter at great length into the questions raised by this paper, but we must content ourselves with commending it, in its re-published form, to the attention of all who engage in the preparation of lunacy statistics.

The Functions of the Great Sympathetic System. By Dr. Bucke.—This is a very interesting and able defence of the opinion entertained by not a few physiologists at different times, that the sympathetic system is the seat of the emotional or moral nature. Gall, in his day, combatted it. A French medical psychologist, long after Gall, defended the theory. We are glad to see all that can be said in its favour brought forward in the ingenious, suggestive, and thoughtful way in which it has been done by Dr. Bucke. It has always appeared to us extraordinary that so comparatively little pains have been taken by mental physiologists to endeavour to explain scientifically the every-day facts which show the intimate relation which does exist between the emotions and the sympathetic system. That this special connection or *rapport*, which exists between them, does not obtain between the intellect and this system, we do not doubt, but it is another thing to hold that the emotions have their seat in the sympathetic system, and not in the encephalon. The facts which the writer brings forward are proofs of this connection, but the question is, whether they cannot all be explained by distinct centres *in the encephalon*, not only for intellectual operations, but for the emotions. We believe the medulla oblongata stands in a special relation to the emotions, without concluding that they are located there. If such is the case, the influence exerted upon the vaso-motor nerves may be explained by their

principal centre being in the medulla—a fact to which we see no allusion in this article. We think that Dr. Bucke is in danger of confounding a mental feeling—*e.g.*, joy or love—with the effect produced thereby upon the bodily system, through, doubtless, the medium of the sympathetic.

The view which locates intellectual and emotional centres in the same portion of the brain, wholly fails to explain a host of psychological phenomena, as also innumerable physical phenomena accompanying or following them. On the other hand, one must admit that to exclude the emotions altogether from the encephalic functions, and relegate them to the sympathetic system, does not help us to explain the wide difference between moral and intellectual capacity in the same person any better than, for instance, the doctrine of Todd, that the emotions have the mesocephale for their centre, or the doctrine of Gall, that they are located in certain well-defined portions of the cerebral convolutions. We cannot at all agree with Dr. Bucke's statement that injuries to, or diseases of the brain, exert little or no influence upon the moral nature. Certainly cerebral hæmorrhage will distinctly affect it, both with and without disordering the intellect. So will blows on the head.

What he says, again, about the influence of bodily conditions, as dyspepsia, affecting the emotions, causing mental depression, &c., is, of course, most true, but this would be equally well accounted for by the action of the peripheric extremity of the sympathetic nerves upon an encephalic centre or organ, invested with emotional functions.

We find it impossible to do justice to this article in an abstract like the present. If we have criticised the author's main position, it is not because we do not acknowledge with him the distinction between the centres of intellectual and emotional operations, or recognise the intimate relation between the latter and the ganglionic system. This we have strongly put forward elsewhere.* We look, however, to future researches demonstrating that, as Ferrier's experiments point to intellectual as well as motor functions being centred in one portion of the brain, and emotional as well as sensory functions in another, an anatomical connection exists between the latter duality and the sympathetic centres and their nerves; thus influencing in the extraordinary manner in which they do the viscera and vessels.

Proceedings of the Association of Medical Superintendents. 1877.—Much interesting information is given in regard to the numbers and condition of the insane in different States, and also respecting the provision for criminal lunatics. In Massachusetts, if a convict appears to be insane, two superintendents and the prison physician form a commission to determine whether he is so, and whether he shall go to an asylum. If he recovers before the expiration of the sentence, he is sent back to prison. Provision has been made for 30 insane crimi-

* "Illustrations of the Influence of the Mind upon the Body," 1872.

nals in the State Prison, entirely separate from the convicts. In the State of New York there are at Auburn 100 patients. Dr. Macdonald, the superintendent, holds that the criminal insane should be provided for in separate institutions. He has found at Auburn, where there are both convicted and unconvicted patients, that the former exercise an injurious influence upon the latter ; and he believes that an hospital for the *convict* insane must, of necessity, partake of the character of a prison in its custodial capacity, Dr. Macdonald, speaking of those who have committed murder and recovered their sanity, observes that "the responsibility involved in their liberation is very grave, and one that courts are loath to assume. especially in view of the strong probability that, if let out, they would return to their former habits and associations, and experience a return of the malady, that would render their condition as bad, or even worse, than it was before."

Dr. Nichols, the President, gives his views on criminal lunatics at length, and insists strongly on the necessity of providing for the unconvicted insane otherwhere than with insane convicts. To have them in the same institution is "utterly repugnant to our ideas of propriety." There should be separate wards for them, generally a separate building, as a department of each State and Borough Asylum. Such a plan would be less expensive than treating them entirely separate from the ordinary insane. He maintains that the States of New York and Pennsylvania, and, perhaps, some others that have two or more large penitentiaries, should provide a separate institution, to which all their insane criminals should be sent. For the cases that arise in the penitentiaries in the smaller States he would establish an insane department of the prison hospital, under the charge of the prison physician. The view thus enunciated by the President differs in some respects from the resolutions passed by the American Association in 1873, on the criminal insane. This arises from his fuller recognition of the various kinds of criminal lunatics. Dr. Nichol classifies them in essentially the same way as is done at Broadmoor.

A considerable portion of the debates is occupied with "the burning question" of non-restraint. If some hard blows are levelled at the English system, they assuredly are not harder than those aimed by ourselves at the amount of restraint practised in American asylums. We have no wish to be dogmatists. So long as the leading supporters of non-restraint admit there are possible cases in which mechanical restraint is permissible, the question may be said to be one of degree and not of principle. At the same time the practice may differ so greatly as to form two divergent schools. As in the use of alcohol, there are the teetotaller and the moderate drinker, the former of whom makes an exception in favour of its use "for medicinal purposes," so, it should not be forgotten, the English non-restrainer, unless a very rabid disciple, allows of certain exceptions in determining not to use mechanical restraints. In any great movement of a humane character, excesses are sure to occur, and we do not claim for the

supporters of the non-restraint system an entire immunity from errors of judgment in language or practice. All that is believed is, that if, of two superintendents, one resolutely sets himself against the strait-waistcoat, &c., making that the rare *exception* which the other makes his *practice*, and even a valued resource and aid to treatment, the results, in the long run, will be much more satisfactory in the former than in the latter case. But it would ill-become the first "to lecture" the second, if he acted from equally humane and scientific motives, which might well be the fact. An unseemly display of personal abuse arising out of the discussion of this subject, is revealed in the American medical press. If "restraint" is ever a good thing, it might with advantage be applied to verbal as well as muscular excitement. Some of the above remarks will be responded to by one (at least) of the American superintendents, for Dr. Gundry (Ohio), expresses in the debate "a great deal of regret at hearing the paper read by Dr. Grissom in defence of restraint," and says, "I do not mean to say I will not use it; but I do say that restraint is the exception in the treatment of patients. I therefore very much regret the appearance of a paper like this, which defends it on such broad grounds as would seem to place it where it may be called the corner-stone of our specialty." Again, "I do object to any going away with the feeling that restraint is the corner-stone of treatment, and forthwith go home, not to see how much they can lessen it, but to use it more than before. This is what I protest against." We regret that, in this discussion, manual restraint is always spoken of as the substitute for the waistcoat. If the dispute were merely between these two, we should agree that in some, if not many instances, the former would be more irritating than the latter. The answer we should give is really unconsciously supplied for us by Dr. Nichols, when, in his speech, he says, after remarking that mechanical restraint is much less used than formerly—"We have all been striving to improve our methods of treatment, until more attendants are allowed, and better facilities for exercise and diversion are provided in most institutions than formerly was the case, and we have the aid of more and better therapeutic agents than we formerly had, all of which enable us to dispense with restraint, without sacrificing the welfare of the patient, more frequently than we formerly could." When he adds, "*It wounds my sense of human dignity to see any patient under mechanical restraint*," we cannot feel that there is any great or vital difference of view between the President of the Association of American Superintendents and ourselves.

(To be continued.)