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THE JOURNAL
OF
MENTAL SCIENCE.

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VOL. XLVI.



LONDON
J. & A. CHURCHILL,
7, GREAT MARLBOROUGH STREET,

1593
/19

"In adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane." But it has been objected that the term mental science is inapplicable, and that the term mental physiology or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanic uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—*Sir J. C. Bucknill, M.D., F.R.S.*

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THE JOURNAL OF MENTAL SCIENCE

[*Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.*]

No. 192 [NEW SERIES
No. 156.] JANUARY, 1900. VOL. XLVI.

Part I.—Original Articles.

*Abstract of a paper on the Necessity for Isolating the
Phthisical Insane.* By ERIC FRANCE, M.B., B.S., Second
Assistant Medical Officer, London County Asylum, Clay-
bury.

Followed by a discussion by Sir WILLIAM BROADBENT,
Bart., Sir J. CRICHTON-BROWNE, Prof. CLIFFORD ALLBUTT,
and others, at the General Meeting of the Medico-Psycho-
logical Association, London, 9th November, 1899.

I HAVE no intention of tracing the history of tuberculosis in
asylums through the official obscurity of the past fifty years.
This point has already received careful investigation at the
hands of Dr. Crookshank in the admirable essay he has recently
published; ⁽¹⁾ nor are we here concerned with any comparison
between the mortality from tubercle among asylum inmates
and the mortality from tubercle among the general population,
inasmuch as deductions drawn therefrom are liable, among
other errors, to those fallacies which occur when two communi-
ties whose environment and susceptibility differ are compared as
regards the mortality of any particular disease.

What we are concerned with, I take it, is the position which
tubercular mortality holds in asylums at the present time, and
the means to be adopted to remedy this state of things. I
have therefore to lay before you very briefly some of the salient

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points with regard to the incidence of tubercular disease among the insane and its prevalence compared with other diseases ; to urge the necessity for some means being taken to reduce that prevalence ; and finally, to suggest some scheme by which such an end might be attained.

The tables and charts herewith presented show the mortality from tubercle as compared with some of the most fatal diseases in asylums. The figures are compiled from the blue-books of the Commissioners in Lunacy, and from the annual reports of the Asylums Committee of the London County Council, referring to the years 1895-6-7-8 inclusive.

It may be remarked that 1895 was the first year in which the returns of causes of death, as shown in the blue-books, were sufficiently comprehensive to warrant comparison with subsequent years. The charts are drawn absolutely to scale.

It is gravely to be feared that the figures I have quoted are very far from accurately representing the number of patients actually suffering from phthisis in the asylums of England and Wales.

As it is impossible, from a statistical point of view, to return more than one cause of death for each patient, it is easy to understand that evidence of active tubercle may be found in many patients who are shown as dying from some other disease.

In Claybury Asylum and at Colney Hatch and Cane Hill, where the post-mortem records have been kindly examined for me, a marked disparity exists between the statistical returns and the number of cases in which active tubercle was found at death, as is shown in the following table :

1898.	Certified deaths from tubercle.	...	Active tubercle found P.M.
Claybury	. 28	...	49
Colney Hatch	. 26	...	41
Cane Hill	. 13	...	22
	—		—
	67		112*

* These figures do not include 10 doubtful cases.

It will thus be seen that at these three asylums the number of patients dying with active tubercle, as compared with those certified as dying from this cause, practically stand in the proportion of 2 to 1.

TABLES AND CHARTS

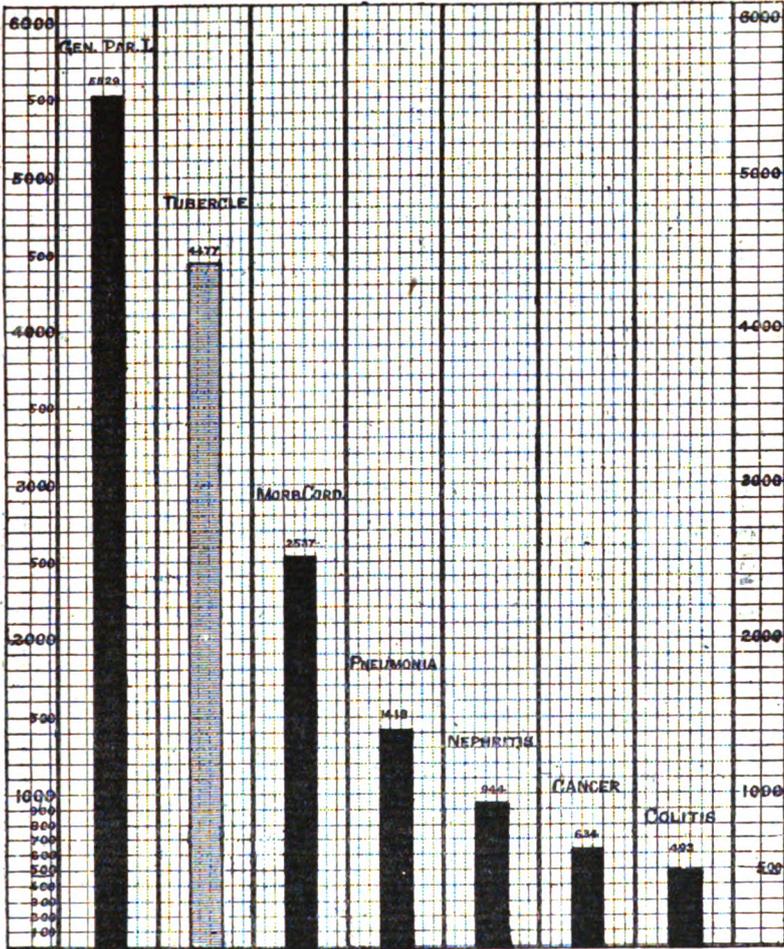
Elucidating the paper by Dr. ERIC FRANCE.

ALL ASYLUMS.—ENGLAND AND WALES.

TABLE I.—Showing Average Daily Residents, Total Deaths (all causes), and Deaths from seven of the most fatal diseases in 1895-6-7-8.

Year.	Average daily residents.	Total deaths, all causes.	General paralysis.	Tubercle.	Morbus cordis.	Pneumonia and broncho-pneumonia.	Nephritis.	Cancer.	Colitis, Enteritis, Dysentery.
1895	71,648	7,182	1,437	1,135	598	504	232	144	126
1896	74,784	6,783	1,385	1,029	569	432	206	174	128
1897	77,217	7,298	1,385	1,140	638	448	244	156	126
1898	79,983	7,578	1,322	1,173	712	534	262	160	113
Totals	—	28,841	5,529	4,477	2,537	1,418	944	634	493
Averages (4 years)	75,903	7,210	1,382	1,119	634	354	236	158	123

CHART I.

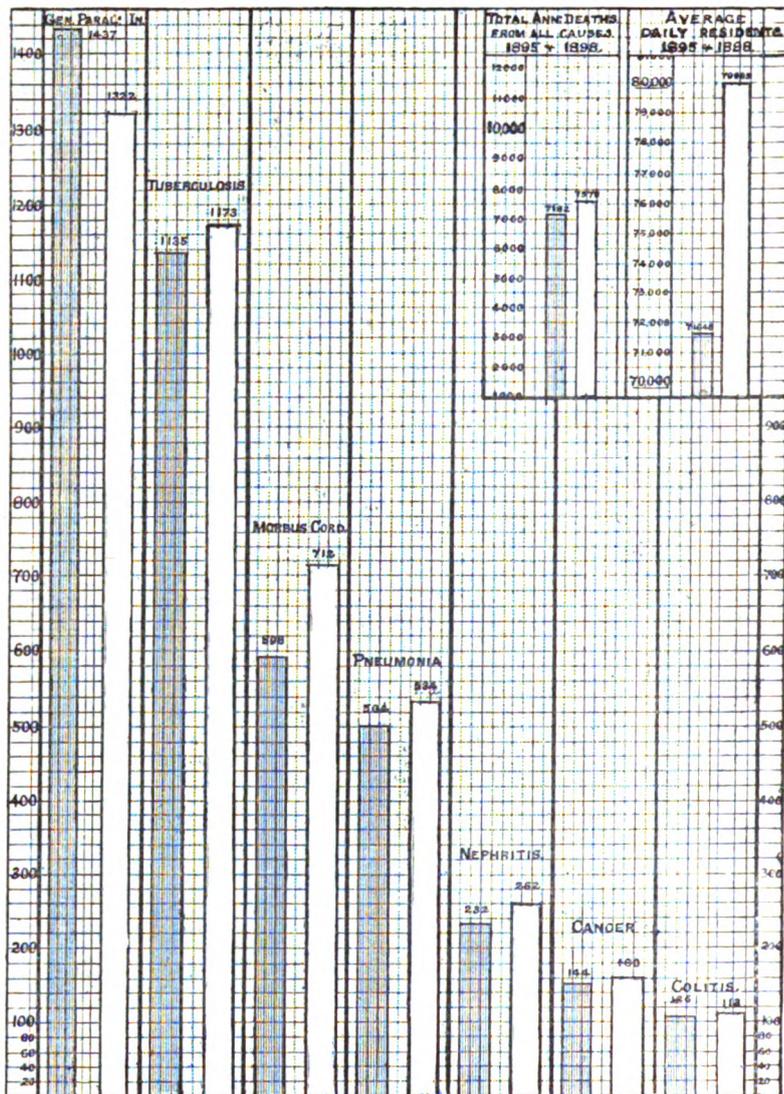


ALL ASYLUMS.—ENGLAND AND WALES.

Showing total mortality in seven of the most fatal diseases from 1895 to 1898 inclusive.

Total deaths from all causes during same period 28,841
 Average daily residents during same period 303,632

CHART IA.



ALL ASYLUMS.—ENGLAND AND WALES.

Showing comparative annual mortality in seven of the most fatal diseases.
1895 and 1898.

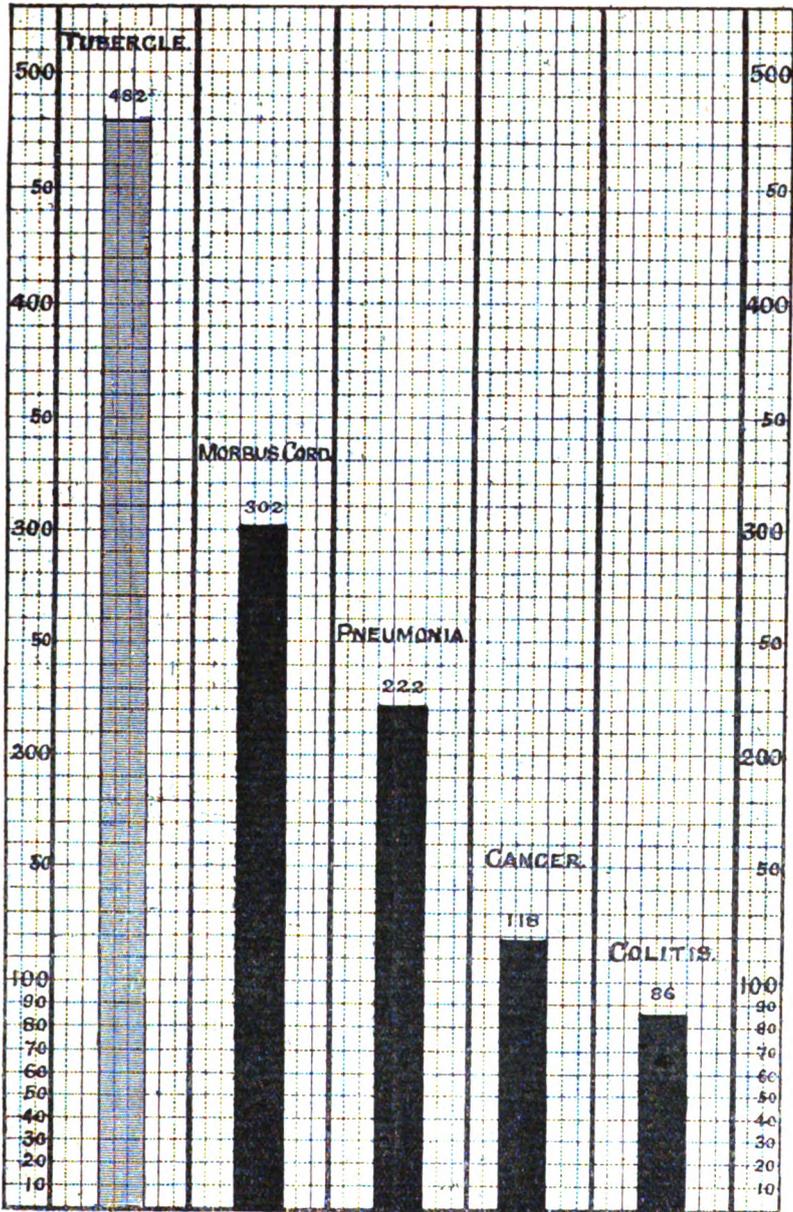
1895 = shaded. 1898 = white.

LONDON COUNTY ASYLUM.

TABLE II.—*Showing Average Daily Residents, Total Deaths (all causes), and Deaths from six of the most fatal diseases in 1895-6-7-8.*

Year.	Asylums.	Average daily residents.	Total deaths, all causes.	General paralysis.	Tubercle.	Morbus cordis.	Pneumonia and broncho-pneumonia.	Cancer.	Colitis, Enteritis, Dysentery.
1895	Hanwell . . .	1,964	164	53	16	7	8	4	1
	Colney Hatch . . .	2,219	198	41	23	16	6	8	0
	Banstead . . .	2,027	169	35	33	11	11	9	0
	Cane Hill . . .	2,039	171	44	29	11	1	7	5
	Claybury . . .	2,342	350	128	29	27	24	5	15
	Totals . . .	10,591	1,052	301	130	72	50	33	21
1896	Hanwell . . .	1,988	162	41	17	3	10	6	7
	Colney Hatch . . .	2,412	216	41	16	7	11	3	0
	Banstead . . .	2,303	182	47	24	4	8	2	0
	Cane Hill . . .	2,112	158	44	10	16	5	3	2
	Claybury . . .	2,494	298	92	30	29	22	10	14
	Totals . . .	11,309	1,016	265	97	59	56	24	23
1897	Hanwell . . .	2,052	147	44	17	7	3	7	3
	Colney Hatch . . .	2,580	240	36	33	18	11	9	5
	Banstead . . .	2,436	224	47	36	32	14	4	0
	Cane Hill . . .	2,202	176	46	22	10	4	5	3
	Claybury . . .	2,494	249	80	19	31	22	7	3
	Totals . . .	11,764	1,036	253	127	98	44	32	14
1898	Hanwell . . .	2,415	246	59	25	14	11	9	6
	Colney Hatch . . .	2,554	207	36	26	11	6	5	1
	Banstead . . .	2,436	199	35	36	21	23	6	0
	Cane Hill . . .	2,213	159	46	13	4	7	3	3
	Claybury . . .	2,488	267	51	28	23	25	6	18
	Totals . . .	12,106	1,078	227	128	73	72	29	28
Total, 4 years . . .			4,182	1,046	482	302	222	118	86

CHART II.

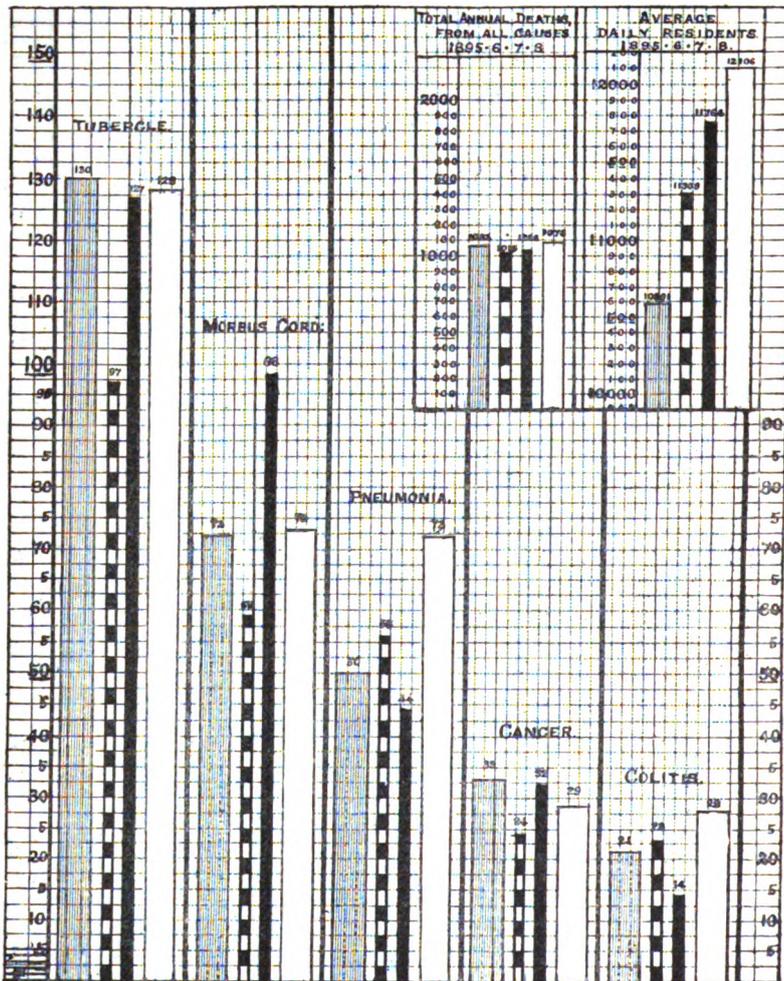


LONDON COUNTY ASYLUMS.

Showing total mortality in five of the most fatal diseases from 1895 to 1898 inclusive.

Total deaths from all causes during same period	4,182
Average daily residents during same period	11,442

CHART IIA.



LONDON COUNTY ASYLUMS.

Showing comparative annual mortality in five of the most fatal diseases, 1895-6-7-8.

1895 = shaded. 1896 = black and white. 1897 = black. 1898 = white.

If it may justly be supposed that a similar proportion exists in the other asylums of England and Wales, it is apparent that the figures representing the incidence of tubercle in these institutions must be doubled before they can be regarded as actually representing the case. This fact alone would more than justify a vigorous attempt to reduce this heavy mortality, but there are other reasons which should stimulate us to take some decided action in this matter. Public interest has recently been aroused in a gratifying degree to the importance of action being taken against the tubercle bacillus. I need only refer to the establishment of the National Association for the Prevention of Tuberculosis, and to the excellent work it is doing ; and to the untiring efforts of the Medical Officer of Health for Manchester—Dr. James Niven,⁽²⁾ and the Medical Officer of Health for Sheffield—Dr. John Robertson,⁽³⁾ both of whom have strongly urged the compulsory notification of phthisis. Dr. Niven's last annual report, and the special report on tuberculosis published this year by Dr. Robertson, both contain much valuable information, and will repay careful study. In each report the obvious fact is strongly emphasised that notification is essential to any coherent scientific attack upon this disease as it exists among the general population. But we, as Medical Officers of asylums, are in this more fortunate position. We have no need to wait for such a thing before we can hope to cope successfully with tuberculosis.

The time has now come when some definite effort must be made to reduce this excessive mortality from tuberculosis among the insane. I am glad to be able to state that the Asylums Committee of the London County Council has this matter under consideration.

The question remains, what is to be done? Two years ago I urged upon this Association that if the prevention of the spread of phthisis could be summed up in one word, that word was *Isolation*.⁽⁴⁾ This opinion has the powerful support of Sir James Crichton-Browne, who, in a speech at the Poor Law Conference, said, "Our greatly increased, and now exact knowledge of the nature of tubercular disease, and of its mode of propagation, makes it, in my opinion, obligatory upon those having control of public institutions into which tuberculous patients are received to arrange for their complete separation from the other inmates."

No thoughtful person will now deny the necessity for isolating the phthisical; and if the importance of isolation be granted, the crucial point of diagnosis at once presents itself. An early diagnosis affords the best opportunity of placing the patient in such environment and under such treatment as is most suitable for his recovery, and when isolated in the early stages of the disease he has not begun to disseminate the bacillus to the detriment of others.

Whatever means be adopted for definitely diagnosing active tubercle in suspected patients, whether it be by a careful study of their body-weight and temperature, or by a microscopical demonstration of the tubercle bacillus in the sputum, or by the inoculation method advocated by Sheridan Delépine,⁽⁶⁾ it cannot be too strongly urged that an early and accurate diagnosis must be made if isolation is to be of real service either to the patient or to the community.

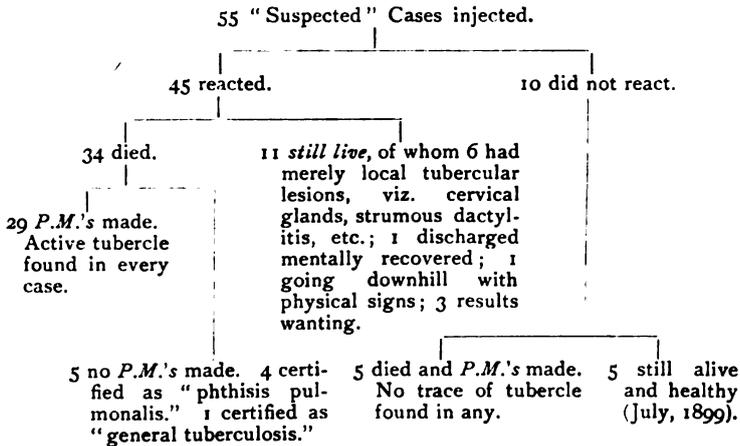
We are well aware how little ordinary diagnostic rules and methods apply to insane persons, and how frequent and great is the difficulty in diagnosing phthisis in them. For these reasons, as well as the importance of an early diagnosis, for about eighteen months at the Northumberland County Asylum (where the death-rate from phthisis was very high—about 40 per cent. of the total deaths) I relied almost entirely on the diagnostic power of single minute subcutaneous injections of Koch's original tuberculin. This method was adopted because, in the majority of insane patients, physical signs in the chest were found to be untrustworthy, misleading, and often paradoxical in the early stages; and because the valuable method of microscopical demonstration of the bacilli in the sputa was seldom possible.

At that asylum I injected seventy-five cases with tuberculin, and am satisfied, not only with the accuracy of its diagnostic power, but also with its entire harmlessness, both in the tubercular and in the non-tubercular. Every patient was carefully weighed at the beginning of each month, and every one who had lost more than 5 lbs. in the month, or in whom gradual loss of weight over a longer period had occurred, was examined and the cause of the loss of weight minutely inquired into. If this could not be readily accounted for by some obvious mental or physical cause, such as refusal of food, the patient's name was placed upon the "suspected list." The same thing

was done in the case of any patient giving at any other time the faintest cause for suspicion of the presence of tubercle.

All those on the "suspected" list were then injected with tuberculin in the following way:—The patient was put to bed and the temperature was taken. The next day, with rigid antiseptic precautions, 1 c.c. of a '001 solution (made by diluting 1 c.c. of Koch's original tuberculin, issued under a guarantee of Dr. Libbertz, who acts under the direct supervision of Prof. Koch, with a '5 per cent. solution of carbolic acid) was injected subcutaneously, and the temperature taken every three hours. If the temperature rose 2° or more within the next twelve hours tubercle was diagnosed.

With regard to the seventy-five cases injected, twenty were non-suspects, or control experiments; in none of these was a reaction obtained. The remaining fifty-five were suspected of having tubercle, and gave the following results:



Grave fears have been expressed that even single minute injections of tuberculin might possibly re-awaken dormant tubercle, or lead to its dissemination through the tissues. I have been quite unable to discover any grounds for such fears. Koch states that out of more than one thousand persons in whom tuberculin was used diagnostically there was not the least indication of dissemination of the disease.⁽⁶⁾ "These facts," says he, "should suffice to make us, once for all, abandon the absurd idea of the possible stimulation of the tubercle bacilli, and should encourage us to apply tuberculin to

the diagnosis of tuberculosis in the human subject." Since my first paper was published on this subject tuberculin has been tried, and its value as a diagnostic agent extolled by Dr. G. A. Heron⁽⁷⁾ and Dr. McCall Anderson⁽⁸⁾ in this country; by Dr. James T. Whittaker,⁽⁹⁾ Dr. Franklin T. White,⁽¹⁰⁾ and Dr. Irving H. Neff⁽¹¹⁾ in America; by Drs. C. F. Martin and G. D. Robins, of the Royal Victoria Hospital, Montreal;⁽¹²⁾ by Prof. Brieger, in a speech before the recent International Tuberculosis Congress at Berlin,⁽¹³⁾ and by Prof. Clifford Allbutt, who, in his address on the prevention and remedial treatment of tuberculosis at the annual meeting of the British Medical Association last August,⁽¹⁴⁾ referring to the diagnosis of early tuberculosis and its attendant difficulties, says, "Tuberculin seems to be almost a certain test of the presence of tuberculosis in its early stages. . . . In England I think most of us have been reluctant to arouse the reaction, but Dr. Turban follows other German observers and Prof. Osler in assuring us that he has never seen any harm ensue from it, although he always keeps the patient in bed until the reaction has wholly subsided. The old tuberculin is preferred for this purpose. Of all our means of detecting early tuberculosis this may prove the most valuable."

It is to be clearly understood, however, that I advocate this method of diagnosis only in those cases where the presence of active tubercle cannot be definitely diagnosed by other means, and that a monthly record of the true body-weight of asylum patients is of the greatest importance, as I stated in detail in my original paper in 1897.⁽⁴⁾

Referring finally to the question as to how isolation may best be provided for the phthisical insane, it would be beyond the scope of this paper to do more than offer one or two suggestions, omitting structural, administrative, and financial details, which must, of course, be left in the hands of those who adopt this means of prophylaxis. I recently contributed a paper to the *Archives of Neurology*, from the Pathological Laboratory of the London County Asylums,⁽¹⁵⁾ referring particularly to these asylums, and may be permitted to repeat it in part. "Two schemes at once suggested themselves: one is the erection of a central isolation hospital for phthisical patients, common to all London county asylums; the other is the building of cheap temporary bungalows at each of these

asylums. Each scheme has its advantages. The selection of a site, specially adapted by reason of its elevation and its soil, is certainly in favour of a central hospital ; while the difficulty and expense of the transference of patients appears to be the chief argument against it. It is now held by eminent authorities that the successful treatment of phthisical patients depends more upon how they are treated than where, more upon perfect hygienic surroundings than upon climate and soil.⁽¹⁶⁾ The idea, therefore, of a bungalow built upon the estate of each asylum appears to me to be a very attractive one."

"In conclusion I should like to suggest that a temporary bungalow should be erected as an experiment on the Claybury estate. I am given to understand that such a building could be obtained, which would meet all requirements and accommodate twenty-five patients of each sex, that is 2 per cent. of those in the main building, for a comparatively small sum."

(¹) *Journ. Ment. Sci.*, October, 1899.—(²) City of Manchester M.O.H.'s Annual Report for 1898.—(³) City of Sheffield, Special Report by M.O.H. on the Prevalence of Tuberculosis, 1899.—(⁴) *Journ. Ment. Sci.*, October, 1897.—(⁵) *Brit. Med. Journ.*, September 23rd, 1893.—(⁶) *Deut. med. Woch.*, April, 1897.—(⁷) *Brit. Med. Journ.*, 1898, vol. ii, p. 77.—(⁸) *Ibid.*, 1898, vol. ii, p. 495.—(⁹) *Trans. Assoc. American Physicians*, 1897.—(¹⁰) *Boston Med. and Surg. Journ.*, 1897.—(¹¹) *American Journ. Insanity*, January, 1899.—(¹²) *Brit. Med. Journ.*, 1898, vol. i, p. 357.—(¹³) *Ibid.*, 1899, vol. i, p. 1348.—(¹⁴) *Ibid.*, 1899, vol. ii, p. 1153.—(¹⁵) "The Prevention of Phthisis in the Insane," *Archives of Neurology*, from the Pathological Laboratory of the London County Asylums, 1899.—(¹⁶) *Vide* paper by Dr. A. Ransome on the "Open-air Treatment of Consumption," *Brit. Med. Journ.*, 1898, vol. ii, p. 69.

DISCUSSION.

Sir WILLIAM BROADBENT.—I have come here with great pleasure to endorse what I understood were the conclusions arrived at by many officers in asylums, namely, that it is the duty of those who are concerned in the management of asylums to make provision for the isolation of phthisical patients. I have heard with very great interest the paper, and have seen confirmed, as had generally been understood, that the mortality from tubercular disease in asylums is, one might almost say, enormous. Anyhow, it is so large as to demand very special attention ; and unless we are to look upon our insane patients as people whom it is desirable to get rid of, we must do our best to keep alive those who are committed to our charge, although asylum subjects. They are a melancholy spectacle,

yet they are human beings, and it is our duty to do everything that can be done for their welfare, and even for the prolongation of lives which are not altogether the happiest.

One of the points of interest which one would have liked to hear illustrated more completely was the comparison between the mortality from phthisis and tubercular disease generally, inside asylums and outside. It is understood of course that that comparison could only be accepted up to a certain point ; that there are many considerations applying to inmates of asylums which do not apply to those who are living an active life outside. It would, however, have been a matter of great interest to know exactly what the proportion was. Taking the absolute prevalence of consumption, one questions what it is due to. Of course I know less of the actual life in an asylum than perhaps anyone here, but one can see that there must be conditions which are extremely favourable to the dissemination of tubercle. For a considerable portion of the twenty-four hours the inmates of asylums are under cover. The necessity for warmth—the warmth which is necessary for these enfeebled organisations—must frequently interfere with efficient ventilation. You cannot teach an insane patient the precautions which are necessary to prevent contamination of surrounding objects by the sputum, and, as Prof. Clifford Allbutt pointed out in the address already alluded to, it is not simply the mass of expectoration which can be collected which has to be dealt with ; it is the spray which is disseminated in the act of coughing which is often richest in these tubercular germs. Whether these conditions alone, the necessary confinement indoors, the necessary association in large dormitories, the difficulties of preventing the expectoration from contaminating surrounding objects, explain the great prevalence of tuberculosis in asylums, or how far they are accountable for it, I am not prepared to say. There is of course the other side, namely, the fact that insane people are weakly organisations, and probably more predisposed from the fact of their disease as well as from the necessary limitations to their outdoor exercise. We have, therefore, in asylums exceptional conditions which favour the dissemination of tuberculosis, and this would imply that special precautions should be taken to prevent such dissemination. For this end I can imagine nothing better than the plan which has been proposed this evening,—that all patients in

whom there is a reasonable suspicion of tuberculosis should be tested by tuberculin. From all that I have heard regarding this test, it is absolutely safe. There is no fear of any harm being done to the patient, and reaction of it is undoubtedly the most trustworthy evidence we can possibly have of the existence of tubercle. Then it seems also that every large asylum, surrounded as it is by extensive grounds, has facilities for isolation and for treatment, and it has been a satisfaction to me to hear so excellent a scheme propounded, and so far as my judgment goes it is entirely deserving of support.

Sir JAMES CRICHTON-BROWNE.—Your discussion this afternoon, founded upon the excellent paper of Dr. France, to which I am sure we have all listened with the utmost attention, has reference to the necessity for isolating phthysical patients amongst the insane in lunatic asylums; and I take it therefore that that necessity is already recognised, and that it is the method by which isolation may be economically and effectively carried out that is henceforth most likely to engage your attention. Now it seems to me that since the publication of the statistics, marshalled and set forth in Dr. Crookshank's very able and lucid paper on pulmonary phthisis, to which the medal of the Medico-Psychological Association was awarded, reinforced and confirmed as they are by the tables and the figures submitted to us to-day, it becomes an imperative necessity to provide for the isolation of phthysical cases in asylums. Dr. Crookshank has shown that the official mortality from phthisis in our asylums—and I can discover no flaw or fallacy in his figures or his conclusions (and it is to be remembered that the official mortality falls considerably short of the real mortality),—he has shown that it is ten times that of the phthisis mortality in the general population, and is four and a half times that of the phthisis mortality in men from thirty-five to forty-five years of age,—that is to say, in the particular age group in which the mortality from phthisis is highest in the general population. Dr. Crookshank has also shown that whilst the mortality from phthisis in England and Wales has fallen during the last thirty years by 30 per cent., there has been no reduction in the mortality from phthisis in asylums, at least during the last twenty years.

Making all possible allowance for errors in these statistics, sift and rearrange them as you will, it is incontestably established, I

think, that phthisis pulmonalis is prevalent and is the cause of death in our public asylums in this country to an unnecessary extent ; that it is to a very considerable degree generated and propagated in them. Well, gentlemen, I have long held that opinion. Dr. Crookshank says that in 1892 I recommended the erection of detached blocks to be used as hospitals for consumption in connection with our public asylums, but long before that I had advocated isolation. I hope I shall not be regarded as egotistical if I quote a sentence or two from a paper of mine that appeared in *Brain* in 1883, that is exactly one year after Koch had discovered the special bacillus in tubercular disease, and had shown that it could be isolated and cultivated, and that the disease could be reproduced in its inoculation.

I said that in 100 general paralytic patients dying in the West Riding Asylum, consecutive cases, in all of which general paralysis was the certified cause of death, tubercular disease of the lungs was found in 25 cases ; in 17 out of 80 men, and in 8 out of 20 women. In 6 of these cases only the remnants of past phthisical disease were noted, crustaceous nodules, cicatrices, etc. ; but there was no room for doubt that in 19 cases the disease had arisen during the course of the general paralysis, and had been cut short by the natural termination of that malady, which it had perhaps in some degree hastened. In none of these had the disorganisation of the lungs spread to the extent which we are accustomed to find in patients who have died of phthisis. I go on to show the reasons that led me to believe that the phthisis in these cases was contracted in the asylum, and the special reasons why general paralytics suffer in this way, and also to explain that the mortality was larger in female lunatics in asylums than in males. I conclude with these words : " Until Koch's theory is disproved it would be prudent to act on the assumption that it is true, and to prevent the close association of persons actually suffering from phthisis with those who, from inherited tendency or deterioration of health, are especially liable to contract the disease. A large number of lunatic asylums have now detached hospitals for contagious diseases, which fortunately stand empty for a great part of the year, and it might be well to isolate in those buildings all cases of phthisis. The experiment could do no possible harm, and there is every prospect that it would be attended with benefit

to the victims of phthisis, and with safety to those who are in danger of its attacks."

From this extract you will gather that I then proposed the isolation of phthisical cases in asylums, but at that time my proposals fell upon deaf ears, and if I recollect rightly they were ridiculed in certain quarters. I made these proposals because I had been startled by the phthisis mortality in the West Riding Asylum when I became its medical director about thirty-four years ago; because I had seen there dropping around me from phthisical disease not only patients, but medical colleagues, nurses, and attendants, in whom I felt sure that the seeds of the disease had been sown during their sojourn in the asylum; because I had satisfied myself that asylum phthisis mortality could be materially reduced by attention to practical sanitation and hygiene, and because I entertained the sanguine expectation that asylum phthisis mortality might be still further reduced by measures calculated to prevent the dissemination of infective material.

Nowadays, as Dr. France has told us, we are all tolerably well agreed as to the merits of isolation, we are all agreed that a stringent obligation rests now upon asylum medical authorities to provide means for separating phthisical from the non-phthisical patients. But though we are theoretically agreed upon that point, much remains to be done before practical effect can be given to our agreement. Quite recently I saw a patient of mine in the last stage of phthisis in a large public asylum in this country, in a single room, the walls of which, the floor of which, besides the bed and the bedding, bore visible traces of dry phthisical expectoration. The single room occupied by that patient opened into a large ward in which patients were constantly passing to and fro, and they had access to the room if they desired to enter it, and it is not improbable they had whiffs of the tubercle bacilli as they passed the door. That sort of thing should not be, but it is still to a large extent unavoidable, for even where our asylum medical officers are deeply convinced, as I believe most now are, of the necessity for isolation, and eager to carry it out, there is still in many cases no possibility of doing so because of deficiency of accommodation for isolating and separating phthisical patients. But, gentlemen, I venture to predict that that sort of thing will not go on very long, for whenever it becomes generally

and popularly known that a certain proportion of lunatics in our asylums, deprived of their liberty, for the protection of the public or for treatment of affections of the brain and nervous system, while detained there are liable to be infected by a disastrous and often fatal, sometimes preventable disease, then I say that there will be an urgent public demand for isolation, and for preventive measures, above all for that primary preventive measure that is of paramount importance—the separation of the diseased from the whole.

I need scarcely remind you that in no class of phthysical cases is isolation more absolutely essential than in those in which phthisis is associated with insanity, for in those patients it is impossible to secure the observance of any minor precautions. It would be impossible to compel them to use special spittoons or handkerchiefs, or observe strict cleanliness, and there is nothing for it but their prompt removal from association with companions to whom they may become a source of danger of lung contamination. Expense must not stand in the way, and sure I am that whenever the Medico-Psychological Association has definitely made up its mind as to the system of isolation that ought to be pursued, then County Councils will at once generously and freely provide the requisite funds. The isolation of the phthysical insane is not by any means an easy or simple problem. There are great difficulties and obstacles in connection with it, but I feel sure that these will speedily disappear when once our asylum medical officers have taken the matter seriously in hand. In the meantime it does seem to me that those existing detached hospitals for infectious diseases which are attached to so many asylums ought to be as far as possible employed for isolation, so that phthysical patients may be promptly removed from the wards, where they are apt to be distributors of disease, and that where no such detached buildings are available special wards should be set apart for the phthysical patients. Very shortly, I have no doubt, sanatoria and special buildings will spring up in connection with our county asylums, provided singly by counties in the case of the large and populous counties, and perhaps in the case of small counties by several acting in conjunction. We shall have sanatoria in which isolation may be thoroughly secured, and in which the modern sanatorium or open-air treatment may be adequately carried out, combined

with that medical treatment of phthisis of which, I trust, we shall never lose sight.

During the course of last summer I ventured to urge upon my friend Dr. Hayes Newington, who is taking so active and so useful a part in connection with the building of the East Sussex Asylum, that he should there provide a sanatorium for phthisical patients on the plan of Dr. Burton Fanning's sanatorium at Mundesley—a simple wooden building with verandahs, shelters, and all necessary appliances for open-air treatment. In connection with some small asylums a chain of villas might be a suitable means of providing for such patients; but whatever style of building be adopted all apartments ought to have Parian cement walls and ceilings, so that they may be cleansed from time to time by hot formalin spray, discharged under pressure, the most powerful disinfectant known for use on the large scale. Where wooden buildings are adopted I would suggest that it should be stipulated that they are to be burnt down always at the end of ten years. I am a member of a small committee appointed to provide and manage a sanatorium for middle-class patients in the neighbourhood of London, to be provided by the munificent advance of £20,000 made by Mr. Lionel Phillips and Mr. Ruby. A site has been acquired in the neighbourhood of Ascot, and every effort is being made that the structure shall be as perfect as possible in every respect. The plans of that building and all particulars in connection will, I am sure, be at the service of any asylum medical officer who may be interested in the erection of a phthisical sanatorium. For the limitation—let us hope for the ultimate extinction of asylum-bred phthisis—isolation, that is to say, complete separation of tuberculous from non-tuberculous patients, is the primary and essential measure. But isolation is not everything. There are many other preventive measures that must receive close and constant attention. Even if we could at once weed out of our asylums to-day all tuberculous cases, there would still go on the constant introduction into them of new cases in that early or incipient stage of the disease in which diagnosis is so difficult. The seeds of tubercle abound around us, and while our first efforts should be directed to blow them away, to remove and isolate those persons in whose bodies they have germinated and taken root, and who have therefore become factories and storehouses for

their multiplication and preservation and distribution, we must not neglect to deal with those conditions of the human soil that are favourable to their reception, and those conditions of the environment that are conducive to their growth. We must not neglect to build up in every possible way the constitutional vigour of our patients generally—and asylum patients are almost invariably in a reduced state of health, and therefore peculiarly susceptible to tuberculous infection—and to surround them by conditions inimical to the life of the tubercle bacillus. Counsels of perfection are not of much avail when the mischief has been done, and when pecuniary considerations are against them; but I cannot refrain from expressing my opinion that our public lunatic asylums in this country are a great deal too big, and that it is deplorable to see them go on stretching out wing after wing, adding annex to annex, climbing up three and even four stories. There can be no doubt that there is danger in massing large numbers of the insane upon a limited area and in buildings that are piled up to a great height; and I think we owe it entirely to the constant vigilance and care of our asylum superintendents and medical officers if these dangers have not already resulted in serious evils. But our asylums are not only too big, but some of them are occasionally overcrowded, and it is certain that there is no more prolific cause of tubercular disease than overcrowding. Having regard to the habits of the insane and to their modes of life, it seems to me that unfortunately the allowance of cubic contents per head in asylum accommodation was originally fixed too low, and that in future an ampler allowance should be given. I think I could point to some asylums where, as regards day-space, the patients are too thick upon the ground. Then we have not only to consider overcrowding, but also that constant human saturation of asylum buildings which is going on. I think I could point to asylum dormitories in which every bed has been uninterruptedly occupied night after night for five, ten, twenty years,—even, in the case of one or two of the older asylums, for forty or fifty years. In this connection I think the recent researches of Dr. Mitchell Bruce as to the health of boys in training-ships preparing for the navy are deserving of very careful consideration. He found that the loss of life from tubercular disease amongst these boys is three times greater than in the general popula-

tion, and that the invaliding of these boys from the old long-inhabited wooden ships was just twice as great as that from the modern and new iron ships which are also used for training purposes.

As regards house accommodation, it appears to me that it should, like land, be left fallow from time to time ; that in every asylum there ought to be a block or ward beyond its proper accommodation, to which the patients from all the other blocks and wards could be moved in succession, so that every block might remain tenantless for a month every year, and be thoroughly exposed to wind and weather. I think also that asylum dietaries require revision. I do not suggest that they are not sufficient, as has been found to be the case in some prison dietaries. I believe they are ample; the amount of waste that one sees about, the splendid condition of all asylum pigs, attest the fact ; but I do question whether asylum dietaries are always sufficiently well balanced as regards their different constituents, and whether they all contain a sufficient amount of fatty elements. It is to be borne in mind that an immense change has taken place in the dietary of the population of this country generally since asylum dietaries were fixed, by the importation of fish, of foreign meat, foreign fruits, preserves, bananas, tomatoes, and all sorts of articles. These articles have found their way down to the very poorest classes of the community, and we must remember that the asylum population in our public asylums is not all drawn from these poorest classes. "Pauper" asylums they are still called, but I think that word should be abolished, for pauper asylums they are not in any true sense, for a very large proportion of the population is not drawn from the pauper class, but from the artisan and small trading and even professional classes. We must remember that patients drawn from these classes have been accustomed to varied and good food, and that it cannot be conducive to their mental tranquillity, therefore to their mental recovery, it cannot be preventive against phthisis, that they should be relegated to a monotonous fare. They should, I think, have a diet not merely wholesome and sufficient, but varied and highly nutritious, and served in such a manner as to tempt the appetite of sickly and nervous persons. Then the drying of clothes is a matter deserving of attention. A large proportion of the

clothes is dried in darkness. In my opinion there is no better disinfectant than sunlight. Then, again, I think that where round asylums the earth comes close up to the wall we ought to have asphalt to prevent that organic saturation of the soil which is constantly taking place. With regard to those special methods for the detection and arrest of phthisis amongst the insane in which Dr. France has been the pioneer, I think he was the first in this country to apply that harmless and very valuable tuberculin test for the detection of phthisis in lunatics in whom the disease is masked and very difficult to recognise in the early stage. I would suggest that whenever in the periodical monthly weighing of patients there are grounds for suspicion of the existence of tubercle, the tuberculin test should be employed. The whole question is one of the greatest interest and importance, and one that the Association will have to consider forthwith.

Prof. CLIFFORD ALLBUTT.—I am glad for the excuse to rise for a moment to add my testimony to the weighty and lucid paper on which this discussion has originated ; and if Dr. Harry Campbell will allow me to say so I think it will add much to the well-being of us old men to know that the younger men are carrying on the torch not only of knowledge, but of enthusiasm for humanity in the way which has been shown to us by the reader of that paper. Everything that I could possibly have said has been said, and said in terms better than I could, so that I would most gladly listen rather than interfere. I do not know that there are any points in which my personal opinion is of very much importance. As regards the bungalow, I think that is a very, very much better suggestion for isolation than the proposal of central or relatively central hospitals. It is of very great importance that patients should be kept near their friends, and there is, I trust, now less and less of that consigning to distant asylums which used to take place on a large scale. I think if we were to begin removing patients again to central hospitals we should set the public against isolation, and also be, I think, very improperly intruding upon the sphere of domestic affections by taking them from their friends. Therefore I should certainly urge that wooden and, as Sir James Crichton-Browne has said, combustible buildings should be set up in asylums, and be established near them on sites which are likely to be among the healthiest to be had

in the county. Another point I would insist upon is that of early diagnosis. The reason why I spoke, though somewhat timidly, in favour of the general use of the tuberculin test in my address at Portsmouth was that at the Congress at Berlin every experienced medical man I met assured me that the use of this remedy is safe if employed with caution, the patient being kept in bed until every sign of the reaction is over. There seems to me to be strong testimony that it may thus be without any danger whatever. When we take people away from their friends and set them apart, and their liberty is necessarily curtailed, we must be exceedingly careful what we do with them, and you will agree with me that to try any means which are in a crudely experimental stage would be unpardonable. But I think the use of tuberculin now is so far established that it may be very safely used without the possibility of its being said that anything in a crudely experimental stage has been tried upon the patients. With regard to the physical signs of phthisis, we very frequently hear of people detecting the disease in the early stage by the stethoscope ; this you never do. When pulmonary tuberculosis is manifested by physical signs you have got disease considerably advanced. If it goes a stage beyond this, and if the physical signs become obvious, remember the disease is passing into the incurable stage. I must say that I have been startled by the excellent diagrams we have seen, which put so very distinctly and clearly before us the relations of prevalence of the chief destructive diseases of asylums to each other. Although specially busy with lunacy and asylums for three or four years, I did not quite realise that the disastrous effects of phthisis in our asylums are so great as we see here. One thing more I should like to say, and that is that I think it ought to be officially known, that the continual tendency to increase the size of asylums has been done in defiance of the protests of the Lunacy Commission, which has urged to the utmost that no asylum should henceforth be built for more than 1000 patients. This opinion has been repeatedly communicated to the central government and also to local governments. The Commission had deliberately come to this conclusion, and I know that it has been a matter of regret that their wishes have been set at naught. I do not like the "tenantless ward" plan. We find that in all such cases of good resolution this system continues for

the first two or three years, but you know that the tenantless ward remains tenantless for a very short time only. The two instances in my mind did not survive more than four or five years. It would merely mean in the course of a few years that all the wards would be occupied.

Dr. WEATHERLY.—It has been my privilege recently to spend a month in one of the largest sanatoria in the world, erected at a cost of nearly £100,000. In conversation with a leading man there I learned that he believed that phthisis in large institutions might be greatly prevented if we insisted on thorough ventilation by day and night. If we would only adopt the German style of windows in our asylums we should have much better ventilation. My experience is that this question of ventilation is much neglected in hospitals and asylums because, as a nation, we hate draughts, and the poorer classes especially object to fresh air indoors.

Dr. HAYES NEWINGTON.—Sir James Crichton-Browne's reference to my position as Chairman of the Building Committee of a County Council tempts me to offer a few remarks. I am sure that the discussion will bear very great fruit in regard to the action of county councils. He is perfectly right in saying that it is necessary that some scheme should be formulated by this Association. As he said, I have had a good deal to do with the designing of a large asylum in Sussex on some new principles, and I have found it quite enough to carry through even a few ideas of a medical nature, which some non-medical people might call fads. I find there is a considerable belief growing in the public mind regarding points which are already well established by us. But this matter is obviously not set on a sure footing as far as we are concerned, and one has had to be a little cautious in going to work. In our sick wards there will be some nice little isolation dormitories, and, of course, plenty of single rooms can be set apart. Our system is decentralisation as much as may be, and there will be plenty of room for variation in other directions. We have no less than 160 beds prepared for, but not to be provided at present, some of which might be set aside for this purpose. I must say that although my views have met with every consideration from my colleagues, my hands on this point would be infinitely strengthened by a proper scheme drawn up by this Association. One quite foresees the tre-

mendous difficulties in planning an asylum—to carry out ideas which are not consolidated as yet. We should have to make provision for the absolute wrecks ; then there are others that we know will become wrecks ; and then there are others that we know may and will go down unless looked after. Further, it is very difficult to balance the physical needs and the psychical needs in such cases. One would think it extremely hard to send into a receptacle, whether burnable or not, with a lot of cases that we know will die in a few months in a degraded state of mind and body, recent cases of melancholia showing threatenings of phthisis. All those little points have to be taken into consideration, and the difficulty I have had in thinking over this matter very seriously since Sir James Crichton-Browne gave me the most excellent advice last year, is how we are going to deal with the phthisical needs of the cases *pari passu* with the psychical. I take it that the proper attitude of this Association is to accept the facts mentioned as proving the necessity for special dealing with tubercular cases, and then to set to work at devising the best methods.

Dr. HEAD.—We are agreed on the necessity for isolation and for early diagnosis. Dr. France's method is tuberculin. That must be put upon its trial. At one of the large county asylums nine elevenths of the male cases and two thirds of the female cases that were found to have tubercle on the post-mortem table had not been diagnosed as tubercular till within a few days before death. Why does this arise? Firstly, because the medical officers have infinitely too many patients to deal with. One to 500 patients is absurd. Secondly, the diagnosis of these diseases in the insane requires very special clinical knowledge. We have no treatise on phthisis in the insane ; why not ? We have treatises on phthisis in children and in adults. It is said that the diagnosis of phthisis in the insane is infinitely difficult. Of course that is true ; so would be the diagnosis if you applied the methods of the adult to the child. Tubercle takes quite a different course in the child compared with the adult. Therefore the signs are said to be paradoxical. The signs of phthisis in the insane are not paradoxical ; they are as definite and as much a part of the clinical features of phthisis in the insane as are the otherwise paradoxical signs of tubercle in children. Asylum medical officers should have fewer patients to deal with, and we should have a treatise on

phthisis as it appears in the insane. Then we shall be able to adopt Dr. France's diagnostic plan, which is one which will require very careful carrying out.

Dr. JONES.—I agree with Dr. Head that auscultatory methods require a lot of time, study, and experience to justify conclusions in the sane; how much more difficult must this be among the insane who are unable to assist the diagnosis! With reference to early diagnosis, it seems to me that Dr. France has suggested a most valuable symptom in the change of body-weight, and a great many of us rely very considerably upon this symptom. I am sure that every superintendent throughout the country would like to have one medical officer to every 112 patients, but what would happen? The maintenance rate would go up, there would be an investigation as to the high expenses.

Dr. FRANCE.—In reply to Sir William Broadbent, who desired to have the ratio of deaths from phthisis outside asylums and the ratio inside, I may repeat that I came to the conclusion that such comparisons are apt to be fallacious, and that Dr. Crookshank has fully discussed the point. I understand Sir James Crichton-Browne to state, on the authority of Dr. Crookshank, that there has been no reduction in the death-rate in asylums during the last twenty years. Either Dr. Crookshank or myself must be wrong, because during the last four years I find that the ratio of deaths from tubercle in all asylums in England and Wales has fallen in relation to the average residents from 15·8 per thousand in 1895 to 14·6 in 1898,—not a big drop, but in the right direction. In London county asylums it has fallen during the same period from 12·2 to 10·6. Dr. Head said that medical officers in asylums have too many patients to deal with. This depends to a certain extent of course upon energy and ability. Dr. Head proceeds to say that physical signs in the early stages of phthisis in the insane are not paradoxical. On my first appointment to an asylum five years ago I had but recently qualified, and then believed that I could detect phthisis and other diseases in the chest of the insane with the same facility as in the sane. I soon found out my mistake. If Dr. Head will give time and attention to these problems, he will also come to the conclusion that in many cases the physical signs are paradoxical, as Sir William Broadbent has pointed out, and as those present evidently believe.

The PRESIDENT.—I am sure you will wish me to thank the gentlemen who have come here this afternoon for their very eloquent speeches. Our distinguished friend Sir James Crichton-Browne has said many things which must prove subjects for our consideration. I have pleasure in acknowledging how much obliged we are to him for the very able way in which he has dealt with the subject.

The Council of the Association have not been indifferent to this very serious question, and have prepared a resolution, which I am asked to bring before the meeting, viz.: "That it be referred to the Council of the Association to consider as to the appointment of a sub-committee for the investigation and collection of evidence, and for practical suggestions as to the isolation of phthisical patients in asylums."

The President having put the resolution to the meeting, it was unanimously accepted.

On the Mental State of Auguste Comte. By WILLIAM
W. IRELAND.

IN the *Revue Philosophique de la France*, tome xlv, 1898, there are three articles filling eighty-seven pages on this subject, by Dr. G. Dumas. In order to appreciate their importance it may be well to give a short review of what was previously made known of the mental aberrations of that philosopher by his friend and biographer, M. Littré.⁽¹⁾

Auguste Comte was born on the 19th January, 1798. His parents were Catholics, his mother especially was dominated by the beliefs of that church. Delicate in health, with a weak digestion, he was from the beginning fond of study. When no older than twenty-four, Auguste Comte had begun to plan that system of philosophy which embraced so wide a view of the sciences. On the 19th of February, 1825, when about twenty-seven years of age, he married Caroline Massin, who is described as a bookseller. M. Littré adds in a note the date of the trade licence of Mademoiselle Massin, October, 1822, and tells us that Comte became acquainted with her through M. Cercler, a

man known amongst the innovators of the times, and who was one of the witnesses to the marriage. M. Comte's family objected, and Auguste Comte would have used the prescribed formalities to dispense with the parental consent had not the damsel been opposed to this. The required consent was at length accorded. As M. Comte admitted no theological belief, the marriage was purely civil. A few months after he took his wife to Montpellier, where she was well received. At this time he had nothing to depend upon save teaching mathematics and writing on scientific subjects. In April, 1826, he commenced a course of lectures in Paris to a distinguished audience, but after three lectures the course was interrupted by an attack of mania, said to be caused by excessive mental work and quarrels with the St. Simonians. This outburst was ushered in slowly by an unusual irritability and acts of violence to his wife. On the 14th April Comte made a determined attempt to drag his wife with him into a lake, and they were only saved from drowning by the strength and courage of the young woman.

On the 18th of April, 1826, Auguste Comte was placed under the charge of Esquirol. During this detention his mother made a formal effort to get her son withdrawn, in order to place him in a religious establishment. In the application she named Madame Auguste Comte as "the person with whom he lived," and attributed his derangement to her conduct. This irregularity was the cause of the failure of the application. After being under Esquirol's care for seven months and a half Comte was withdrawn by his wife, no way improved. She was confident that no treatment would succeed if the person directing it did not know the character of her husband. With some general medical directions from Esquirol, Madame Comte carried out her plan of treatment, which was to endeavour to procure whatever he desired, and to cross his wishes as little as possible. Living alone with him on a small allowance from his father, she indulged his whims and endured his threats. Once, when she was out on some message, he left the house and threw himself into the Seine. He was rescued with difficulty. Not recognising the validity of a civil marriage, Comte's mother got an order from the Archbishop of Paris that they should be married by a priest. After the ceremony Auguste Comte signed his name, adding the words "Brutus Bonaparte." At the end of the year 1828 Comte had completely recovered

his health and vigour. In 1832 he was made examiner in mathematics for the *École Polytechnique*, which assured him a competent income. This post required his travelling to different parts of France. To judge from his letters, the duties were by no means light. He complains that for six years he had not enjoyed entire leisure for twenty days at a time. As examiner he excited lively opposition with only a vague support. His anti-theological views, of which he made no secret, also caused irritation amongst the zealous Catholics. The uncertain nature of his tenure—for he required to be re-elected every year—kept up a feeling of insecurity and dependence. Though well qualified for his duties, he merely discharged them to gain an income in order that he might be able to go on writing the *Système de Philosophie Positive*. To this work Auguste Comte during twelve years devoted all his spare time, following a course of study and contemplation severely marked out, avoiding all distractions, seeking no side ways of popularity, and refusing to modify his views for either fear or favour. The last of the six volumes appeared in 1842, with a preface containing reflections upon Arago and others so unpleasing to the Council of the Polytechnic School, that for 1844 he was not re-elected to his post of examiner, and thus, on the completion of the work which was to change the social condition of mankind, the author found he had lost the greater part of his income.

In the *Système de Philosophie Positive* Comte exposed a new arrangement of the sciences, clearer and more comprehensive than any hitherto attempted. He traced the genealogy of knowledge, beginning with the most simple and general, and descending to the more complex and special, and showed that it was in this way that the sciences had been successively evolved. It was at once a lucid arrangement, a useful method, and a history of the growth of human knowledge. His method is of service in all the sciences together, and in each of the particular sciences. Beginning with mathematics, astronomy, and physics, he descended to chemistry, biology, and history, and sought to construct a new science of sociology. In the execution of this great plan, covering the whole field of human knowledge, Comte shows prodigious and sustained powers of mind. Few are even able to follow him all the way.

His method of literary work is explained by M. Littré. In composing a volume of his *System* Comte thought over the

outlines without putting anything to paper. He then passed to the division, and on to the details. After the general plan came the special plan of every part. When this was accomplished Comte said his volume was made. When he sat down to write he found without fail all the ideas which formed the weft of his work, and introduced them in their order and connection. His memory sufficed for all. When he had a certain number of leaves written out he sent them to the press, and kept up with the printing, making scarcely any change in his proofs, of which he never saw more than one. Though such a proceeding might be favourable to unity of conception, it was fatal to compactness of expression and polish of style ; hence his books are prolix, diffuse, and full of repetitions. Students of his philosophy generally prefer the versions which have been made by his disciples and admirers. The best exposition for English readers is the book of John Stuart Mill, *Auguste Comte and Positivism*.

In France the work attracted little notice and sold slowly. A few copies got to England. A well-merited recognition of the first two volumes was given by Sir David Brewster in the *Edinburgh Review* (July, 1838), and a digest of the whole work was published by Miss Harriet Martineau.

Comte was saved from pecuniary distress through Stuart Mill, who got three of his friends, Grote the historian, Sir William Molesworth, and Mr. Raikes Currie, to contribute 5000 francs, the equivalent of the salary which he had lost. Comte benignly accepted this subsidy, and made a dignified remonstrance when it was not continued the next year. To the end of his days his disciples contributed enough to provide for his wants, which, though whimsical, were scarcely extravagant. Comte thought he had a right, in doing a work for the benefit of the whole human race, that he should be kept above destitution. He made little endeavour to disguise the very high opinion he had formed of his own merits. He regarded it as no compliment to be compared to Bacon, and deemed himself the equal, if not the superior, of Descartes and Leibnitz, and to this valuation Stuart Mill and Littré give their adhesion. It is not thought in good taste that a man should proclaim his own mental superiority save by guarded implications, yet it is important that one should accurately gauge his own capacity, and he who undertakes great tasks must know that he possesses

great mental powers. During the intense application of mind required for the composition of his great work, he was several times subject to crises threatening a return of the cerebral excitement of 1826. Madame Comte showed her anxiety by repeatedly consulting physicians about symptoms which she had observed in her husband, principally sleeplessness and irritability of temper. One of these nervous crises was noted in 1838, another in 1842, and a third in 1845. Aware of the danger of a relapse, Comte had what he called his system of cerebral hygiene. He abstained from coffee, tobacco, wine, and all excitants; was careful of his diet, and tried to avoid painful emotions. He found too many chagrins in his own house. Madame Comte was evidently a woman possessing great literary talents, and took a deep interest in her husband's pursuits. He was solicitous to have her opinion upon his writings, and was angry when, instead of compliments, she proposed improvements or gave criticisms. In a letter to Stuart Mill the philosopher complains that his works have been prepared and accomplished under the heavy weight of material embarrassments, and in the midst of painful and absorbing troubles resulting from the *quasi*-continuity of civil war, the domestic duel,—that is to say, he had long been quarrelling with his wife, which ended in August, 1842, in a complete separation. In such disputes the woman generally gains the sympathy of those who take a gossiping interest in the affair, as she is more willing to state her grievances. There is no question that Madame Comte did this to M. Littré, who interceded for her and remained her defender to the last. M. Comte confided the departure of his wife to Stuart Mill in a letter in which he says, "Married for more than seventeen years, through a fatal inclination, to a woman gifted with a rare elevation of mind both moral and intellectual, but brought up in vicious principles and following a false appreciation of the necessary condition of her sex in the human economy, her total want of inclination for me has never permitted her affectionate disposition to compensate for her unruly and overbearing tendencies." When we consider that M. Littré was an admirer and a disciple of Auguste Comte, and was, moreover, a man who led a worthy life, we are naturally disposed to follow him in taking the part of Madame. Nevertheless the information given by Dr. Dumas leads us to think that M. Littré has misled his readers by

leaving out some facts and bringing others into prominence. Dumas roundly asserts that the causes of Comte's insanity in 1826 were excess of work and domestic chagrins, Madame Comte having quitted the house to live with a lover. Dumas tells us, "His wife deceived him; four times she quitted his house, and she made his home life hard and jangling." "During seventeen years of cohabitation," wrote Comte to Littré, "I have often conceived thoughts of suicide, to which I should probably have yielded had the bitterness of my domestic situation not been neutralised by the increasing sentiment of my social mission." Comte feared the combination of intellectual strain with painful emotions. This occurred in 1842, the date of the fourth departure of his wife, the result being another nervous crisis. This time he refused to allow her to return, although he continued for eight years to correspond with her by letters, in which he showed an interest in her welfare and took for granted her sympathy in his fortunes. He paid her an annuity of 3000 francs, which in two years he reduced to 2000. In a letter to Littré he writes that, though her conduct was very licentious, she never showed a real attachment to any one.

Two years after this final separation Comte met with Clotilde de Vaux, then about thirty years of age. She is described as a lady of amiable manners, with fair silky hair, languid blue eyes, and soft and delicate beauty. Her husband was in prison for some infamous crime, and she was living with her parents. She had literary tastes and wrote weak stories and verses. Acquaintance began by the lending of books, and æsthetic conversation soon ripened into a deep passion on Comte's part. There was a "crise d'amour," during which he kept his bed for eight days. The lady managed so to balance her attractions and repulsions as to keep the philosopher hovering round her. Her love, if warmer than friendship, was Platonic; not so his. Comte had much in his nature both of *l'amour gout* and *l'amour passion*. To the first Madame de Vaux accorded no indulgence. To quote M. Dumas, "elle lui conseillait de chercher ailleurs des soulagements, et Comte répondait en termes précis: 'Vous exagérez, Clotilde, la grossièreté masculine, du moins chez les nobles types. Elle nous permet en effet le plaisir sans amour, mais seulement quand notre cœur est libre; lorsqu'il se sent vraiment pris, cette brutalité nous devient impossible. J'ai dû longtemps

recourir, comme tant d'autres, à ces ignobles satisfactions puisque toutes relations sexuelles avaient déjà cessé dans mon triste ménage, un an avant votre propre mariage. Mais depuis que je suis à vous, ma continence, quoique parfois douloureuse, est toujours peu méritoire parce que je ne pourrais pas vivre autrement.'” The weak state of Madame de Vaux's health gave a sober colouring to her fancies. “For a year,” wrote she to her impassioned admirer, “I ask every evening if I have the strength to live till the morning. It is not with such thoughts that one can do inconsiderate acts.” Another time she seemed more yielding. “Since my misfortunes,” she wrote, “my sole dream has been maternity, but I have never thought of associating in this rôle save with a man who was distinguished and worthy to understand it. If you believe that you can accept all the responsibilities attached to family life, say so, and I will decide my lot.” Comte lost no time in accepting the responsibilities, only to find that the aspirant to maternity had changed her mind. This caused him deep distress. Six weeks after he wrote, “Although the convulsive agitation has almost disappeared, my sleep remains insufficient,—if not as to its total duration, already about normal, at least for its depth and continuousness.” Truly the philosopher knew little of woman's heart. During a year of intimacy, which was always becoming closer, Clotilde was wasting away from consumption, and in 1846, at the commencement of her thirty-second year, she died in the arms of Auguste Comte, after having received extreme unction.

In a letter to Madame Comte he announced his *liaison* with Madame de Vaux, and recounted the death of that lady who had become his eternal colleague and his veritable spouse. This attachment had brought out the affective and sentimental side of his character. We have frequently occasion to notice how simple people give to general ideas a particular application, but one requires to converse with philosophers to observe particular impressions being generalised into doctrines. Although much of Comte's system of *Politique Positive* had been formed in his mind before he met with Madame de Vaux, the influence of this passion modified in many respects the character of his speculation. His political philosophy showed a great falling off, which his enemies ridiculed, his more critical admirers deplored, and scarcely any of his disciples entirely

followed. No man can be master of all the sciences. Even in Comte's first work when he came to biology there was a falling off; his remarks on psychology were of little depth; his interpretations of history, though much admired by some, were, in my opinion, superficial and often incorrect, and he showed an ill-grounded contempt for political economy. Nevertheless M. Comte firmly believed that his studies in the exact sciences were but a prelude to his scheme for reorganising society, for changing the face of the world. For proposing changes in the social constitution he lacked the essential qualification that he should know something of human nature, yet he knew nothing of the nature of the ordinary man, and indeed little of the nature even of the philosopher; hence his scheme for the reorganisation of society was absurd, and even if it could be carried out there is no reason to believe that it would make mankind any happier. For about twenty years he abstained from reading the newspapers, even from scientific periodicals. He only read a few favourite poets. Thus, while preparing schemes for the salvation of society, he would not feel the pulse of the world. Unlike other social reformers, Comte did not propose to level ranks or to divide property. The proletaires were to be deprived of all political power, and their destinies determined by an intellectual bureaucracy who would classify them like specimens in a museum. Labour was to be directed by chosen captains of industry. France was to be divided into seventeen small republics. He had regulations for the smallest particulars of daily life, for he had no sense of the ridiculous. There were prayers and an elaborate ritual with no God. Men were to be taught to love others better than themselves, and, as a reward for labours in the cause of humanity, seven years after a man's death it was to be solemnly adjudged whether his remains should be disinhumed, to be buried in the sacred wood which was to surround every temple, where the living should pay a make-believe worship to the *Grand Être*,—he might rather have said the *Grand Néant*.

One of his fancies was that our earth, before man came upon it, once possessed intelligence and will, and may have used its physico-chemical activity, so as to render its orbit less eccentric, and have modified its own shape by a judiciously planned series of explosions. Our benevolent planet may also have rendered the inclination of its axis better fitted to the wants of

the Grand Être. This, at first proposed as a fiction, was in the end nourished into a belief as perfecting the unity of his system, and making up the Trinity which his disciples were enjoined to glorify, *i. e.* Humanity, the Grand Être ; Space, the Grand Medium ; and the Earth, the Grand Fetish.

If Comte had gone on studying biology, psychology, and sociology with the same mental power and application which he had brought to the exact sciences treated in the *Système de Philosophie Positive*, he had written his name much higher in the history of philosophy ; but intoxicated with self-conceit, he fancied that he had reached such a height of wisdom through his studies in the exact sciences and his perfection of method, that a few easy deductions were sufficient to enable him to prescribe solutions for any remaining question in the complicated subjects of psychology, morals, and sociology. Thus, after recommending as a part of his system the refuted localisations of Gall, he set himself to construct a cerebral topography. He assumed *a priori* eighteen mental faculties to exist in given regions of the brain, and founded upon this assumption without waiting for any confirmation from anatomy or physiology. He regarded all his previous studies as but a preparation for his social scheme, and declared that all scientific pursuits should be treated as an idle waste of time if they could not be proved to have a direct bearing upon the welfare of humanity. " All books were to be destroyed save about a hundred, and all animals and plants thought useless to man were to be extirpated." There is no doubt that if Comte had held the power, he would have carried all these absurdities into practice. Indeed, he believed that the world's acceptance of his doctrine was so near, that if he lived to be as old as Fontenelle or Hobbes he would enjoy the dignity of being recognised as the grand high priest of a regenerated humanity. A few disciples gathered round him, who regarded him with veneration. Auguste Comte died in 1857, of an internal cancer, at the age of sixty. He left a long testament, with his usual attention to minute details. The disposal of his estate could not be carried out without the consent of his wife.

Comte left the furniture in the Rue Monsieur le Prince and all his books and manuscripts to thirteen executors, who were to keep the rooms as a museum and to publish the manuscripts. The annuity of 2000 francs was to be offered to Madame

Comte, and in the event of his widow refusing her consent to the conditions of the will, he left in the power of the executors a sealed paper, which, he declared, contained a secret so grave that if it were divulged his unworthy spouse would be abandoned even by her principal defender (M. Littré). Not heeding this threat, Madame Comte refused her consent to the will, and declared herself heiress. The executors recoiled at making use of the secret, and proceeded by legal methods; they declared themselves the creditors of M. Comte, and thus brought the furniture and books to a sale. These were bought up by the Positivists. Madame Comte, who, according to Littré, could have entered a preferential claim to most of the money, waived her rights that her late husband's debts should be paid; but the struggle was for the possession of the manuscripts. Apparently Madame Comte wished to prevent the publication of the testament, which was injurious to her, and of the amorous correspondence of her husband with Clotilde de Vaux. She demanded that the will should be annulled on the grounds that M. Comte was insane,—in fact, had never entirely recovered from the attack of 1826. This ground was afterwards abandoned; but she pleaded that he was mad when he made the will.

The matter was not called before the tribunal of the Seine before the end of 1869, and it was a year ere it was decided. The advocate employed by Madame Comte made much use of the philosopher's writings for facts indicating insanity. He recounted the theatrical performances by which Comte sought to keep fresh the memory of his sweetheart. By his passion for Clotilde he had learned to subordinate to the heart the whole of human life. Sentiment ought always to dominate the intelligence. "To become a perfect philosopher," he wrote, "I wanted especially a passion at once deep and pure, which made me sufficiently appreciate the affective side of humanity. Such emotions exercise an admirable philosophic action in placing the mind at once at the true point of view, which by the scientific way one can only attain by a long and difficult elaboration." Five days after the death of Clotilde he instituted prayers, which he recited three times a day before the couch on which the adored one used to be seated. He recalled her memory, and gave her thanks for ennobling his life. Once a week he went to her tomb, to which he also made

an annual confession of what he had done during the year. He recommended every disciple to fix his thoughts upon the three forms of womanhood—the mother, the daughter, and the wife. If one or other were not adorable enough, the votary might put some other woman in the place. Comte himself had for his three guardian angels Madame de Vaux, his mother, and a young woman who acted as cook.

Dr. Dumas observes that the mystic has need of images, sometimes of very vivid ones, and often this persistent image becomes transformed during an ecstasy into an hallucination. It seems to have been so with Auguste Comte. Longchamps tells us⁽³⁾ that one day Comte had his eyes fixed upon the memento of Clotilde, when he beheld her lying deadly pale as he had seen her for the last time. Comte falls on his knees, calls her and blesses her, speaks of his grief, of his despair. He implores her to help him, for she alone could make life supportable to him and give him courage. After a time he rose, calmer and more resigned. From that day Comte endeavoured to reproduce by his will the beloved vision. Every morning and evening he saw Clotilde. He knelt before her altar, and renewed his resolution to live for her and for humanity. It appears from the testament that this hallucination was sometimes auditory as well as visual. Dumas adds it is evident that Comte was never the dupe of his hallucination, that he led up to it and made use of it in order to sustain his mystic passion.

The image of Madame de Vaux transfigured and magnified appears everywhere in his later speculations. Through this shallow and sickly Frenchwoman all women were to be glorified and held up for men's adoration. In obedience to a fancy, which he did not favour during Clotilde's life, her sentimental admirer proposed a theory which should free the whole sex from the selfish brutalities of instinct, and render husbands superfluous. To use Comte's own words, "si l'appareil masculin ne contribue à notre génération que d'après une simple excitation, dérivée de sa destination organique, on conçoit la possibilité de remplacer ce stimulant par un ou plusieurs autres dont la femme disposera librement."

It may be said that one could make a case against the sanity of many a speculative philosopher by collecting his whimsical theories and leaving out his sensible ones. Moreover much of what men in modern Europe write to or about

their sweethearts is mere inflation of style, though men in love often do commit sillinesses which they may come to smile at themselves. Comte's admirers advance that Descartes and Leibnitz, in their readiness to follow the principles which they had laid down to logical consequences against common sense, were guilty of absurdities as great, or nearly as great, as Auguste Comte; they do not say as many absurdities. We have no time to consider this serious accusation against these two philosophers.

Dumas observes that Comte's pride differs from that of the megalomaniac—that it was justified by his achievements in philosophy, and no doubt these were great; but his pride was extravagant, though whether it passed the limits of sanity may be a question between his admirers and his critics. One of his disciples, M. Allou, has published a certificate signed by seven medical men, amongst whom is Dr. Congreve of London, and Dr. Robinet of Paris. These physicians state that “they all having known Auguste Comte during the last years of his life, from 1850 to 1857, and having all seen him during this time, some daily and others at intervals, certify that they have never perceived in him, in his conversation, in his actions, nor in any of his writings, the least trace of intellectual or moral derangement, of mental alienation, nor of monomania of any kind whatsoever; that they have never observed anything amiss about him, nor had the least suspicion of such; and that, on the contrary, Auguste Comte had always appeared to them as enjoying, and having enjoyed till the last moment of his life (without speaking of his incontestable genius), the most complete lucidity, a most extensive and well-balanced memory, a perfectly sane judgment, and a correct reason, steady calmness, strong perseverance, and the most generous disinterestedness, which are the mental and moral characteristics most opposed to those of insanity.”

In 1870 the tribunal before which the case was pleaded rejected the accusation of insanity, and declared the testament valid so far as it did not prejudice the rights of Madame Comte. They decreed that the manuscripts of M. Comte should be restored to the executors of the will. The court also ordered that the sealed paper should be destroyed, and some passages injurious to Madame Comte should be suppressed in publishing the testament. Dr. Dumas lets us know

that the purport of the sealed paper is now no longer a secret. The revelation which Auguste Comte held over his wife was, that before her marriage Caroline Massin had been a prostitute, and that her name was inscribed in the register of the Préfeture. We are not told whether Comte became aware of this before or after his marriage. At any rate it did not cause Littré to abandon her; on the contrary, he always speaks highly of her solicitude for her husband's welfare and her devotion to his memory. It is to be hoped that this attempt to strike at the woman who bore his name was the worst act of a life otherwise honourable.

Without questioning the justice of the court's decision it may be said that during the last years of his life the fine intellect of Auguste was deranged to a notable degree. Even warm admirers like J. S. Mill and E. Littré mourn the decadence of a great genius. In the words of Dr. Dumas, after the mania in 1826 *il cotoya la folie*; though by his system of hygiene and mental regimen he escaped such another attack, he was subject to severe nervous crises, and remained for the rest of his life a "neuropath."

(1) *Auguste Comte et la Philosophie Positive*, par E. Littré, Paris, 1864. (2) *Revue Philosophique*, p. 178.

Comparative Lunacy Law. By A. WOOD RENTON, Esq.,
Barrister-at-Law.

CONSIDERING the closeness of the ties which the existence of such bodies as the Medico-Psychological Association have created between alienists throughout the world, it is surprising that so little attention has been paid to the comparative side of the medical jurisprudence of insanity. In the spring of 1898 there was published in New York a treatise by Dr. Clevenger and Mr. Bowlby, an American barrister (*Medical Jurisprudence of Insanity, or Forensic Psychiatry*, 1898, Lawyers' Co-operating Publishing Company, 2 vols., pp. 1356), in which excellent work in this direction, so far as England and the United States are concerned, was done. The book is a monument of labour. Every conceivable branch of forensic

medicine is discussed with learning and ability, and an admirable index, both of cases and of subjects, renders fairly accessible to the reader the otherwise bewildering mass of legal information which the editors have so industriously accumulated. It is not, however, specially of efforts of this kind that it is desired to speak in this paper. The problems of lunacy law and lunacy administration with which civilised countries have to deal are, to a great extent, similar. It would obviously be of immense international importance if the solutions attempted of these problems in different parts of the world and the results of such experiments were systematically chronicled from time to time, so as to give the lunacy authorities, lawyers, and experts of the chief countries of the globe the benefit of each other's experience. It may be of interest to select some instances of the manner in which different countries have dealt with questions that are constantly arising. Take first interdiction and curatory. The voluntary and judicial interdiction of Scots law is sufficiently familiar to alienists (for full information on the subject see Stair, i, 6, 37; iii, 8, 37; Bankt., i, 7, 118; Ersk., i, 7, 53; Bell, *Com.*, 139, *Prin.*, S. 2123; Fraser, *P. and C.*, 554).

In England the only analogue is to be found in the law as to catching bargains and undue influence. In France, however, an elaborate system of interdiction is in force. A person of full age who is in a usual state of imbecility, insanity, or madness is to be interdicted, even if such condition is accompanied by lucid moments (Civ. Code, Art. 489). Any relative is allowed to apply for the interdiction of his relative. In like manner, any married person may do the same for his wife or her husband (Art. 490).

In case of madness, if the interdiction is not applied for by the husband or wife or the relatives, the Republic's Attorney (Public Prosecutor) must do so; and in cases of imbecility or insanity he can likewise apply for the same against a person who has no husband or wife or parents (relations) known (Art. 491). All applications for interdiction shall be made to the Tribunal of First Instance (Art. 492). Acts of imbecility, insanity, or madness shall be stated in writing. Those who apply for the interdiction shall produce the witnesses and papers (Art. 493). The tribunal shall order the family council⁽¹⁾ to give its opinion on the condition of the person whose inter-

diction is sought for (Art. 494). Those who have applied for the interdiction cannot form part of the family council ; nevertheless the husband or wife and the children of the person whose interdiction is sought for can be admitted without having the power to vote (Art. 495). After having received the opinion of the family council the tribunal shall examine the defendant in the judge's room ; if he cannot appear there, he shall be examined at his home by one of the judges appointed for that purpose, attended by his clerk. In all cases the Public Prosecutor (*Procureur de la République*) shall be present at the examination (Art. 496). After the first examination the tribunal shall, if necessary, appoint a temporary administrator to look after the person and property of the defendant (Art. 497). A judgment upon an application for interdiction can only be rendered at a public sitting after the parties have been heard or summoned (Art. 498).

If the tribunal rejects the application for interdiction, it can nevertheless, if the circumstances require it, order that the defendant shall no longer be allowed to go to law, compromise, borrow, receive capital or give discharges therefor, convey or mortgage his property without the assistance of a counsel, who shall be appointed to him by the same judgment (Art. 499). In case of appeal from a judgment rendered in the Court of First Instance the Court of Appeal may, if it deems it necessary, again examine the person whose interdiction is applied for, or have him examined by a commissioner (Art. 500). All decrees or judgments ordering interdiction or the appointment of a counsel shall, at the instigation of the plaintiffs, be docketed, served upon the parties, and recorded, within ten days, among the notices which must be posted in the court room and in the offices of the notaries of the district (Art. 501). An interdiction or the appointment of a counsel shall take effect from the day of the judgment. All acts performed subsequently by the interdicted person, or without the assistance of a counsel, shall be void by right (Art. 502). Acts previous to the interdiction can be annulled if the cause of the interdiction notoriously existed at the time these acts were performed (Art. 503). After the death of an individual the acts performed by him can only be attacked on account of insanity, if his interdiction had been pronounced or applied for before his death, unless the proof of insanity results from the very act which is attacked

(Art. 504). A husband is by right the guardian of his interdicted wife (Art. 506). An interdicted person is assimilated to a minor as to his person and as to his property. The laws on minors shall apply to the guardianship of interdicted persons (Art. 509). The income of an interdicted person must be specially used to better his condition and hasten his recovery. The family council may direct that he be taken care of at his residence, or be placed in an asylum, or even in a hospital, according to the symptoms of his disease and the amount of his fortune (Art. 510). Interdiction ceases with the causes which have given rise to it. Nevertheless the withdrawal thereof shall only be obtained by following the rules set down to obtain an interdiction; and the interdicted person can only resume the use of his rights after a judgment ordering the withdrawal of such interdiction (Art. 512).

The German system under the new civil code (which came into operation on January 1st, 1900) resembles the French, but presents a sufficient number of distinctive points to justify a brief sketch of it. A person is incapable of managing his affairs, and also disqualified from at any time instituting legal proceedings with effect, who is in a condition of disordered mental activity excluding the free exercise of the will, unless the disorder is only a temporary one, and still more so who is placed under guardianship (*Dormundung*) on account of mental disease (s. 104). In the latter case the effect of the guardianship is to put the lunatic in the same legal position as a minor who has completed his seventh year (s. 114). The validity of a contract into which he enters without his guardians' consent depends on whether the contract is beneficial to him or not (s. 108). A unilateral contract which he makes without the above-mentioned consent is ineffectual (s. 111); he cannot draw up a will (s. 2229), but he can revoke a will formerly made (s. 2253). On the other hand, he possesses unlimited capacity for such arrangements as he, after his lawful guardian has authorised him to enter into contracts as to service or work, makes in regard to the entry on or abandonment of service or work of the permitted kind, or the fulfilment of the obligations resulting therefrom (s. 113). It is worthy of notice how much more detailed the German system is than the French with reference to the extent and the consequences of the incapacity. The idea of authorising a certain area within which

the insane ward may exercise his own discretion as to contracts and engagements is an ingenious and interesting one. A person of full age, who has been placed under guardianship, has a curator as his legal guardian (s. 1896). A major for whose subjection to curatory a motion is made can be placed under interim curatory if the judicial authority think it necessary for the prevention of serious danger to his person or property (s. 1906), and a person under interim curatory is, in regard to capacity, in precisely the same position as a minor who has completed the seventh year of his age (s. 114).

By Section 52 of the Civil Procedure Rules, as modified by the law of May 1st, 1898, a person is capable of instituting legal proceedings if he can, according to the common law, bind himself contractually. The application to have a pension subjected to curatory can be made by spouses, by a relative, by the lawful guardian proposed for the person alleged to be insane, and further by the Public Prosecutor to the Landgericht. The proceedings are in the first instance instituted in the court of the Amtsrichter, which corresponds roughly to the English county court or Scotch sheriff's court. The practice of this tribunal is to enter into a personal examination of the alleged lunatic in presence of one or more competent experts, and to receive other evidence as to his mental condition. It can, in particular, sequester him up to six weeks in a medical establishment if this seems necessary owing to his state of health. The decision of the Court on a question of curatory can be impugned in an action by the insane person himself, by his lawful guardian, by the persons otherwise entitled to apply for curatory, and also by the Public Prosecutor. The procedure is substantially identical with that in other civil proceedings. If the insane person again becomes mentally sound, the supersedeas of the curatory can be applied for by himself, his legal guardian, or the Public Prosecutor. Here again the decision rests with the Court of the Amtsrichter. If the application is refused, an action can, as before, be instituted, and the case will be decided by means of it.

The main interest of the above analysis of the provisions of French and German law as to the interdiction and curatory of the insane consists in the light that they throw upon the lines on which a system of dealing with "borderland" cases, from the legal standpoint, can be worked. It may have yet to be

considered whether some machinery of the kind is not needed in England. The law as to "catching" or unconscionable bargains does not protect the class of persons who in Scotland or France may be interdicted. The law of undue influence is a weapon of most uncertain action. Something might be done, if necessary, by an extension of the summary procedure established by Sect. 116 of the Lunacy Act, 1890, to cases of "facility."

The next point to which, in surveying the field of comparative lunacy law, we may call attention is the similarity of the manner in which civilised countries, both in the Old World and in the New, have solved the chief problems of lunacy administration. The necessity for the interposition of a judicial check on the commitment of the insane (with special procedure, in most instances, for dealing with cases of emergency), for the regular official visitation of all classes of receptacles for the insane, the importance of classifying patients according to the nature and severity of their malady, and of keeping mechanical restraint within the strictest bounds, the protection of patients' correspondence, the right of access to them of their friends,—these and all the other ordinary questions which the administration of asylums presents have been settled in Britain, France, Germany, and the United States on identical lines.

"This similarity is partly due, no doubt, to the fact that civilised nations, brought face to face with the same administrative problems, will naturally light upon similar solutions of them. But its origin is mainly attributable to historical causes. The typical modern asylum system is the product of the great movement for reform which, associated in England with the name of William Tuke, in France with the names of René and his disciples, and in America with that of Ray, swept almost simultaneously over both the Old World and the New at the end of the eighteenth and during the first half of the nineteenth century. The points of contact between the lunacy laws of modern Europe and America are the heads of the reformation which that movement demanded and accomplished." (*Journal of the Society of Comparative Legislation*, N. S., vol. i, p. 272.)

There are other features in comparative lunacy law which are instructive. There is a growing tendency in English-speaking countries to supersede the old formal inquisition by such a summary system as Sect. 116 of the English Lunacy Act, 1890, embodies. The question of the civil capacity of the insane is being gradually freed from external standards, and

made to depend, as it ought to do, on the facts of particular cases. Room is being found in the criminal law for the plea of moral insanity and the theory of modified responsibility. It may be noted, in conclusion, that a bold step has just been taken by Germany. The new Civil Code (s. 1569) recognises the lunacy of a spouse as a ground of divorce, but only where the malady continues during at least three years of the union, and has reached such a pitch that intellectual intercourse between the spouses is impossible, and also that every prospect of a restoration of such association is excluded. If one of the spouses obtains a divorce on the ground of the lunacy of the other, the former has to allow alimony, just as a husband, declared to be the sole guilty party in a divorce suit, would have to do (ss. 1585, 1578). The inquiry which this paper has initiated might easily be carried further, but perhaps enough has been said to show the lines on which useful work might be done.

(¹) A family council is composed of six blood relatives in as near a degree of relationship to the lunatic as possible; if there are not six, relatives by marriage are then chosen. Such a council is always presided over by the *Juge de Paix* of the district where the lunatic is domiciled (Civil Code, Arts. 407 and 408).

The Physical Signs of Insanity. By F. GRAHAM CROOKSHANK, M.D.Lond., late Assistant Medical Officer Northampton County Asylum.

IT is disappointing to anyone trained in modern clinical methods, and accustomed to hear alienists urge with so much insistence that insanity is a brain disease, to find so little apparent attention paid to what may be called the physical signs of insanity.

It would be foolish to declare that these physical signs have not been observed. But is there not a tendency to speak of them merely as interesting phenomena met with amongst the insane, and to forget that they are consequences of those brain changes which make up the somatic background to what we call insanity? Have we not of late somewhat neglected the old-fashioned method of induction from clinical observations?

The stigmata of degeneration, it is true, have had attention

enough. But they are not physical signs of insanity ; they are merely marks—valuable, no doubt—of a general protoplasmic vice which reveals itself, so far as the brain is concerned, by idiocy, criminality, insanity, eccentricity, or wayward genius.

We must believe that the physical phenomena of insanity—no less than those of sanity—are, if not strictly dependent on, at least the concomitants of certain activities or changes, cellular or molecular, of brain tissues. And unless there are brain cells whose activities are aimless as far as the body is concerned, and are simply the concomitants of physical states, and unless in insanity the brain changes are restricted to these hypothetical cells, we must admit that the cellular activities which accompany insane states of mind have some resultant effects on the physical economy.

It is to these resultant effects—the necessary result of any brain disease accompanied by insane states of mind—that in the first place we assign the term “physical signs of insanity.” But it is sufficiently obvious that, at least in the case of general paralysis, there are modifications of physical functions the result of changes in brain cells whose activities so far as we know are not accompanied by conscious or vividly conscious states of mind. Such modifications are not necessarily physical signs of insanity, inasmuch as they may be the result of purely local brain affections, tumours, etc. But when occurring in the insane they are direct evidence of the insanity being, as we believe it is, connected with brain disease.

Attending the out-patients of any large hospital one frequently enough sees patients who, when tested, fail to recognise or to correctly name objects presented to them. We are told that such persons labour under amnesic defects ; and the defect is regarded as a physical failure and located in one or other brain convolution. In every asylum one may see scores of patients exhibit these particular amnesic defects ; though, to be sure, in their case the defect is only one of many disabilities, and hence does not stand in strong relief. Should we not do well to endeavour to analyse, no less carefully than our colleague of the out-patients, this amnesic defect, and to localise the peccant convolution ? It is true that in the one case the pathologist will find a small hæmorrhage, or may be a thrombosis. In the asylum cases no organic change may be found. Yet a failure of function has an anatomical situation not a whit

the less real because it does not happen to have a gross "organic" cause obvious to our dull eyes.

Now Dr. Hughlings Jackson has enunciated the remarkable law, that in every case of insanity a negative lesion of highest centres exists, which causes some paralysis, sensory or motor (*Journal of Mental Science*, iii, 1888). Dr. Jackson's evidence, however, relates almost entirely to the insanities of epilepsy and to post-epileptic states; and though Dr. Anderson has brilliantly discussed general paralysis, and Dr. Mercier coma, there seems to have been but little attempt to correlate what observations have been made of the physical signs of insanity in the widest and popular sense of the term.

Many valuable hints, it is true, are scattered through Dr. Francis Warner's papers, and Dr. Turner has contributed some accurate clinical observations (*Journal of Mental Science*, i, 1892).

But Dr. Turner's observations, which were concerned chiefly with the asymmetry of expression seen in the insane, would have been more valuable if he had expressed the physical signs in terms of the nerve centres responsible rather than in terms of the muscles involved. As Dr. Turner says, it is by studying paralyzes accompanied by physical states that we shall be enabled to identify the cortical sites whose integrity is necessary for the accomplishment of those physical changes whose psychical concomitants are peripherally expressed by muscular contraction. But in nerve centres movements not muscles are represented, and some of the movements seen in insanity, and called movements of expression, depend really on lower (not cortical) centres, and have little, if any, conscious accompaniment. Hence the apparent dislocation of expression and emotion in insanity. A spasm or weakness of one half the face, and affecting one half the occipito-frontalis, cannot depend on cortical changes. It must be the fault of the seventh nucleus or nerve. Hence to speak of asymmetry of "expression" in cases exhibiting this sign is incorrect.

No one expects the psychical state of a tabetic with double ptosis to be necessarily that of sleep or repose; and no one talks of abnormality of expression in such cases.

The essentials of expression do not lie in peripheral muscular arrangements; these may be more or less brought about from different levels. What is important is the state of those brain

cells whose activities are accompanied by the appropriate emotion or other conscious state.

We should then clinically attempt to express the physical state of the insane, (1) in terms of the peripheral resultant, (2) in terms of the governing brain region involved. It is so that we describe a case of brain tumour; it is so that we should describe a case of insanity from brain decay or intoxication.

The most obvious of the physical signs of insanity are, of course, those muscular arrangements truly expressive of the predominant insane emotion. We do not cry because we are sad, as most would say; nor are we sad because we cry, as others would say. We are sad, and we cry, that is all that we know. But the crying, whether in sanity or insanity, is the physical sign of the emotion; the resultant of those cellular activities which are the physical concomitants of sadness.

Psychologists have detailed the motor resultant of these cell states; and Jackson summed the matter up once and for all when he said, "The emotional centre represents all parts of the body, though doubtless the heart and viscera first and most." And a full acceptance of this proposition entails one or two interesting consequences.

I see a man daily who suffers from an overwhelming sense of anxiety, fear, dread; no very uncommon case. The physical signs of his insane emotion are precisely what psychology would lead us to expect; he displays weak voluntary innervation; a certain amount of vaso-constriction; a contraction of certain facial muscles, and, most important, a rapidly-acting heart. His pulse rate is 120. There is no discoverable cardiac disease in the ordinary sense of the word; there is no reason to suppose any.

His rapid pulse rate is simply a part of the expression of his predominant emotion.

We are bound to recognise that there is representation of the heart in the highest brain levels, inasmuch as one result of the activities of those brain cells whose changes are accompanied by psychical changes is a rapid cardiac action. In this insane man the rapid pulse rate is, in fact, a physical sign of brain disease—of perversion of function of the higher brain levels.

There is cardiac representation in the lowest level—that we know. We know of no conscious state accompanying outgoing

processes from that level: if any accompany the incoming processes they must be the ordinary organic cardiac sensations.

It is most probable, then, that the viscera, like the muscles, or rather like movements of the muscles, are represented at more than one brain level. And, just as many of the psychical states corresponding to certain highest level muscle actions—crying and other modes of expression—are those we call emotions, so it seems that the psychical activities correlated with highest level visceral representations are “emotions” or complex states. For example, take respiration. With lowest level interference with respiration we have no conscious state; with voluntary changes in respiration we have certain simple conscious states; with highest level changes in respiration we have complex states of consciousness of which the change is a physical sign, *e.g.* with the arrest of respiration, attention (Ribot).

The cortical representation of viscera, if a fact, has still further importance. It is true that many think a “visceral delusion” proof of visceral disease, and are innocently surprised that so little relief is gained by treatment of the viscus. Is not the visceral delusion a proof, not of visceral disease, but of disorder of the “visceral centre?” The peripheral morbid condition, if any, is surely a physical sign of the brain disease. A woman has sexual delusions—central failure. Surely the local pelvic congestion is a physical sign of the central state, just as the tachycardia of my just-quoted case is a physical sign of the brain disease and insane psychosis.

Who would seek to cure a lesion of the Rolandic area by treating the resultant palsy locally? And who would think the brain tumour an “effect” of the paralysed hand? Yet such seems to be the logic of alienists who clamour for gynæcologists and general physicians instead of seeing in these uterine congestions, cardiac irregularities, and so forth, physical signs of disease of certain brain areas, disease none the less real because it may depend on no very gross lesion.

Certainly in some cases, as in that of a lad I know who thinks he has monkeys at his heart, there does exist organic visceral disease. But the fault lies with the central nerve cells, in this case the cardiac centre cells, which, perhaps of never great stability, break down functionally and for association under extra strain.

As a rule, the condition of the special viscus of a patient with delusions relating to that viscus, depends on functional perversity of the central cells representing that viscus, no less than does the twitching of a thumb in Jacksonian epilepsy depend on a lesion of the Rolandic cortex.

If any proof were wanting of the elaborate way in which visceral movements and functions are represented in the highest brain levels, it is surely to be found in the phenomena of vascular "stigmata," and in experiments such as that of Ribot in which, by concentrating attention on a finger tip, pain or discomfort is felt as a result of very localised vaso-dilatation.

It is very probable that just as we see motor or sensory derangements from affections of different brain levels, so visceral delusions may be able to arise at more than one level. At any rate hallucinations may be due to failure at the periphery or lower levels, while delusions are of more central origin.

But to return to the physical signs of insane emotions. Bearing in mind what has been already pointed out, that apparent incongruities of expression do not really depend on the mechanism of expression at all, but on low level or peripheral and independent changes, we should be able, from a study (1) of certain muscular dispositions; (2) of certain visceral states, to deduce at any rate the predominant tone of feeling in the insane, as certainly as we do in the sane. And moreover, the abnormal persistence of certain muscular dispositions or visceral conditions is evidence of nerve disease, actual and localisable, just as the abnormal persistence of an idea or tone of feeling becomes proof of insanity.

Leaving now those physical signs indicative of changes in the brain cells correlated with emotional states, we may direct attention to other clinical evidences of local brain disease in insanity. If any case under consideration be one of "general paralysis," hesitation is not shown in naming anatomical situations as the probable seat of cell changes causative of the muscular states. Yet there is a curious reluctance to do so in cases of ordinary insanity. Though certainly Sir J. Crichton-Browne has pointed out how the abnormal persistence of certain gestures and movements of the insane must be due to abnormal functional activity of certain cortical regions, in the Rolandic area probably.

Again, if certain symptoms of insanity, such as incoherence, defects in writing, failure of powers of recognition, inability to read aloud correctly—all familiar enough in cases of mania and dementia—if all these be studied carefully, isolated, so to speak, they are seen to correspond closely with the aphasias, amnesias, agraphias, and so forth, of the hospital clinic. They are all signs of definite disorder of function of the brain—physical signs of brain disease. Why, then, do we not employ the ordinary clinical terms in describing our cases of insanity, instead of vaguely stating “patient is lost; confused and incoherent.” Certainly there is this difference: the lunatic is unaware of his defect; his paraphasia is one symptom among many. The paralytic may be aware of his defect, and it stands out crisply in the clinical picture.

Again the blunting of sensation met with in demented, and the great increase in reaction time, is surely a physical sign, no less than in tabes, of direct nerve failure.

The general motor weakness of persons with melancholia is obvious enough; why should we not call this paresis? If it were marked on one side of the body only we should do so; as it is general we ignore it, or talk of lack of will power. But surely it is a weakening of muscular power depending chiefly on defective central nerve activities.

In mania of the acute and delirious types surely excessive reflex activity is obvious, and the movements are incoordinated.

Dr. Mercier has suggestively shown that every case of coma is really a case of total paralysis. And in advanced dementia is there not very real paresis, with almost total loss of truly “voluntary” movements?

I know an asylum attendant of great sagacity and native shrewdness. He is always in the habit of speaking of feeble patients as “much paralysed,” and incurs no little ridicule in consequence. But I remember the case of an old man, to most people a case of senile mania, who displayed restlessness and great weakness. The attendant in question persisted in saying the man was much paralysed. At the post mortem disseminated cerebral sarcomata were found, subcortical and in the motor areas. The man was paralysed truly enough. Would he not have been so, save for the name, if the failure of

his Rolandic areas had depended simply on lack of nutrition and arterial disease?

The motor weakness, the feebleness of advanced dementia, is true paralysis, a physical sign of disease of the middle level. In fact, if, looking at motor physical signs alone, we consider that in melancholia there is general weakness of innervation (especially of finer highest level actions), that in mania there is failure of complex co-ordinated movement, and unfettered activity of lower states, that in deep dementia only automatic and quasi-automatic movements are retained, and that in coma, where the bodily powers, together with the mental, fine to the vanishing point of death, practically only movements of the vaso-motor and respiratory organs persist; we have the "types of insanity"—melancholia, mania, dementia, and amentia—arranged in the order which Dr. Sankey years ago declared to be the clinical order. And this order of the "types" or rather "stages" of insanity corresponds in essentials, if not superficially, to the order of the stages of general paralysis.

The physical signs of a comatose man, whether the coma be due to trauma, poisons extrinsic or intrinsic, or to organic disease, are, as Dr. Mercier has shown, those of a man in whose brain all functions above the lowest (bulbo-spinal) level are abrogated.

Respiration is of the bulbar type; no modifications of respiration or circulation can be produced by stimulation of the highest centres.

Voluntary movements are not performed; only the lowest "most organised" of automatic movements.

Sensation is absent and so are sensory processes. In dementia sensory processes, though not absent, are greatly blunted; new complex movements cannot be acquired; such movements as are performed are only "organised" habitual movements.

Reflex activity, though not abolished as in coma, is very sluggish, and it is almost impossible to produce, through the mechanism of the highest level, pupillary, cardiac, and respiratory changes. In fact, with the disappearance of the emotion, the power of expression has gone. Speech is limited; amnesia is profound; agraphia and alexia, mind blindness, and word deafness very common. In fact, the physical signs are those of a brain in which the cortical faculties are reduced almost to

the uttermost, and, in katatonia and allied states, it is to the basal ganglia that control of the musculature seems⁷ abandoned.

In mania the physical signs clearly enough seem those of unfettered reflex activity, of destruction of highest controlling levels. The exaltation and excess of nerve tension spoken of by some writers mean, not real excess of nerve action, but uncontrolled action of a lower type, the exaltation being merely as the spasm of the legs in lateral sclerosis. The finest and most complex movements are badly performed; sensation, so far from being more acute, is actually blunted.

The state of the viscera—the cardio-vascular and respiratory viscera—demonstrates also the loss of highest controlling powers. The physical signs of mania, in fact, are the signs of a brain in which the highest level is degraded, and functions of the body are governed and ordained by the middle level.

But in melancholia the physical signs, well enough known, the sluggish innervation, the poor circulation, the feeble respiration, the impaired acuteness of sensation and sensory processes relating to the external world,—all point to a general enfeeblement with commencing decay or impairment of the highest level.

Looking in this way at the physical signs of insanity, one is forced to ask, was not Sankey right in calling the chief types of insanity (melancholia, mania, and dementia) stages of one progressive process?

Is not every case of insanity in a sense a case of general paralysis—a stage in a progressive dissolution of brain, sometimes partial, sometimes general, sometimes arrested, more often not to be arrested? Is it not the fact that the more complex the causation of an insanity, the wider the brain area seriously affected, the less curable the lesion, the more the clinical picture resembles that of a stage of general paralysis? The term “general paralysis” is, of course, a convenient one for certain brain dissolutions which run a certain course and have more or less well ascertained causes and pathology. But the cases confounded clinically with the general paralysis of the text-books are those of general brain dissolution from alcoholism, from general arterial disease, meningeal disease, or disseminated tumours. Is not general paralysis, then, not a thing apart, but the perfect example of progressive brain dissolution, imitated more or less perfectly by the other insanities.

It is true, and herein lies the chief difference, that the abrogation of brain function in the ordinary insanities is less often due to gross and permanent organic changes; but then, the more general and the more permanent the change, the closer becomes the resemblance to a stage of true general paralysis.

As Hughlings Jackson said, in every case of insanity there is a negative lesion causing sensory or motor paralysis, and it is to the observation and enumeration of these paralysees—the physical signs of insanity—that our clinical efforts should be applied.

So far I am afraid I have dealt chiefly with generalities. I will endeavour to enumerate some of the physical signs of brain disease in the insane. Some classification is necessary, and at present it seems best to follow anatomical and clinical paths, though there necessarily must then be some confusion between physical signs of insanity—signs met with *only* in the insane, and physical signs of brain disease met with in the sane as well as in the insane,

Let us take first the cranial nerves and the nerve tracts from the nucleus to the cortex:

1. Perversions of smell in delusional insanity, indicating aberrant functioning or faulty associations of highest centres, probably in gyrus fornicatus.

Blunting of sense of smell in dementia, indicating defect from highest centre downwards.

2. Perversions of the sense of sight in delusional insanities indicating defects or faulty associational paths in highest visual centres; marginal convolutions.

Hemianopias in post-hemiplegic insanities, and in insanities, associated with unilateral gross lesions, indicating disease in occipital lobes or lower tracts.

General failure of visual acuteness, colour sense, etc., most marked in demented; general failure of visual nerve-paths.

(Word and mind blindness in cases of mania and dementia, failure of cortex around marginal convolutions.)

3. Recurrent and temporary palsies and spasms; mydriasis (unilateral), ptosis, squint, myosis, and retraction of eyelids (upper), indicative of functional disturbance in the third nucleus or any of its component parts. Seen chiefly in manias.

4. Squint (oblique), occasionally with maniacal excitement.

5. In dementia, general blunting of sensory processes connected with fifth nerve.

6. Internal squint common in mania ; usually due to temporary weakness of one external rectus ; defect of sixth nerve or part of nucleus.

7. Facial spasm and weakness ; asymmetry of frontal muscles, indicative of defects in seventh nucleus.

8. Auditory hallucinations and delusions ; in most cases probably defect, associational or otherwise, of highest centres : temporo-sphenoidal lobes.

Deafness (general) in dementia. Word deafness and amnesic aphasia in chronic mania, dementia, etc., failure (extensive) in temporo-sphenoidal lobes.

Vago-glosso pharyngeal nerve.—Tremor and deviation of tongue—perhaps a central defect.

Spinal accessory nerve.—Shallow, slow respiration without emotional variation, in dementia.

Lack of expectoration power—of laryngeal and palatal reflexes—in advanced dementia.

Sympathetic system (cervical ganglia). Paralytic myosis ; unilateral and bilateral flushings of face ; unilateral sweatings ; seen in various forms of mania, and especially in epileptics.

Sensory tracts.—Repeated observations have shown sensation, and so necessarily sensory processes, those of touch, heat, cold, and pain, to be blunted in melancholia, more so in mania, more in dementia ; we know them to be abolished in coma.

Spinal reflexes we find, like all nervous processes, sluggish in melancholia, in mania exaggerated from loss of cerebral inhibition, and in dementia almost in abeyance.

Movements ; functions of the motor tract.—As indicating disturbance of the highest (motor) level, we have—in melancholia—a difficulty of imitating new movements ; in cases of deeper dissolution a failure of execution of higher movements ; in advanced and acute mania a failure of all complex movements other than those purely automatic ; in dementia a restriction of movements to a few well-organised (voluntary) movements.

Looking at *muscular* states we have, indicative of general nerve failure, the loss of tone in melancholia ; indicative of greater failure of higher levels, the low level “reflex” tone of mania. In other cases we have more complicated conditions

indicative of varying depths of dissolution ; the katatonic, cataleptic rigidity of some cases, the total paralysis and flabbiness of coma.

The general wasting of some cases of insanity doubtless means cord invasion (anterior horns), just as the greyness of hair, skin conditions, and bedsores indicate disturbance of what are called trophic centres. All these because general are less obvious than if partial.

We have sluggish peristalsis in melancholia, and sphincter relaxation in mania and dementia—doubtless dependent on failure of the appropriate cord centres, just as priapism in mania is no less a sign of cord activity (morbid, unfettered) than when the spine is fractured or we have a myelitis.

Certain other signs must specially be mentioned.

We are inclined to connect a feeble, small-volumed pulse—that of poor innervation—with melancholia, a bounding, dilated one—that of diminished inhibition—with mania, one unaltered by emotion with dementia. So, too, one is inclined to connect a sluggish medium pupil with melancholia, one in which there is spasmodic myosis or mydriasis with mania—again the unvarying pupil with dementia.

May I now venture to anticipate some objections and criticisms ?

One may be told that these “paralyses” of insanity are not the paralyses of the hospital ward.

Certainly, there is a difference ; the hemiplegic has will, but no power. The comatose general paralytic and, in less measure, the dement, has neither will nor power. That in mania the paralyses are transient is true enough ; in other cases it is, in fact, the universality of the paresis that prevents us seeing it.

Again, it may be said that many of these signs that have been mentioned are not “paralyses” at all ; that an internal squint of a maniac or a smoothed left forehead is not due to paralysis of a sixth or seventh nerve, but to excessive action of a third nerve or of the opposite seventh. It may be ; but in any case there is localised disturbance of brain function. The detail matters little ; the real point is that these things are evidence of brain disease, even though the disease be purely functional. Perhaps some one will see that all this is obvious ; that one flogs a dead horse.

My only answer is that in no text-book that I know of are the physical signs of insanity set forth or mentioned as evidence of brain disease. Perhaps it is a question of description and expression ; still the proper expression of facts is surely a matter of importance.

We have to-day in medicine, and in our speciality in particular, a vast and unwieldy accumulation of facts. It seems to be forgotten that the proposition of hypothesis is a necessary part of induction, and that without theory there is no useful observation. Let us be unafraid then of cultivating a wholesome imagination, corrected by, and not in opposition to, observed facts.

On some of the Rarer Skin Diseases affecting the Insane. By THEO. B. HYSLOP, M.D., Medical Superintendent, Bethlem Royal Hospital ; Lecturer on Mental Diseases, St. Mary's Hospital ; Demonstrator of Psychology, Guy's Hospital.

It would be quite impossible during the few minutes at my disposal to deal in an exhaustive manner with the numberless varieties of skin affections met with in asylum practice. I have therefore selected from an immense mass of material a few of the rarer affections, and shall deal with them in such a way as to call for your experiences and criticisms rather than make any personal attempt to lay down the law with regard to any of them.

While fully recognising that some skin diseases may be classed among the neuroses, I believe that several writers on this subject have classed as neuroses diseases which are not more prevalent among the insane than the sane, and which on inquiry have no distinct relationship or evidence of neurotic origin. All asylum physicians are familiar with the brown muddy tints in mania, the cracked and scurfy conditions in melancholia, hypochondriasis, and stupor ; also the brown discoloration in general paralysis somewhat suggestive of Addison's disease. Attention has also been directed to pallor, leaden hues, mottlings ; the wine-coloured skin of demented ; the semi-

transparent, thin, pale, glossy skins of the scrofulous; the ecchymoses of demented and paralytic, and the so-called "insane fingers." I shall in this paper, therefore, take little or no account of these, or of the various affections of the hair, nor shall I deal with the innumerable perversions of the cutaneous senses. My remarks will be confined to the questions of—

Anomalies of pigmentation.

Pseudo-pellagra.

Herpes.

Pemphigus.

Adenoma sebaceum.

Feigned diseases.

Pigmentation.

I shall not discuss or even mention some of the various unhealthy conditions associated with the abnormal deposit of pigment in the tissues of the skin. The pigmentation due to diseased states of the blood, as in ague, syphilis, malignant disease, chronic rheumatism, various cachexiæ, etc., are very well known, as are perhaps also the almost innumerable instances due to reflex irritation from the abdominal and pelvic viscera. Dr. Long Fox, in his book on the *Influence of the Sympathetic on Disease*, has cited a large number of authorities and cases. He there refers to the influence of certain violent emotions in the production and deposit of pigment, and regards emotional pigmentation as a sympathetic disorder. Other observers have reported cases in both sexes of partial pigmentation of the face due to anxiety. One such case (under the observation of Dr. Fox) was so marked as to give rise to fear of Addison's disease, but the pigmentation passed away when the anxiety was removed. Laycock quoted a case of a woman who during the French Revolution incurred the anger of the Parisian mob, and with difficulty escaped being hanged in the streets. Her terror caused a gradual black discoloration of the whole body, and this remained with her until her death thirty-five years afterwards. The tint was deeper on the neck and shoulders than on the face; on the face and chest the tint was the same; it was less deep on the abdomen and legs; the joints of the fingers were blacker than other parts; the soles, palms, and folds of the inguinal region

paler. In this case the change was gradual. In another case of Laycock's, an hysterical woman, under pressure of grief, showed melasma of the forehead, eyelids, and face, with hyperæsthesia of the affected surfaces. This condition occurred during successive pregnancies, therefore it is questionable how far it was of the reflex or of the emotional type.

I have here three photographs of a case of dementia showing well-marked pigmentation over the body. The pigmentation is of old standing and probably due to liver trouble.

The photographs (1 and 2) well illustrate this abnormal condition due to emotional causes. The patient became intensely depressed in consequence of long-sustained business worries and anxieties. There were symmetrical patches of brown pigment on his forehead, neck, fingers, and round his eyes. Later in the attack he developed patches on his penis and glans, also on his pubes, buttocks, anterior axillary fold, back, and thighs. The deposit of pigment on the forehead was confined to a V- or pear-shaped area having its angle at the root of the nose, and spreading upwards and outwards quite symmetrically to the supra-parietal region. At the end of a year he had become demented, but when he left us the pigmentation was gradually disappearing. I was unable to trace the case further. A case is quoted in the *Annales Médico-Psychologiques* for 1876 of *melanopathia* in a demented general paralytic. Slight darkening of the skin of the eyelids was first observed, and during eight days this discoloration increased in extent and intensity. Each side of the eyelids and skin over the malar bone presented an absolutely black colour, while a narrow black band crossed the upper part of the nose and united these patches. Seven days later the colour began to fade, and in fifteen days had completely disappeared. At no time were there any inflammatory signs or special mental symptoms. Irritation of the pelvic organs is accountable for discoloration either in patches or all over the face. Sometimes these patches are quite symmetrical, as in the illustration.

Dr. Swayne has published a case in the *Obstetrical Transactions* (quoted from Long Fox). The subject was a blonde of rather florid complexion, with brown hair and blue eyes. At the time of her confinement there was a peculiar appearance of the skin of both forearms and hands. There was a very general discoloration of the skin of the forearms, more



No. 2.

To illustrate Dr. HYSLOP'S paper.

marked on the dorsal than on the palmar aspect. On the dorsal aspect it occupied all the surface of the arms, and existed in patches on the hands, the knuckles, and all the fingers. The skin in these spots was of a rich yellowish-brown colour, or as dark as the skin of a mulatto. The skin had been similarly affected in each preceding pregnancy, and the dark colour first appeared about the end of the third month, and increased *pari passu* with the development of the areola, until it attained its acme at the time of labour. After delivery it soon began to diminish in intensity, and in about three months had entirely disappeared. Her mother had two children, and in each of her pregnancies both the arms and neck were spotted in a similar way; and, being a very fair woman, the discoloration was still more evident than in the daughter.

Pseudo-pellagra.

I have seen three female cases in which the backs of the hands have quickly (within forty-eight hours) become intensely brown or even almost black, perhaps as the result of short exposure to the sun. This discoloration was in each case followed by desquamation. In none of the cases was I able to obtain evidence of reflex irritation, nevertheless I was not satisfied that the result was due solely to exposure to the sun. So remarkable were the conditions, that I endeavoured to obtain information about their nature from many sources. It was suggested by Dr. Sandwith, of Cairo, and by an Italian physician who saw the cases, that the condition was allied to pellagra. I have since found that Dr. Fèvre in 1878 described pellagroid affections as occurring in the insane, especially during spring and summer, and attributable to exposure to the sun. They are found on all parts exposed to the sun, but chiefly on the back of the hands. The skin assumes an earthy colour, becomes wrinkled and fissured, in some parts thick, in others thin and glistening. The epidermis is broken up into scales, attached by their centres with edges curled up, in some parts forming little heaps, beneath which the skin is red, with slight serous oozing. These pellagroid affections are to be distinguished from true pellagra.

Dr. Fèvre has also described a condition ("peau ansérine") known to most of us as occurring in persons suffering from great debility. Here the skin, without exposure to the sun,

becomes dry and tawny like rumpled parchment, without either inflammation or exfoliation.

As early as 1867 Dr. Brunet wrote a paper upon the effects of insolation upon the insane. His observations were derived from experiments performed in the asylum at Mort. He found that exposure to the sun was attended by acute inflammation of the skin, with redness, pain, and tension, and in severer cases of phlyctenulæ containing serum, blood, or pus. When sero-purulent effusions occurred, the superficial parts of the epidermis appeared to be mortified. Sometimes there was fever and insomnia, and even gastro-intestinal irritation with diarrhœa. It terminated by desquamation of the cuticle or persisted in the chronic form.

The chronic state was characterised by reddish-brown discoloration of the skin, a loss of elasticity, fissuring, and peeling of the epidermis. The desquamation in slight cases was simply furfuraceous and painless, but in severe cases plates of skin were dislodged after acquiring the form of blackish crusts. Brunet compared these conditions to those of pellagra, in which there is a special inflammation of the digestive canal throughout, an erythema of the skin accompanied by desquamation and fissuring, and a grave lesion of the nervous system marked by vertigo, tremor, and unsteady gait, a painful sensation along the spine, and a remarkable disturbance of the intellectual faculties. In the three cases I observed there were no symptoms other than the local skin affections which were incidental to the insanity, and not the cause of it. Moreover in each case the characteristic spinal tenderness of pellagra was completely absent. In one case a residence of fifteen years under a tropical sun had failed to affect a skin which, during an attack of insanity, became affected as the part result of a brief exposure to our own sun.

M. Brierre de Boismont has given an exhaustive discussion on the connection between pellagra and insanity; the conclusions being that insanity, while undoubtedly being a frequent complication of pellagra, ordinarily does not appear until after the pellagra. This, however, is not invariably the case, as has been shown by Legrand du Saule in an excellent article in the *Gazette des Hôpitaux* (1864), where he has cited cases in which the psychical disorder preceded the alterations of nutrition and the cutaneous phenomena.

I find in the *Journal of Mental Science* of 1866 a report by Dr. Howden of a case of pellagra occurring in the Montrose Royal Asylum. In this case the erythema and diarrhœa did not appear until six months after the mental symptoms. The eruption affected the hands, face, and neck, and latterly the upper surface of the feet (which were habitually uncovered). Exposure to the sun's rays always exaggerated the symptoms, and recovery ensued with the onset of winter. Dr. Howden regarded this as a sporadic case of pellagra, but I am inclined to think that the diarrhœa and the eruption may have been accidental in their coincidental occurrence, and that the condition may have been pellagroid. Since Lombroso's work on pellagra was published in 1869, clearly proving the relationship between pellagra and the special poison from the maize, I have been unable to find any records of true cases of pellagra occurring in British asylums. Possibly, however, the pellagroid condition of the hands may have been observed by many. I exhibit photographs of two cases of pellagra, for the use of which I am indebted to Dr. Selvatico d'Estense.

Roussel used the term pseudo-pellagra for those conditions similar to pellagra as seen in chronic alcoholism with peripheral neuritis and in demented and general paralytics. All the cases I have seen have been females suffering from mania of an intractable type. It is difficult to account for these partial pigmentations. If we assume that there is a parietic state of the vaso-constrictors, we are still at a loss to explain the local distribution.

Loss of Pigment.

Long Fox states that when *loss* of pigment seems to depend on emotional causes, it does so by their acting as paralyzers of the cerebro-spinal nerves. He has described an instance in which patches of ivory-white morphœa occurred on the temple, the side of the nose and upper lip, in association with uterine troubles. Godlee records a case of vitiligo in which there was a strong nervous influence.

I can only recall one case of insanity in which there was evidence of local pallor (other than morphœa), and which could hardly be regarded as an instance of loss of pigment. A single woman, aged forty-six, suffering from mania of the recurring type, before each attack had a patch of white on her upper

lip. This remained unchanged for two or three days until the maniacal symptoms had fully developed, and then it disappeared. Each attack was ushered in in this way. So far as I am aware this is quite a rare symptom. I was unable to determine any relationship between its existence and any disturbance of the uterine functions. Dr. Savage tells me that he has seen in some cases of insanity white patches appearing, only to disappear with recovery.

Herpes and Pemphigus.

Herpes is not uncommon in the insane, and doubtless all of us have seen many cases. Mickle records an interesting case of general paralysis with acute herpes zoster over front, inner, and partly outer side of left thigh, with some pemphigoid blebs. The herpes extended upward from the groin, trending outwards above the crest of the ilium to the sacral and lower lumbar region. An isolated patch of it over inner side of head of tibia. No complaint of pain. The eruption left cicatrices. I have seen several cases of herpes in the region of distribution of the superior branch of the fifth nerve in the later stages of progressive paralysis. The occurrence of *pemphigus blebs* on the fingers, forearms, feet, and legs in the last stages of general paralysis is interesting from many points of view. Déjerine found the nerves of the subjacent parts undergoing a process as of atrophied breaking up and involution in a case where pemphigus blebs appeared on the forearms and legs shortly before death.

It is very difficult to determine the ætiology of these blebs and bullæ, and since I studied Köhner's writings on pemphigus, which purport to prevent the frequent mistakes in diagnosis between syphilitic and bullous affections, I have found far greater difficulty. In all the cases I have seen there has been a history of syphilis, and the patients have been in the last stages of general paralysis. The affection has seldom been polymorphic, and there has been no evidence of herpetic distribution. They have not been pruriginous nor erythematous. In one case I saw many years ago there was a bullous eruption associated with high temperature, but in the cases of general paralysis here referred to there was no definite relationship between the eruption and the temperature.

Inasmuch as the relationship of general paralysis to syphilis still forms a problem for controversy, and we are not clear upon the question as to whether general paralysis is syphilitic in nature or in origin only, I think it advisable to speak of the eruption as "pemphigus parasymphiliticus." Fèvre says he has seen pemphigus develop with the cure of insanity—a kind of critical eruption. Dr. Savage says he has never seen such cases; nor have I; but all are agreed as to their unfavourable import in general paralysis.

Adenoma Sebaceum.

About twelve years ago, when I was Assistant Medical Officer at the Royal Albert Asylum, I saw two cases of this rare affection. Since then I have only come across one case, and that was also in an idiot. The cases at the Royal Albert have been fully described by Dr. Shuttleworth, to whom I am indebted for the use of his notes and the accompanying photograph (3). The affection is characterised by a chronic eruption of minute, warty-like nodules distributed over the face, usually affecting by preference the cheeks, but subsequently spreading to the forehead and chin. It has been termed the "butterfly disease"—*epithelioma adenoides cysticum*,—and one case shown by Dr. Fletcher Beach was christened "*fibroma rubrum*;" but *adenoma sebaceum* is the name applied to it by Radcliffe Crocker and others.

So far as I can ascertain, the reported cases are only about twenty in number. According to Brooke, Jacquet and Davies in 1887, under the title of "*hydradénome éruptif*," first described the affection. Crocker, however, claims that Rayer, Addison, and Gull reported the first cases, but that it was not positively recognised as a distinct disease until Balzar fully described it. In the *American Journal of Psycho-asthenics* (March, 1899) Dr. Barr, Chief Physician of the Pennsylvania Training-school for Feeble-minded Children, has given a description of three cases.

The lesions are roundish convex papules, varying in size from a pin's point to that of a split pea. The majority are of a bright crimson; others may be slightly coloured or translucent and waxy. When the papules are very numerous and thickly grouped they are apt to assume a cinnamon or brownish

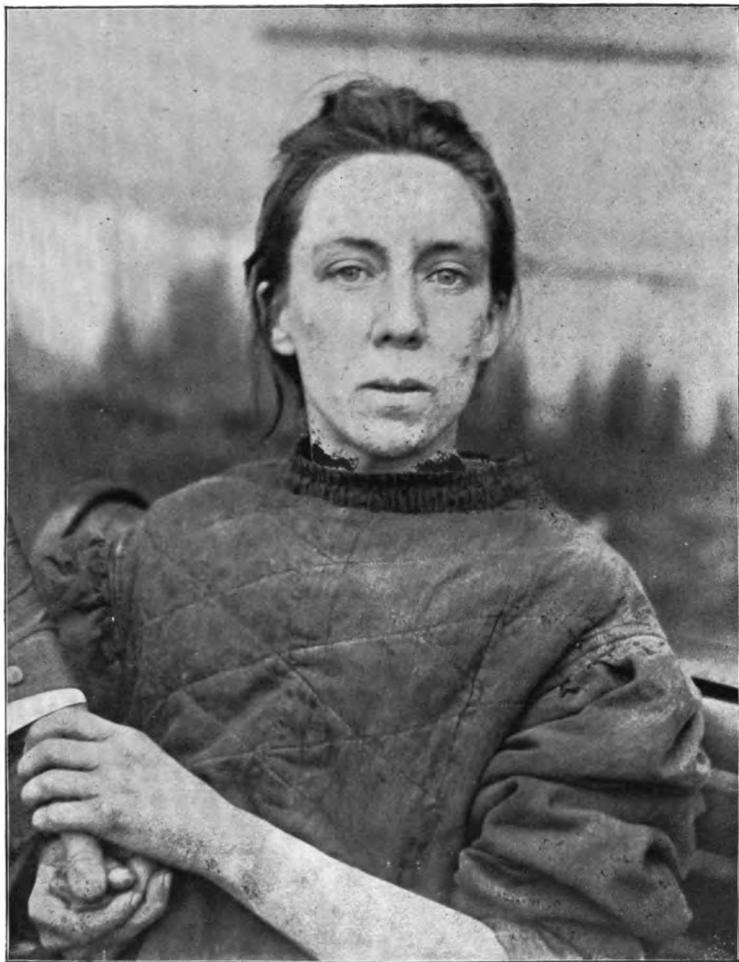
tint, occasionally paling on pressure. As a rule, the lesion is symmetrical, but Crocker reports a case in which it was unilateral, and in one of Barr's cases the eruption was symmetrical except that the right side of the forehead was affected and not the left. It is usually confined to the face, and most abundant on the sides of the nose and the naso-labial folds, where it is sometimes confluent. A few scattered lesions may be present at birth or appear gradually in early childhood, or they may suddenly increase in number but not in size at puberty. The disease, once established, is stationary, although the papules occasionally undergo involution, leaving insignificant scars, which in time fade.

It is not uncommon to have other affections of the skin associated, such as fibromata of the hair-follicles, pigmentation, or true warts. Colloid milium and acne papules or pustules may also add to the disfiguration.

There is now in Bethlem a case of some interest, and at one time suggestive of adenoma sebaceum. A lady suffering from puerperal mania of prolonged and intractable type has lesions affecting her cheeks, nose, naso-labial folds, chin, and (as shown in the accompanying photograph, 4) a triangular or almost pear-shaped area in the centre of the forehead, the lower angle resting between the eyebrows and extending over the forehead to the hair. This case is of double interest inasmuch as the milium, acne, and seborrhoea supervened upon pigmentation of the pellagroid type, and the affection covered an area on the forehead very similar to that in the case of pigmentation associated with melancholia already described.

Feigned Diseases.

The last case I have to mention in this incomplete series is of interest, and opens a large field for collective experience. It is that of a single lady aged thirty years, who came to Bethlem six years ago suffering from melancholia with hysteria and uncontrollable impulses. Her family history was bad, there having been insanity, phthisis, and alcoholism in her near relations. She herself had been hysterical for eleven years, manifested from time to time by inability to walk, see, or talk, also by *quasi*-syncopal attacks. Seven years previous to her admission she had a sore on her finger, which she kept open



No. 4.

To illustrate Dr. Hyslop's paper.

for months, and finally had the nail removed. This sore she ascribed to a dog-bite. Two years later she had a sore heel and sore fingers and toes, followed by affections of the soles of her feet and palms of her hands. These were treated as skin disease. Two years later sores appeared on her left leg and left side. After consulting more than twenty medical men it was at last suggested that the condition was self-inflicted, and with due precautions improvement ensued. With this improvement, however, the patient became fretful and refused food. She also feigned delirium, and had to be held down for several hours by attendants. In spite of vigilance she managed to cause sores on her hands and feet, and some ulceration of her gums. Finding that she was beginning to develop suicidal tendencies, her friends had her removed to Bethlem.

On admission she was suffering from hysterical melancholia with impulsive tendencies. Her catamenia had been irregular during the previous twelve months. On examination it was found that her right pupil was larger than her left, but both acted well to light and accommodation. Her superficial plantar reflexes were absent, and there was defective localisation and some analgesia of her left leg and foot, while the sensation of the right leg and foot was only slightly impaired. She also had other sensory disturbances and some loss of memory. Her acts were governed by impulses to which she said she was subject, and whose origin she could not explain.

She had a number of scars on her left leg extending from the knee to the ankle. There were about forty discrete ones, and others which had run together. They were rounded, pigmented (colour disappeared on pressure), and a few slightly depressed below the general surface. Some of the scars were evidently of old standing, and had become pale and fibrous-looking. They were all on the inner side of the leg. She had similar old wounds on the left hip, the right thigh, and on the extensor aspect of the right forearm. All these were self-inflicted, and done by scraping with a pair of scissors, and then by rubbing in ammonia. She said the process had been accompanied by a considerable amount of pain, but that she had felt an uncontrollable impulse to do it, and that she had generally done it in her room either on going to bed or early in the morning. She again ascribed the beginning of the affection to a "wee bite from a dog," which she treated by

scratching and rubbing in ammonia. She was seen by nearly all the skin specialists, and had undergone a course of Weir Mitchell treatment, but without result.

Subsequently she developed the following sensory impairments of her left side. The tactile sense was much impaired all over the left half of the head, trunk, arm, and leg, fairly accurately limited by the median line, the impairment being greatest below the knee. The anæsthesia also involved the mucous membrane of mouth and tongue. There was also some impairment below the knee of the right leg. Left hemianalgesia was present, pin-pricks producing no result below the left knee, and little or no result elsewhere in the left side. Her temperature sense was impaired all over the left half, mostly below the left knee, a hot test-tube being unfelt. She also had impairment of the senses of smell, sight, hearing, and taste on the left side. I mention this instance of combined absence of the tactile temperature and pain sense as I believe it to be rare except in peripheral neuritis. Cocaine, ether, chloroform, syringomyelia, locomotor ataxy, hysteria, are usually attended by analgesia without impairment of the tactile and temperature senses. Carbolic acid, acetic acid, hemianæsthesia, some cases of locomotor ataxy, and some brain diseases have, on the other hand, diminished tactile sense but unimpaired pain and temperature sense. This case, however, is cited mainly in illustration of the skin lesion which was feigned.

Among the sane, ulcers are frequently induced by the use of epispastics, acetate of copper, quicklime, and many other drugs. Frauds of this kind are also not infrequently performed by the insane, especially by hypochondriacs who wish to "get up a case." They rub a part until it becomes inflamed or ulcerated, and keep up the irritation by thrusting pins through the bandages. Maniacal patients will also sometimes rub their skin with urine until there is an eruption of petechiæ or pustules. Jaundice has been imitated in France by taking daily a small quantity of muriatic acid, and the deception has been almost complete, even to the discoloration of the adnata and of the urine. Paleness of the skin has also been caused by burning sulphur, and by the use of digitalis, emetics, and purgatives, but watchfulness and preventing their use check the effects. The condition described in some books as *erythema gangrenosum*, or patches of superficial gangrene, is usually to

be seen in hysterical persons and under circumstances which point to their having been self-inflicted. These self-inflicted affections are usually arranged unsymmetrically on the left side, and on parts easily accessible to the right hand. The diseases most frequently simulated (according to Crocker) are erythema, eczema, pemphigus, ulcerations, morbid growths or discolorations, changes in the cutaneous secretions, etc., and the same author points out that the eruption or lesion nearly always differs from what may be called the natural eruption it is supposed to represent, and is often unlike any known disease. "Thus," he says, "if it is an erythema, it is probably sharply defined and irregular in shape, and, with a clumsy operator, may even be angular in outline. If it is gangrenous and produced by a liquid caustic, in addition to the irregularity it is common to find that some drops have been spilled away from the main lesion, or that it has run down in a streak, or that it has damaged the clothing or stained the fingers or nails. Then the lesions are either single or few in number, at least at each supposed outbreak, though when the deception has lasted a long time the number of lesions in the aggregate may be very large."

The evolution and progress of skin affections in insanity, and their relationship to it, are questions large enough to form a separate paper. Here, however, it must suffice to say that sometimes mental diseases alternate with skin diseases; recurrent attacks of insanity may have recurrent eruptions; frequently curable insane patients have curable skin affections, while incurable insane patients have incurable skin affections—the condition and progress of the one sometimes warranting a prognosis as to the other. Or, as Dr. Savage says, "if you see the skin gradually clear up you will soon see mental improvement too, but an obstinate skin means a tardy or difficult cure."

DISCUSSION

At the Autumn Meeting of the South-eastern Division of the Medico-Psychological Association, 1899.

Dr. FLETCHER BEACH said that the only case he had the opportunity of seeing was one to which Dr. Hyslop alluded—the case of butterfly affection. It occurred about twenty years ago, and he had to find a name for it himself. He was, however, quite willing to fall in with the well-known name of adenoma sebaceum.

Dr. SELVATICÓ ESTENSE (Rome) said he was very pleased to be at a meeting of the Division and to take part in the discussion, because he had seen many cases of

pellagra, which was a malady of northern Italy. Generally speaking it occurred in countries in which maize was the principal food. It occurred in the south of France as well as in northern Italy. It had been said that when maize was not perfectly dry, fermentation took place and developed some special poison, which Lombroso called pellagra. In Italy there were about one hundred thousand cases of pellegra, but they were not all cases of insanity. Patients lived many years without developing mental trouble; but in the later stages insanity developed, especially in the form of melancholia.

Dr. SAVAGE said that if they took up Dr. Crocker's book and referred to almost any of the remedies suggested, they would find that each of them had more or less power of producing rashes. Most of the cases he had seen showed rashes of one kind or another, and it was absolutely necessary to stop all drugs, in order to make sure how much might be due to the drugs and how much to the disease. Drawings made by Mr. Lennox Marks, at Bethlem, showed a good example of pigmented areas spreading over the face. The patient slowly improved, and was discharged, only to return some time afterwards, when there was no trace of the condition which had previously been so marked. It had always been a matter of wonder to him that they got comparatively few cases of inflammatory skin disease in general paralytics with a very feeble circulation. Sir James Crichton-Browne had described many of these as cases of chilblain of the brain. He (the speaker) thought that was an important point, for although he observed extreme congestion of the extremities, yet in cases of mental stupor he very rarely saw anything like severe chilblain of the skin. In dealing with hysterical girls they had to remember that these patients suffered from a grave nervous disorder, and in some cases but the early stage of much graver disease. Dr. Savage mentioned the case of a girl who had caused a number of sloughs on different parts of her body down into the muscles, by the use of very strong ammonia. These sloughs she preserved in a bottle of spirits, which she seemed to be very proud of showing. He told her that it was perfectly clear how these sloughs had been caused, and threatened that if any more occurred her father should be told. This seemed to have had the desired effect, for the patient recovered.

Dr. STODDART said that generally every insane patient had a greasy, dirty skin, while the growth of the beard in female de-nents was often rapid. He believed there was some truth in the statement that the prognosis in the adolescent male patient depended on the growth of the beard. If these patients improved simultaneously with its growth, as a rule they went straight on to recovery; but if the beard remained downy it was a bad sign. He quite agreed with Dr. Savage's remarks about drugs. They all knew that both arsenic and potassium bromide had a marked effect on the skin. In the relations between affections of the skin and nervous diseases, both in the insane and in diseases of the lowest level, in connection with peripheral neuritis, there were affections of the skin; although he was not prepared to offer any explanation, it was a striking point.

Dr. SHUTTLEWORTH said that during the twenty-three years he was at the Albert Asylum only four cases of adenoma-sebaceum came under his notice out of some 1600 patients. The disease was certainly rare and little known outside the specialty of mental disease, and, he might add, outside the particular province of asylums. The probability was that the affection was congenital; that was to say, of embryonic origin, but of later development. The patients were ordinary epileptics. Similar affections—he did not say identical affections—were known to dermatologists. Dr. Brooke, of Manchester, had sent him portraits of patients which resembled those described by Dr. Hyslop, except in the distribution. Dr. Brook had also sent him one which he thought was a true case of adenoma sebaceum. It would be interesting to know what became of these skin affections after leaving the asylum. He himself had never had the opportunity of watching the affection beyond the age of twenty. There was no doubt there was a process of development—first, the minute papules were almost colourless, and afterwards, generally towards the age of puberty, they developed a deeper colour. It was not contagious, but embryonic. Dr. Beach had named the disease, and had given his reasons; it would be only right to ask the dermatologists to say why they called it adenoma sebaceum. Crocker made use of words to this effect, that the era of the development in the shape of congenital overgrowth in the skin shows thickening of the corium, increase also in the number of the sweat glands, and a marked increase of connective tissue.

Dr. HELEN BOYLE, who exhibited three photographs of a case at Claybury Asylum, said it began as small papules on the right side of the forehead; in the next stage it looked like herpes; after that it developed rapidly, and began to ooze with little points of pus. Opinions as to diagnosis varied between adenoma and epithelioma. It spread over the body in several patches. In the course of a few weeks the trouble had entirely disappeared under antiseptic dressings. It cleared up, leaving a rather bad scar, which was contracting.

Dr. RICHARDS said that it appeared to him that Dr. Hyslop had not clearly proved that the mental disease had anything to do with the skin disease in these cases. Among the large number of cases which had been under his care at Hanwell there were not more of skin disease than would be found among a like number of sane.

Dr. TUKE and another member having referred to cases of skin pigmentation, Dr. HYSLOP said with regard to what Dr. Stoddart said about the growth of the beard, he suggested that it might be due to the fact that razors were not accessible in asylums, for it was within a few days after admission to the asylum that they began to show hair on their faces.

Epilepsy associated with Insanity. By ERNEST W. WHITE,
M.B.Lond., M.R.C.P., City of London Asylum.

THE object of this paper is to briefly consider the various forms of insanity which are complicated by epilepsy, and for convenience we shall discuss them as they occur during infancy, puberty, adolescence, the climacteric, and the senile periods.

The so-called eclamptic convulsions of infancy from teething, worms, and other reflex irritations are common enough, but fortunately in but a small proportion of cases (probably only about 15 per cent.) does idiocy result. Idiocy and imbecility are frequently complicated by epilepsy, but these conditions do not bear any relation of cause and effect, they march side by side, and spring in most instances from a common origin—some inherited taint of mental disease, from epilepsy, or allied neuroses, or alcoholic intemperance on the part of the parents. The idiot with frequent and early epileptic seizures is incapable of improvement in habits or intellectual development. When the fits do not occur early, and are not frequent and severe, they may to some extent be controlled by drugs, and slight mental amelioration may be effected.

We next come to epilepsy associated with insanity during the period of puberty. When one remembers the great changes,

mental and physical, which occur normally in both male and female during this period, one is not surprised if any inherited tendency to mental disease or epilepsy then becomes evident.

Epilepsy is pathologically closely allied to the physiological process of blushing so common in the sympathetic period under discussion. I must own, however, that I have seen but few cases of primary insanity of puberty. Nearly all have been sequential to epilepsy or chorea.

Insanity associated with epilepsy during adolescence is very common. The epilepsy has probably first appeared during the period of puberty, the fits have recurred with ever-increasing frequency; irritability, loss of self-restraint, fits of passion, and failing memory have followed—then a maniacal outburst with extreme violence necessitates certification. We are accustomed to observe in the intervals between the attacks the facial expression, or rather the want of it—“the facies epileptica.” The patient is mildly demented, and often has widely dilated pupils, the speech is drawling, ideation being sluggish. They usually have abundant hair, which is abnormally moist when the fits occur. There is marked moral decadence, yet often religious fervour. They are at one moment quoting texts, at another swearing, obscene, and lying. They are most quarrelsome, impulsive, and dangerous, and often come to blows. It is an interesting fact that their injuries heal most readily. They are thickset as a rule, with good muscular development, and are coarse feeders, needing aperient medicine once or twice a week. Frequently they have delusions of a religious nature, and of persecution, with hallucinations of one or more of the special senses of the familiar types. These delusions and want of self-control often cause homicidal acts.

The series of epileptic fits may occur at fixed periods, and are of similar duration. If one patient has a fit in a ward another will quickly follow, and certain patients are similarly affected by any loud noise or unexpected nervous shock, such as the shutting of a door, the taking of a bath, or a sudden change of temperature. Some patients are threatening and violent before, the majority after, the fits. In some a maniacal outburst takes the place of these fits—a form of “*épilepsie larvée*” or “masked epilepsy.” The “aura” is seldom present in the epileptic insane, and the “cry” is rarely heard in adults. Each patient falls in his accustomed way, either forwards, back-

wards, or sideways, and there is generally one point of impact. Those who fall backwards often impinge on the occiput with tremendous force, giving the impression that the skull must be fractured. This, however, is a very rare accident, for in chronic epilepsy the bones of the cranium are greatly hypertrophied. The more frequent the seizures, and the more rapid the sequence, the more prolonged is the clonic stage relatively to the tonic—the “status epilepticus” which is symptomatic of nervous and muscular exhaustion, characterised by temperature as high as 106° Fahr. There is a general cerebral congestion, and our treatment must be appropriate. A certain proportion of cases of epileptic insanity are attributed to falls on the head, and on treatment of the exact site of the injury, eliminating hereditary taint, good results from an operation may be anticipated, provided that the disease be not of long standing.

When chronic epilepsy has induced insanity, or occurs concurrently with it, there is always evidence of impaired memory, reasoning power, and change of moral character, involving the feelings, affections, inclinations, temper, habits, and moral dispositions. These patients are inveterate liars, and bring all sorts of charges, based in most instances upon their hallucinations, against their fellow-patients or those in whose care they are. The ultimate goal is dementia, therefore cases of epileptic mania are incurable, except the epilepsy is controllable by medicines, or is connected with pregnancy. Too often these last named become insane during pregnancy, recover after parturition, and again become insane with the next pregnancy.

The incidence of one or more epileptic fits in cases of mania and melancholia of some duration is, as a rule, a bad sign, as it points to active disease affecting the motor tracts being superadded to that of the intellectual centres. There are, however, exceptions to this general rule, for I have had two cases where epileptic seizures have marked a turning-point towards recovery. One was a severe case of protracted mania. After doses of hydrobromate of hyoscine during a maniacal period she had a severe fit, and immediately began to improve mentally. After several months she was discharged, and has for the last two years remained quite well. She had been previously under treatment in several asylums for several years. The other was a male patient, addicted to self-abuse, with a tendency to phimosis. During an operation for the relief of

that condition he had a severe epileptic fit, the first in his lifetime, and from that day he made a good recovery and has kept well. The occurrence of epilepsy in the earlier stages of general paralysis in the insane is well recognised. A fit in a person between thirty-five and fifty years of age, suffering from mania or melancholia, who has never previously had one, often clears up the diagnosis. It points to active changes affecting the convolutions of the motor areas, and as the disease becomes more advanced the tendency to these seizures increases. The epilepsy of general paralysis is marked by the want of tonicidity in the fits, the shortness of the tonic stage relatively to the clonic, the tendency of one fit to run into another, until the seizure appears to be a series of clonic spasms with slight intervals. It is completed with extreme exhaustion. Epilepsy, during adolescence, in melancholic cases is rare, except in the form associated with general paralysis. Climacteric insanity is also seldom complicated by epilepsy, but in senility it is common enough, associated with both mania and melancholia. The form is often that of "petit mal," a mere transient unconsciousness during excitement. In these cases the patient not infrequently continues the conversation which had been interrupted by the fit, as if the function of the nerve-cells was temporarily arrested by defective blood-supply. In most instances the heart and blood-vessels have undoubtedly undergone degenerative changes. "Petit mal" is therefore said to induce early dementia, but in these cases both conditions have a common cause—inadequate nutrition of the nerve-cells owing to the defective blood-supply, or impurities in the supply. Cases of senile mania and melancholia complicated by epilepsy occurring for the first time late in life never recover, but soon drift into dementia, and after a year or so, or even in a shorter time, die.

We shall now consider the epileptic records of the City of London Asylum for the past two years, to ascertain how the incidence of fits in the chronic insane is influenced by various conditions.

First as to the moon. It is generally noted in asylums that the chronic insane are more troublesome, noisy, and destructive at the full moon. One steward assured me that there is more crockery broken then than at any other time of the month.

But will not the light nights account for this to a large extent? Our returns, however, show that it is just after full moon that fits are most prevalent in the epileptic insane of the female but not of the male sex.

All female epileptics are more quarrelsome and troublesome at menstrual periods, but a very large percentage are unaffected in regard to epilepsy. As a rule, in my experience, menstruation has no influence in inducing fits. A former superintendent (Dr. Dyer) of the Metropolitan Asylums at Darenth assures me that he has noted that a sudden change in the temperature or atmospheric pressure increased the number and severity of the fits, and rendered the patients more noisy, excited, and troublesome.

Epileptic fits are undoubtedly more prevalent in winter and spring-time. Our records show that most occur in January. February, December, and April follow in order, while there are fewest in the summer months, June, July, and August. I suggest that exercise and the free action of the skin explain this fact, but we have no statistics to show whether epilepsy is as common in the tropical as in the temperate zone.

Our records show that fits in males are two and a half times more numerous by night than by day, whereas in females they are twice as numerous by day as by night. This may be accounted for by the fact that the men are largely employed by day, and the use of their muscles and free action of the skin reduce the tendency. As indigestible food cannot be the cause, I would suggest that the explanation of nocturnal fits is to be found in insane dreams coupled with an abnormally hyperæmic condition of the brain. We may definitely state that the more indolent the epileptic the greater is the tendency to fits by day or night.

The automatic actions of these patients after fits are noteworthy. A man will put his coat on back to front, or apparently with the intent of walking forward will step backwards through a window. Whatever their erratic behaviour may be, they remember nothing of it when they come to themselves. I am one of those who are of opinion that chronic epileptics should be deemed irresponsible for homicidal acts, having seen many cases of epilepsy marked by brutal violence associated with an absolute mental blank as to all that had occurred.

Treatment.—The recognition of the controlling power of the bromides in epilepsy has resulted in epileptic wards being furnished like the others, bright and cheerful, with pictures, birds, books, and flowers, while strong-rooms are seldom used. Yet we have to guard against abuse of these drugs, recognising the enfeeblement and destruction of the nerve-cells which result from large doses of the bromides too long continued. In recent cases, and in those where improvement seems possible, we must carefully regulate their administration. They seem to act by allaying reflex excitability, for in many acute cases, where the action of the drug has been cumulative or the dose excessive, the earliest symptom of danger has been loss of power, of deglutition, and absence of reflex excitability on tickling the fauces. In chronic cases excessive exhibition of the bromides may keep them under. The fits may be controlled, but the advent of dementia is hastened. There are a great many cases in which the bromides do no good, for the number and severity of the fits are not reduced, and in some cases are even increased. Ergot is the only drug in which I have any confidence for these intractable cases; it may be given as liquid extract of ergot, as ergotine, or as citrate of ergotinine subcutaneously. About sixteen years ago I first tried this drug, and obtained excellent results. My statistics, then collected at the East Kent Asylum, were unfortunately lost and publication prevented. In the *status epilepticus* the bromides are worse than useless, for it is a state of exhaustion. A quarter of a century ago we were advised to administer croton oil and the like. Well, these patients practically always died. When it was recognised that the condition is a thorough exhaustion requiring stimulation there was a change of treatment, and a large proportion of the cases recovered. In the *status epilepticus* there is an intense turgescence of the venous sinuses and stasis of the blood-vessels of the brain generally. Depletion by blood-letting is of little service because of this stasis and lack of tone, but we have in ergot a remedy which frequently acts like a charm. We relieve the bowels by an enema, raise the head to assist the return of venous blood by gravity, then give half-drachm doses of the liquid extract of ergot in a little brandy and water between the fits, or the citrate of ergotinine hypodermically in $\frac{1}{10}$ to $\frac{1}{6}$ of a grain in case of difficulty of deglutition. Nitrate

of amyl, digitalis, and chloral have been useless in my experience.

It seems to me that there are two principal forms of epilepsies, the one originating in the nerve-cells of the cerebral cortex (cerebro-spinal), the other primarily in the vaso-motor nerves (sympathetic). The former is that in which the primary nerve storms occur, and the bromides by allaying the reflex excitability prevent explosions. The latter is that in which there is lack of tone in the vaso-motor nerves of the vessels of the cortex, an instability of function in these nerves so to speak, whereby the nerve-cell function is disordered, and it is in these cases in which the bromides are absolutely useless that ergot is of service. Epilepsy can certainly arise from either anæmia or hyperæmia, and this strengthens the vaso-motor theory of the origin of the latter form. The chronic alteration of the brain circulation may also account for the mental enfeeblement of chronic epilepsy. Ergot is undoubtedly a vaso-motor nerve tonic which specially acts upon the vessels of the brain, and should be given for congestive headaches, as well as for epilepsy where the congestion primarily occurs in the venous sinuses.

DISCUSSION

At the Spring Meeting of the South-eastern Division of the Medico-Psychological Association, 1899.

Dr. FLETCHER BEACH said that his experience was that a small proportion of epileptics very much improved after careful treatment. In clinical teaching he always pointed out to students that these epileptic patients might be divided into three classes—those who entirely and speedily recovered, those who recovered after a number of years, and those who drifted into dementia. A large number died, but an appreciable proportion improved and were cured. Two years ago, in his paper on "Insanity in Children," he had referred to clinical facts in this connection. In the earlier stages, during infancy, they were often delirious, as might naturally be expected. The number of cases of epilepsy increased with age. The removal of portions of the cranium had been followed by wonderfully good results in his hospital practice; but when the cranium was small, because the brain was small, no benefit could ensue. Operative interference was, therefore, limited as a curative measure. As far as his observations went, epilepsy generally begins at night, the reason being that the amount of carbonic acid excreted is much in excess of the oxygen absorbed by the blood. For the last six years he had given directions that bromides must be taken for at least two years after the last fit. With regard to ergotine, its value must depend upon its influence upon the cerebral circulation, and not upon its action upon the heart.

Dr. BOWER, while agreeing with most of Dr. White's remarks, held that in his experience epilepsy had generally begun just before puberty. While all the female epileptics under his care had luxuriant hair, all the males were bald, or nearly so. He would supplement Dr. White's paper with two remarks: first, that epileptics should be treated in separate asylums; and second, that they should be kept in bed after the fits. The first had been advocated by Dr. Ewart some years ago, and carried out successfully on the whole; the second had been Dr. Rayner's system at

Hanwell. It was disappointing to hear of the small success of operative measures. He gave bromides sparingly, and was convinced that the constant use of these drugs sent a good many cases into asylums. He had not used ergotine, but commended the employment of Epsom salts as most potent and useful treatment. As to the *status epilepticus*, a stimulant was very necessary. For a good many years he had given injections of chloral with success, while in the control of ordinary seizures chloral with bromides rendered them less frequent and less severe. He did not think that dementia followed so surely on that combination as on bromides alone.

Mr. MACLEAN could not remember any good results from the use of ergot, but believed that the best course was to give small doses of chloral combined with bromides, thus diminishing the number of the fits in epileptic cases.

Dr. WHITE, in replying to the discussion, agreed with the statement made by Dr. Fletcher Beach to the effect that epileptic fits were referable in some degree to the amount of carbonic acid circulating in the blood, as it went to support his opinion and principle of treatment that fresh air and exercise reduce the number of the seizures. His paper was founded on his personal experience and observations, and was exclusive of children, who are not found in asylums as a rule. He regretted that a long series of observations made by him in the Chartham Asylum some fourteen years ago—records of five years' work—had been destroyed, rendering it necessary for him to begin afresh. His experience had differed from Dr. Bower's. He had found chloral of little use in the *status epilepticus*; and, although much hair may fall off, he had not seen frequent baldness in male epileptics. He could see that Dr. Rayner's treatment might be very useful, but had not yet adopted it.

Notes on 206 Consecutive Cases of Acute Mania treated without Sedatives. By C. K. HITCHCOCK, M.D., M.A
Medical Superintendent, York Lunatic Hospital.

DURING the sixteen years I have been at York 206 cases of acute mania have been admitted, inclusive of 29 relapsed cases occurring in sixteen individuals. Of these 206 cases, 171 have recovered, 8 have died during the attack and because of the mania, and 3 have died during the attack from intercurrent bodily diseases, 12 have been discharged relieved to the care of friends, 7 were transferred to other asylums, and 5 remain under care.

The average period under treatment was for males three and a half months, and for females five months, with the addition, in many cases, of one month at home on trial before discharge. Seven cases recovered after one year, and 2 after three and five years respectively.

The ratio of recoveries to the number of cases under treatment is 83 per cent., the ratio of deaths is 3·8 per cent.

The point to which I wish to call attention is that, excite-

ment and sleeplessness being prominent symptoms in greater or less degree in all these cases, I have not used sedatives in the treatment of any one of them, and my firm belief is that I have thereby secured a larger proportion of recoveries, a calmer after-existence for those cases which have not recovered, and perhaps a diminished death rate.

Before coming to York I had the advantage of becoming intimately acquainted with the practice as to the use of sedatives in six different asylums, and formed the opinion that sedatives were largely and harmfully used both for recent and chronic cases; that no known sedative will cure or cut short acute mania; that given in large enough doses to subdue maniacal excitement there is a possibility of permanently harming a patient; that continued sleeplessness is not of itself a condition incompatible with complete recovery. Having watched the effect of chloral and other compounds of that group, hyoscyamine and the hydrobromate of its alkaloid, opium and its alkaloids, cannabis indica, and other drugs, I resolved to use none of them. Of course the speedy subdual of excitement and the inducement of natural sleep are most important points of treatment, but it always seemed to me that in preference to straightway drugging an excited sleepless patient one must try to ascertain in each individual case the cause leading to that state and endeavour to remove the cause and so indirectly attack the symptoms. The history of the case, with careful physical examination, with temperature taking, and urine testing, will sometimes give a clue to treatment. A purgative may work wonders, particularly calomel, valuable not only for its therapeutic action but also as it is tasteless and inodorous, and mixes readily with cream or butter. Milk and eggs with some farinaceous food in abundance will suit another case, and here the old maxim comes in that if you intend to feed, feed early and often.

Other types of patients, particularly those of post-puerperal mania with tendency to exhaustion, after the bowels have been well acted on and food has been taken, will most readily and harmlessly be influenced by suggestion. In these cases I never use or allow the use by nurses or others of the words mesmerism or hypnotism, but certainly the personal influence of the physician will in some cases induce the patient to take food or to sleep with the happiest results.

Occasionally I have resorted to the wet pack or hot bath with or without cold affusion to the head, and sometimes use a bath of 110° to 115° for ten minutes, the patient being afterwards wrapped in blankets only. Hot whiskey and water or a glass of stout are also amongst simple remedies that may be very helpful.

I do not incline to keeping cases in single rooms, and if they are physically in fit condition to be in the open air they are out of doors most of the day, although I do not go the length of employment of forced and prolonged exercise combined with enormous quantities of food. If a case tends to pass into partial dementia I should add massage, shampooing the head, shower-baths, to the indirect treatment of suitable social influence and surroundings.

I have now solely considered the treatment of cases where the mania is established and the patient is under care in an asylum, exclusive of the prophylaxis of insanity or the treatment of cases of threatening mania. Although nothing new has been advanced, my relation of details of treatment is not intended to be didactic, but is merely a statement of my own experience in the treatment of a class of cases from which it is perhaps the easiest to get favourable results.

DISCUSSION

At the Autumn Meeting of the Northern and Midland Division of the Medico-Psychological Association, 1899.

The CHAIRMAN.—I hardly agree with Dr. Hitchcock when he says that his is a common experience, because very few of us can say that we have treated a similar number of cases of recent acute insanity without hypnotics. I doubt if the death-rate in his records was really diminished by withholding hypnotics; indeed, more cases might have lived if these had been given.

Dr. CLAPHAM.—My feeling is that the first and most necessary treatment is a good purge, not only for cases of mania, but for all cases that come into asylums. There is great neglect in this matter, judging from the effect of its administration. Feeding, of course, must be attended to in mania, where there is so much tissue waste. As regards hypnotics, I certainly do not agree with Dr. Hitchcock. Hypnotics get a man to sleep to begin with, and have the effect of putting him in a fair way of quietude and proper condition for receiving other necessary treatment. By using baths and other sedatives you may afterwards do without hypnotics, but I think it is certainly necessary in the first instance to administer them in many cases.

Dr. MILLER.—There can be no doubt that even in comparatively recent times hypnotics have been abused to an alarming extent, but I have never personally known cases treated in the manner Dr. Hitchcock describes. Acute mania is more noisy during the day and dementia during the night. Good feeding and warm baths are extremely valuable, and go far further to quiet acute mania than the use of drugs.

Dr. KAY.—It is best to avoid the use of hypnotics as far as possible, but in asylums, to a certain extent, the interests of other patients must be safeguarded.

In acute mania men do without sedatives better than women; the latter are much more noisy, and sedatives are a great advantage to them.

Dr. PERCEVAL.—If we give an hypnotic for the convenience of others we study the good of the largest number; but if we give it as curative, I heartily agree with Dr. Hitchcock that it is quite unnecessary. The high number of his recovered cases clearly shows that. I think the results of Dr. Hitchcock's method would have been more valuable if he had treated one half of his cases *with* hypnotics, and the other half, or some of them, *without*, as test cases.

Dr. HEARDER.—A great deal depends on the nursing staff. With a good nursing staff—two or three nurses to each maniacal patient if necessary—sedatives are not so much required; but with a comparatively small nursing staff they are practically indispensable, owing to violence of conduct. I think it is better to do without sedatives for these acute cases, and in the large majority I think we do manage them without sedatives to a very great extent. It is the chronic cases that are mostly treated by sedatives in asylum practice; and this is quite right, because they are hopeless from a curative point of view, and must be kept quiet to promote the chances of recovery in the acute insane. I do not think that in asylum practice sedatives are too greatly used in acute cases, for it is generally recognised that they do better without them.

Dr. HITCHCOCK.—What made me take up this subject was the fearful abuse of sedatives at almost every asylum with which I was connected before I went to York. I have seen two 16-ounce bottles made up for the males and females, each 1-ounce dose containing 30 grains of chloral, given night after night to be used at discretion for patients who were noisy. I have seen this most detrimental treatment pushed until many patients have been at death's door, and therefore resolved to adopt other methods even with chronic noisy patients. I cannot blame myself for any patient having failed to recover because no hypnotics had been given, even if sleepless for six or seven nights; but the longer I have gone on the more I have been satisfied of being right in continuing as described. I did not touch on the use of sedatives for chronic noisy patients, yet it has been my practice not to give them sedatives. I found at York certain old cases that had been accustomed to hypnotics. These continued noisy and excited until they died. I have not now any of those noisy, troublesome, violent cases, and believe that they are produced very often by the treatment pursued in the earlier stages of their insanity.

Hysteria and its Relation to Insanity. By GEOFFREY HUNGERFORD, L.R.C.P. and L.R.C.S.I.

THE term hysteria among the ancient Greeks had reference to a disease primarily due to some abnormal state of the female generative organs. Even yet we assign a foremost place to the sexual elements in hysteria, but more as a symptom than as a cause of the disease. We find that the greater the number of cases we investigate the more we shall be impressed by the fact that a marked element of sexual perversion generally exists, at times so dominating the reasoning powers of the patient that he becomes firmly convinced that unless his sexual desire is indulged the community will suffer in some inexplicable manner. In a recent case I found this symptom strongly

marked in connection with the habit of masturbation. As a rule the "delusional errors" of these patients are vague. They generally can be brought to admit that their ideas are erroneous; and their ability or otherwise to do this should, I think, bear much weight with regard to prognosis.

The history of the case mentioned is of considerable interest. The patient has lived a very indolent life, had always plenty of money to spend, and his main idea has been to "kill time." Lately he has manifested an intense anxiety regarding his own condition and a morbid fear that any food will disagree with him. He stands before a glass examining his tongue and asking whether he does not look very ill. At times he states that his case is hopeless and that he is a broken-down wretch, but if not noticed he laughs a moment afterwards and seems rather ashamed of his remarks. At other times hard exercise and drastic advice prevail, and he appears in a normal condition quite different from the indolent, helpless being of a few hours before.

The literature of hysteria is very plentiful and teems with different theories and definitions, some of which are directly contradictory to one another, so that much more time than is at my disposal would be occupied in merely glancing at the different and disputed views taken. Rather than enter on that discussion let us realise the necessity of recognising the early stage of this condition as one which often masks more serious underlying symptoms, which, if neglected or wrongly treated, may result in patients entering our hospitals and asylums who need never have gone there if proper precautions had been taken.

As a fundamental principle it may be laid down that the condition of an hysterical patient is always abnormal and occupying the ill-defined and shadowy borderland lying between sanity and insanity. It is a state in which ideas control the body and produce many and unlooked-for changes in its functions. Of two predisposing causes—heredity and education—I would particularly speak. The latter, if properly directed, will gradually eliminate the former and cause it to sink more and more into the background. The early training and mode of life of a great number of hysterics have a direct bearing upon their disordered state. Most of them have been impressionable, emotional children, generally the offspring of

parents with a neurasthenic taint. Their parents, perhaps in their very eagerness for their children's welfare, overshoot the mark, turning over and rendering suitable the soil for those seeds of disease which they are striving to eradicate. In the majority the disease was pre-existent but ignored. It only wanted an opportunity of breaking out. That opportunity is the exciting cause in the individual, but it would, in all probability, no more occasion an attack of hysteria in a healthy person than the mere presence of the specific bacteriæ of any of the fevers would necessarily cause an outbreak of febrile disease, unless a suitable soil had pre-existed together with an inability of the tissues to resist the attack.

The healthy mind takes its colour more or less from its surroundings; the cases under discussion do so in an abnormal degree. They are open to scientific "suggestion" more readily than their neighbours. It is obvious that the greatest hope of successful and preventative treatment presents itself during childhood. At this period of life the ratio of hysterics to the sexes is about equal; after the age of twelve the paths of the two sexes widely diverge, and the educational factor comes into full force. The boy goes to school, has to fight his way in his own schoolboy world, and has a spirit of healthy emulation awakened; the girl, on the other hand, is more restricted, and her surroundings, unless carefully adapted to her disposition, tend to foster inherent seeds of disease, presupposing that an hereditary taint exists.

Though the consensus of opinion in the English school of medicine is that hysteria is far more common among women than among men, yet Charcot and other French observers hold a diametrically opposite opinion. The explanation suggests itself. This is a racial defect due to the early training and education of the French boy, which entirely differs from that of the English boy. The French system is not calculated to improve moral fibre, but rather panders to an already hysterical temperament.

Among hysterics the imitative faculty seems to be abnormally developed. They are highly impressionable. They closely, though often secretly, observe those about them, seeking for a kindred spirit to foster their deluded ideas and sympathise with their imaginary woes. If they succeed their symptoms will become more pronounced, their delusions will become

fixed, and they can no longer be included in the category of sane individuals.

The generally accepted view is that hysteria is an affection of the layers of the cerebral centres immediately below the highest, and therefore more or less under control. Insanity, on the other hand, is a disorder of the functionally highest layers of the cerebral centres, the activities of which are accompanied by intellectual processes; thus control is impossible. It was a common error to regard hysterical disorders as a deliberate sham, and thus limit its sphere to the extent of rendering the subject unintelligible. Leaving this obsolete view behind, it would seem that most success can be looked for by following a course of treatment having as its basis a discouragement of the "ego" in all its departments, together with a strenuous opposition to the indolence which lies at the root of the nature of every hysterical person, and which affords countless opportunities for the growth and manifestation of those very peculiarities which it is desired to overcome. A "watchful neglect," to use a paradoxical expression, coupled with a quiet but assured firmness, would seem to be at the root of all successful treatment; for, as a hysteric will quickly notice a want of confidence and self-reliance in those about him, so conversely will his condition improve when he can see nothing which will pander to his weaknesses, or give countenance to his distorted fancies.

DISCUSSION

At the Autumn Meeting of the South-western Division of the Medico-Psychological Association.

Dr. WOOD said he had treated a few cases by suggestion. Some he found very easy and some very difficult to deal with.

Dr. BENHAM related a striking instance of difference of opinion as to the mental condition of a case he had lately seen. He had lately visited a house where a lady was keeping certain patients. One of these at the time of his visit was lying in bed in a wretched bodily condition. He was informed that for three days she had taken no food, and that she then was about to be forcibly fed for the first time. She appeared from her past history to be in a condition of acute melancholia, and a case for treatment in an asylum.

The legal case broke down, the lady having pleaded guilty to keeping lunatics without certificates; but he was informed that there was an eminent gentleman in court prepared to swear that it was simply a case of hysteria, in contradiction to Dr. Benham's evidence. It was most important that they should understand what was meant by hysteria in such a case, where medical men came to absolutely opposed conclusions. With regard to the treatment of these patients, he was in complete accord with Dr. Hungerford.

Dr. DAVIS instanced a remarkable case of hysteria in a boy at Plymouth, who, some time ago, gave his parents a great deal of trouble. He voluntarily came

into the asylum, where he remained for some time. He was very extraordinary in his conduct on many occasions, and seemed to have some attraction for other patients. He was rather effeminate in appearance and manner, and they had a difficulty in keeping him separated from the others. He was discharged and returned home. There he shaved, dressed himself as a woman, and met several soldiers and sailors in Plymouth. Eventually it appeared that he and a soldier were found together and apprehended. He was not dealt with by the Criminal Court, having said that he was insane, but was returned to the asylum. Dr. Davis did not believe that he was insane; it was very difficult to draw the line in such a case.

Dr. DEAS said that when they had to form an opinion as to border-line cases they always found that it was very difficult to say whether it was one of hysteria or insanity. Was it worth while, therefore, to keep up this distinction between these disorders. He claimed that the essentials of unsoundness of mind existed just as much in hysteria as in insanity. For the purposes of discussion, the essentials of insanity were want of self-control and the too great proneness of the nervous system to respond to stimuli. These two essentials covered the ground of insanity and hysteria. If this were the case, was it worth while to retain the term of hysteria as a distinct disease? It seemed to him that the so-called cases of hysteria were really cases of moral depravity and mental impairment. In his opinion it would contribute very much to the elucidation of early cases of insanity if they could sweep away all idea of their being merely cases of hysteria. He did not know that he had seen a case of hysteria in which he would not come to it with a more open mind and be more able to get to the heart of the trouble by simply viewing it as one of impairment of mental power. All the principles used in the treatment of hysteria were exactly the same as those used in cases of insanity, and he could not help thinking that it would be a distinct advance if they heard less of hysteria and more of the early symptoms ending in and tending towards insanity.

Dr. MACDONALD said that, while agreeing with much in Dr. Hungerford's paper, he was inclined to support Dr. Deas when he suggested that the term hysteria might with advantage be dispensed with. He was inclined to agree with Dr. Deas that it might be hysteria, but that it might be a great deal more.

Dr. HUNGERFORD, in replying on the discussion, said the manifestations of hysteria were so diverse, that it would be rather hard to classify all as insanity.

The Evolution of Asylum Architecture, and the Principles which ought to control Modern Construction.

By R. H. STEEN, M.D.Lond., Senior Assistant Medical Officer, West Sussex County Asylum, Chichester.

"The recovery of the curable, the improvement of the incurable, the comfort and happiness of all the patients, should steadily be kept in view by the architect from the moment in which he commences his plan."—Conolly, *Construction and Government of Lunatic Asylums*, p. 1.

IN the present day the great increase in the number of certified lunatics has raised the question of asylum architecture to one of primary importance. New asylums are being built and planned in all parts of the country, and the managing authorities are keen to provide the best possible accommodation for the suffering ones under their care.

In these circumstances it is surprising to find how little literature there exists dealing with the matter, and an authoritative treatise on the subject is much to be desired, although it must be admitted that never before has the treatment of the insane by properly constructed buildings exercised greater attention. New plans, new systems are being introduced and are still on their trial, and several years will be necessary to determine the correctness of the ideas of their respective advocates.

In the following pages the writer does not claim to do more than touch the fringe of this extensive subject : firstly, by describing types of the earlier asylums, and pointing out errors inherent in their designs ; secondly, by describing briefly the different systems at present advocated in this and other countries ; and lastly, by suggesting what appears to be the most suitable form of structure for the treatment of the insane in this country.

Historical.

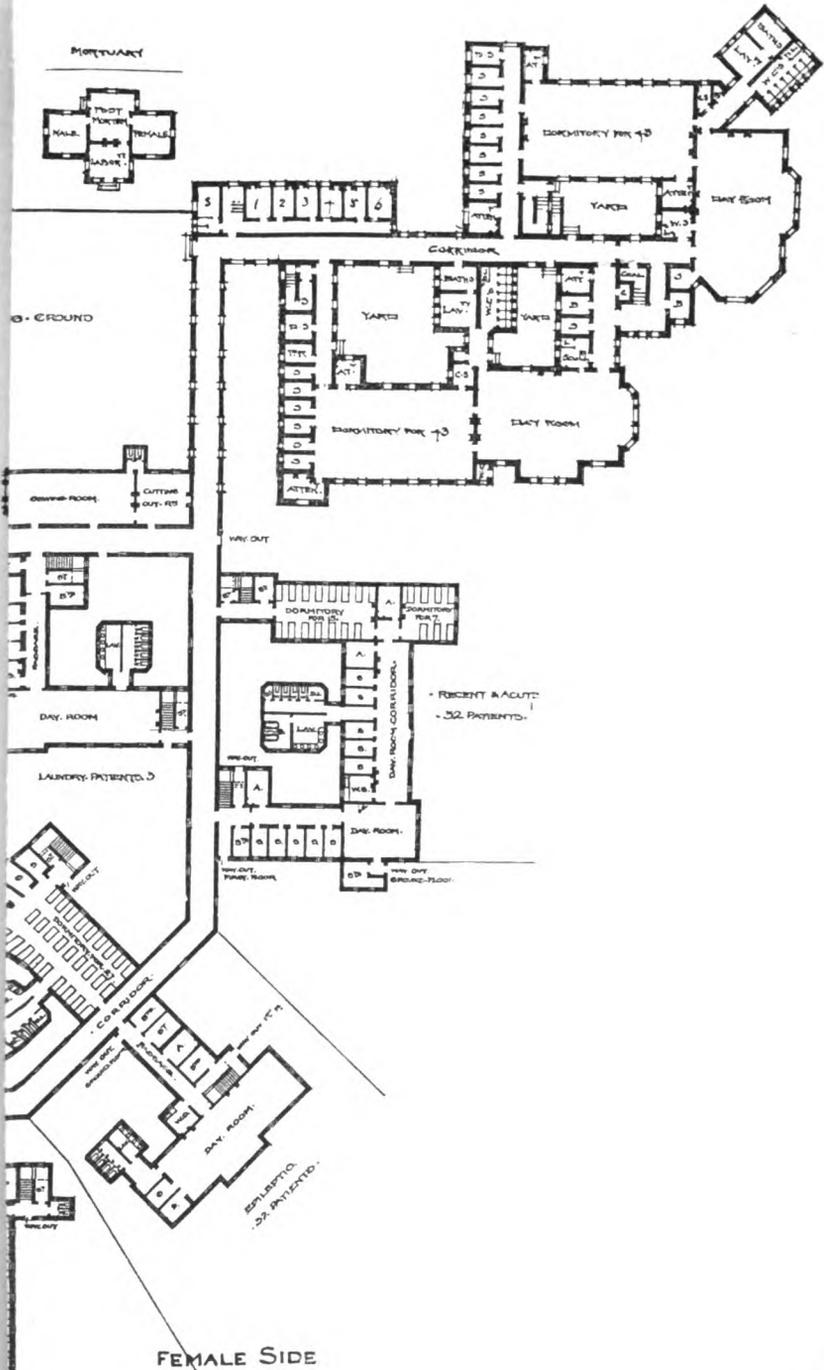
The construction of asylums as a definite branch of the art of architecture is one of very recent growth, and may be said to date only from the commencement of the present century.

A short historical survey of the subject can be most conveniently classified under four headings :

1. Period of complete neglect of the insane.
2. Period of transition from one of neglect to one of custody of the insane.
3. Period of curative treatment as distinguished from mere custody, but still hampered by the principles governing the latter.
4. Modern period. One of scientific treatment with comparative freedom.

1. *Period of neglect.*—The presence of insanity in the community can be recognised in the most ancient writings. No attempt seems however to have been made as regards the segregation of the insane till the ninth century A.D., when we find that a Morostan (madhouse) existed in Cairo.

In England up till the latter end of the eighteenth century little care was taken in providing accommodation for the mentally afflicted. Those who were dangerous to the community were shut up in prisons or delivered to the care of



monks. It is true that such places as Bethlem (founded in 1547), and St. Peter's Hospital, Bristol (founded in 1696), were in use, but these buildings were not specially constructed for the purpose to which they were put. Other institutions undoubtedly existed, and in all the condition of the sufferer was no advance on that of the Dark Ages.

2. *Transition period.*—The opening of the York Retreat in 1796 marks the beginning of the new era in the treatment of the insane in this country, and the lessons taught by this institution combined with the insanity of their King roused the interest of the public at that time in the treatment of this disease.

Parliamentary committees were appointed, and in 1808 an Act of Parliament was passed in which justices of counties were permitted to consider the propriety of erecting asylums. As this Act was permissive only, little was accomplished, till in 1845 an Act was passed making it compulsory on the authorities to provide county and borough asylums.

During this period the condition of the insane was one of great discomfort, though not of absolute neglect. It was estimated in 1844 that there were 17,000 insane poor in England and Wales, of whom not more than 4500 were accommodated in asylums.⁽¹⁾ These were placed in licensed houses, which, being old mansions converted into asylums, showed no special form of construction, or in small buildings attached to work-houses; and any asylum especially built for the reception of lunatics differed little in plan from that of a prison, being composed of long galleries lined on both sides by gloomy ill-ventilated cells, with "space for exercise wanting, and means of recreation and cheerfulness unthought of or unknown."

3. *Period of treatment.*—With the legislation of 1845 in England, and 1857 in Scotland, the question of the suitable construction of these institutions came prominently to the front.

The non-restraint principles of Gardiner Hill, carried into practice first by him at Lincoln Asylum in 1837, and later by Conolly at Hanwell, modified the idea that the construction of an asylum and a prison were one and the same, and gave rise to the desire to erect places suitable rather for the treatment of sick people than for mere confinement of the dangerous.

The teaching of Conolly and the publication of his book on

Construction and Government of Lunatic Asylums (1847) served as a guide to all interested in the subject, and the County Asylum, Derby (for 370 patients), opened in 1851, was the outcome of his work.

This asylum was built on the corridor plan in modified linear form. The main building faces the south, with one ward on each side running north. A corridor connecting the distal wards with the centre runs along the back of the single rooms. The administrative buildings are in the centre. In this building the "prison system" as applied to the insane has not yet lost its hold. This is evidenced in the construction of the wards, which are composed of long galleries open on one side, the other side being made up of single rooms. The single rooms are excessive in number (two thirds of the total accommodation), and thus there is an absence of even moderately sized dormitories and therefore of observation dormitories.

Other defects are :

1. Corridors run immediately adjacent to the single rooms, which necessitates that the latter be lit by windows placed high up and over the roof of the corridor.
2. The unfavourable position of certain wards which are cut off by others from a southern aspect.
3. The approaches are overlooked by the wards.
4. The monotony of the plan, no wards constructed specially to suit the varieties of patients.
5. The small size of the recreation hall (seating 170).
6. Central position of medical superintendent's house.
7. The presence of high walls surrounding "airing courts."

The advances in this plan over other corridor types are :

1. The provision of small day or dining-rooms at the extremities of the wards.
2. The extremities of the wards are not co-terminous.
3. It is possible, by means of the connecting corridors, to reach one portion of the asylum without passing through all intervening parts.
4. The presence of single rooms on one side only of the gallery instead of on both sides, as was so frequent in earlier buildings.
5. The provision of a recreation hall—a structure previously unknown to asylums.
6. The wards are composed of two stories instead of three.

7. Special ventilating arrangements are provided.

Other types on the corridor system exist and need only be mentioned. These are the quadrilateral , H-shaped, radiating , and double quadrilateral , and in all the same disadvantages are present, viz. the different parts of the asylum are too crowded together, giving rise to an insufficient circulation of air, cheerless aspect of the wards not looking south, and one ward overlooks the other.

The corridor type not having satisfied all requirements, architects proceeded to build institutions modified in various ways from this plan. The plan of the Hereford City and County Asylum, opened in 1872, may be compared with that of Derby County Asylum and is an example of the progress made.

1. The aspect of the entrance is placed on the side opposite to that of the wards, thus preventing proximity of the main approaches to the grounds used by the patients.

2. There is a corridor (covered way) distinct from and not interfering with the lighting of the single rooms.

3. Sanitary annexes with cross-ventilated passages are provided.

4. Day rooms with large bay windows and of fair size are present.

5. Dormitories have been provided, and there is not an excess of single room accommodation.

6. A capacious dining and recreation hall is provided.

7. The medical superintendent's house is placed at one extremity of the building instead of being in the centre.

The defects in this plan are, in the main, those noted in connection with Derby Asylum. It may be remarked, however, that the aspect of the building is bad, and that there is no attempt made to provide wards of special design for the different classes of patients. The chapel is placed above the recreation hall. This is a common plan in the older asylums, and is even yet recommended by recognised authorities⁽²⁾.

The flights of stairs leading to this structure must, however, constitute a danger to the feeble and epileptic patients, and the lower building of necessity be mean in appearance and intersected by supports for the upper part.

The plan of the Barony Asylum, Glasgow (for 600), opened

in 1875, gives evidence of a distinct advance in construction, and should almost be included in the next period.

The main features are as follows :

1. Differentiation in plan for special use, *e. g.* infirmaries and acute blocks.

2. Day rooms more like private dwellings and on the ground, with sleeping accommodation on the first floor.

3. Southern aspect of blocks, with northern aspect of entrance block.

4. Absence of walled "airing courts."

With regard to (2) it is hardly advisable to have feeble patients such as would necessarily be in the infirmaries ascending flights of stairs on going to bed. The dormitories above these day rooms are not cross-ventilated. It will be noticed also that a chapel, distinct from recreation hall, has been provided, though the corridors leading thereto must have been expensive. There are general bath-rooms.

While the plan of construction of asylums had been gradually developing, the internal arrangements had been progressing *pari passu*. Conolly had recommended tiled floors to single rooms and inspection plates in the doors of all single rooms. Single rooms were now floored, like the rest of the ward, in pitch pine, and no extraordinary fittings were used. The decoration of the interior had also changed from the time of the same authority when he wrote "much ornament or decoration, external or internal, is useless and rather offends irritable patients than gives any satisfaction to the more contented."⁽⁸⁾

4. *Modern period.*—The new ideas introduced by architects into designs for hospitals now began to exert their influence in asylum construction. In 1866 St. Thomas's Hospital, London, on the pavilion type, was commenced, and finished in 1871.

Edinburgh Infirmary design was published in the *Builder* in 1870, and since that time many new asylums in this country have been designed on this plan.

It may be here pointed out, however, that the pavilion plan had been known in asylum architecture long before its introduction for hospital use—as, for example, the plan of Kingston Asylum, Jamaica (1847),—but had seemingly been forgotten by English asylum architects.

In the pavilion plan a large corridor of one story only

connects together the otherwise separate blocks. The benefits thus obtained are :

1. The blocks can be of varied architectural form to suit various classes of patients.

2. The blocks need not be crowded together, and thus there is no interference with the proper air and sun supply to each part of the building. Should a serious fire occur it can be confined to the area of the outbreak.

3. The blocks can be so arranged as not to overlook or disturb one another by noise, etc.

4. Each block, as now designed, is self-contained. It has its own dormitory, day space, dining-room, bath-room, lavatories, store-rooms, and cupboards, and the asylum is thus split up into many units for administrative purposes.

5. In large asylums the depressing effect of crowds of patients herded in one huge building is minimised.

There can be little doubt that this type of asylum is the most suitable for patients in this country and is the one which is being adopted in almost all the newer asylums. One of the chief drawbacks to the system is that on which stress is laid by Sir H. C. Burdett, namely, "the difficulty, if not impossibility, of efficient supervision by the superior officers of the asylum."⁽⁴⁾ This drawback, however, does not appear to be seriously felt except in those asylums which are of enormous size and in which whatever plan were adopted the same difficulty would remain.

Pavilion asylums are of many varieties :

1. Linear, in which the connecting corridor is in one straight line. This is the form frequently met with in hospital plans.

2. H-shape, *e. g.* Leavesden Asylum.

3. Echelon plan (*e. g.* Claybury Asylum) and its modifications.

1 and 2. The linear and H shapes may be considered together, as the latter is only a double linear with administrative offices in the centre. Both of these have the disadvantage that the blocks are too closely crowded together and interfere with the proper circulation of air and supply of sunlight, while the greater part of one ward necessarily overlooks another, and there is increased liability to spread of fire.

3. The echelon plan has many modifications corresponding with the different varieties in shape of the main corridor.

The following are given as examples :

(a) The quadrilateral, *e.g.* West Sussex, Hertford. This seems to be the most popular form in smaller asylums.

(b) V-type, *e.g.* 2nd, Gloucester Asylum. This form has the disadvantage that the wards at the extremities of the V are at a great distance from the administrative portion.

(c) The crescentic, with corridors as sectors connecting different segments of the crescent, seems best adapted to the needs of very large asylums, allowing greater concentration of the huge building, *e.g.* Bexley Heath Asylum.

A description of a pavilion asylum is given below.

Asylum Hospitals.

At the same time as the architecture of asylums in England has been progressing on the lines just mentioned, authorities in Scotland have been providing buildings allowing a still further classification of their patients, Dr. Clouston, at Edinburgh Royal Asylum, having converted the old "separate" buildings into hospitals; and Dr. Urquhart, at Perth Royal Asylum, having built two attached hospitals. Dr. Howden, at Montrose Royal Asylum, led the way in building a detached hospital. This building has been in use about ten years. This example has been followed by many of the older asylums in North Britain, and the newer Scottish asylums are specially designed with this principle in view. For descriptive purposes that of Gartloch Asylum is most suitable, being one of those the design of which appears to be the best.

The entrance portion is made up of waiting-rooms, surgery, and quarters for the matron and medical officer. The incoming patient is taken to an examination room with bath-room adjacent, and after being seen he is sent to the observation ward, or if old and feeble to the sick and infirm ward. The observation ward is planned for twenty-five, day rooms on ground floor, and dormitory on first floor. Staff required is one to six patients in this ward, and the patients are under continual observation both day and night. The remainder of the block is one story in height. A kitchen and dining-hall placed centrally divide the male from the female side. The sick room is for twenty-eight patients. The feeble and infirm use the

day room adjacent to the dining-hall and the dormitory next to it. A small day room with single rooms is provided for noisy patients. A noticeable feature is the exercising corridor, which is wide and practically forms a gallery. A small block separated by a cross-ventilated passage is provided for the treatment of infectious cases. The hospital provides accommodation for 150 patients.

The points in this plan that invite criticism are :

1. The observation wards and those for noisy patients face almost due north.
2. The dormitories adjacent to the exercising corridor appear to be faulty in ventilation, as there is neither cross nor longitudinal air circulation.
3. W. C.'s and lavatories, as in all Scottish asylums, are not separated from the day rooms by cross-ventilation.

The hospital is intended for those patients requiring constant medical attention, *e.g.* suicidal patients, generally feeble, wet or dirty patients, and those suffering from intercurrent diseases. The number of these, according to Sir John Sibbald,⁽⁶⁾ is one third to one half of the total number of patients. The advantages claimed for this system are :

1. More complete provision for the medical treatment of those requiring it.
2. In a section of the institution where medical treatment is the predominant aim, all concerned will be more zealous in their work.

That the remainder of the asylum can be constructed and administered more economically and effectively with due regard to the needs of the chronic cases.

That this subject has not been neglected in England is seen by the construction of a hospital block in connection with the asylum at Whittingham. The authorities of Wakefield Asylum are also at present engaged in the construction of a hospital block. This is being built at a cost of £68,944. There is accommodation for 100 patients of each sex, with a cottage home at the back for another 100. A complete administrative portion contains laboratories for scientific work. This system cannot, however, be said to have found favour with English architects. The plans of the many new asylums recently constructed or in course of construction do not show a special hospital.

This subject must not be confused with the scheme to found

a hospital for acute cases of mental disease suggested by a committee of the London County Council sitting in 1889. The Scotch Board lays stress on the fact that chronic, as well as acute cases, should be under one control.

The following seem to be disadvantages in this system :

1. A building constructed mainly of one story must prove expensive, having regard to the accommodation provided.
2. Administration must also be expensive. The staff required is large, owing to the breaking up of the building into comparatively small rooms and the need for two kitchens in the institution.
3. The size of the hospitals appears to be too large. An ordinary county asylum in England of 550 patients would with difficulty find 170 of that number suitable for the "hospital" treatment, yet these will be seen to be the respective numbers at Gartloch Asylum.

4. Though Sir John Sibbald expressly states that many curable cases will be in the asylum blocks, yet there appears to be some danger that the two sections of the institution will be used to separate the curable from the incurable. For example, one writer describes this system as follows :—"The hospital for the reception of all cases and treatment of the sick and infirm, and the asylum for the care and detention of the insane, the majority of whom are incurable."

In this connection the words of Conolly may be recalled : "I believe the absolute separation of the curable from the incurable to be neither practicable nor desirable ; and I know that the incurable patients are generally better companions for the curable than other curable patients are." (*Ibid.*, p. 19.)

Dr. Greene, in a paper read in 1890, says, "It is a common observation that association with the quiet chronic lunatic has a most beneficial effect on the acute case, more especially if this association can be combined with steady employment of some kind."

5. When the main attention of the staff is concentrated on the hospital block there is a liability that the chronic patient may be neglected.

It is feared that there is an idea much too common among medical officers that as chronic cases are rarely recoverable they should be put into a large building, housed and fed comfortably, and that then one's duty is at an end. The doctor in an asylum ought, however, to find that some of his best work will

be done among these cases. This work may not bring him prominently before the public with a remarkable recovery rate, but he will find his reward in the general appearance and tone of the great mass of those under his care. The depraved idiot and the demented epileptic, as examples of two of the most hopeless varieties of mental disorder, are capable of being taught at least good personal habits, and may be raised from a position of helplessness to one of comparative usefulness. Very many of the chronic cases, owing to their deep-seated delusions, are hopeless as regards being discharged "recovered," but they none the less feel the deprivation of their liberty, and, liable as they are to periodical exacerbations, require as close attention medically and generally as the acute cases just admitted.

In an older asylum which has been constructed with its wards all of one pattern it is evident at once how great a help a special building for the treatment of the newly admitted and sick cases must be. But in a modern pavilion asylum it is not understood why the blocks already provided for the different classes of patients should not serve their purpose more usefully and economically than a detached hospital.

The newly admitted patient will always attract attention and be carefully treated in whatever ward he is, owing to the freshness of his case. The feeble and infirm do not like to be shut off from the general cheerfulness of the younger and chronic patients, and many can attend an entertainment in the hall when they have only a short distance to go who could not do so were they confined to a detached building. The wet and dirty cases with proper attention should be few in number, and even were they many it seems undesirable to congregate them in one part of the asylum.

It may be here noted that a small hospital for the reception and temporary treatment of patients mentally afflicted has recently been opened in connection with Lewisham Union Infirmary. This building is designed with two wards, each accommodating eight patients; two padded rooms; the necessary offices; a small acute ward; and separate entrances for the sexes. The idea is an admirable one, as many quickly recoverable cases—for example, those due to alcoholic poisoning—can be sufficiently well treated here, and saved from the expense of certification and the stigma often attached to asylum confinement.

Several differences between Scottish and English asylums may be now mentioned. In Scotland :

1. The sanitary arrangements often open directly off the wards without the intervention of a cross-ventilated lobby.

2. Dormitories and day rooms, in many instances, are constructed without regard to the cross-ventilation insisted upon by the English commissioners.

3. The absence of chapel accommodation. The recreation hall is frequently made use of for the purposes of religious services.

4. The absence of enclosed "airing courts" is a noticeable advance in the principle of non-restraint, but the number of patients escaping appears to be larger than would be tolerated in a more densely populated country. The annual reports of the General Board of Lunacy state that the proportion of escapes to the number of patients is over 2 per cent. per annum in the asylums of Scotland.

The Villa or Village Type.

It has been seen that the tendency of late years has been to split up the asylum into two separate buildings, and at present there appears to be a movement on foot to do away with the connecting corridors, and have all the blocks of the institution disconnected. That this idea is no new one is evident from the following list of asylums in Germany and America. The dates of opening and number of beds are given in some instances.

Berlin State Asylums : Herzberge (1893, 1050 beds) ; Dalldorf (1881, 1300 beds) ; Biesdorf (1893, 750 beds).

State Asylum of Saxony : Alt-Sherbitz (commenced 1876, completed 1891, 961 beds).

America : Kankakee ; Toledo (1883, 1220 beds) ; Dakota ; Willard ; St. Lawrence State Hospital (commenced 1888, 1200 beds) ; McLean Hospital, Boston (private for 200).

Alt-Sherbitz.

Attention has of late been directed to Alt-Sherbitz, due to the praise given to this institution by Sir John Sibbald, ⁽⁶⁾ and the action of the Edinburgh Board of Lunacy in modelling their new asylum on this plan. Want of space forbids a lengthy description of this place. A detailed account is given

in the admirable report of a visit paid by a deputation of the Edinburgh Board in 1897.

The asylum is divided into a hospital and a colony portion. The hospital consists of separate blocks containing from 20 to 50 patients each, the colony of cottages holding from 26 to 42 patients each. The asylum has several disadvantages apart from those of the system, *e. g.* want of separate accommodation for staff ; small proportion of staff to patients (1 to 10) considering the small size and scattered arrangement of the buildings ; absence of internal decoration and primitive sanitary arrangements. One writer describes his visit as a "disappointment," and he found "ten patients locked in seclusion in the only ten single rooms of the asylum."

The advantages claimed for this system of separate buildings as compared with connected asylums are :

1. The cost of construction and management is less.
2. The separate buildings are more home-like and less institutional in character.
3. More extensive classification can be adopted.

With regard to these points :

1. The cost of corridor construction is certainly a drawback to the connected pavilion plan, but might be minimised by devising a less expensive type. In Scotland the corridors in many places are made of lighter material than the usual heavy brickwork, but these are found to be very cold in winter and excessively hot in summer. It must be, however, remembered that corridors, besides acting as means of communication, subserve the useful purpose by means of subways of carrying the various heating, lighting, water-supply, and other plant necessary to a large building. The cost of Alt-Sherbitz is given as £142 per patient inclusive of site ; this latter must be taken into consideration, as many buildings already on the estate have been converted to the use of the asylum. But having regard to the absence of proper heating, ventilating, and sanitary arrangements, with the lesser price of German labour, this amount cannot be considered specially moderate. St. Lawrence State Hospital cost £351 per patient exclusive of site. As regards management Alt-Sherbitz rate is quoted at less than £25 per annum per patient, but it is felt strongly that in an asylum built on this principle and administered on English lines the maintenance rate could not possibly be less, and

would probably be greater, than in a connected pavilion asylum. The experience of the Edinburgh Board will be looked forward to with great interest in this connection.

2. To a visitor such an asylum must very well appear less institutional in character from an external standpoint, but it is open to doubt whether the patients will share the same idea. There is no reason why the pavilion ward holding forty patients should appear less home-like than the detached building with fifty.

3. It is doubtful if this is an advantage. The principle of placing the melancholiacs, the acute, and the noisy, epileptics, and senile cases in separate buildings for each variety is one which is open to criticism. What can be more harmful than the so-called "refractory" block, in which each patient feels he is labelled with a bad name, and therefore tries to live down to his reputation? Melancholiacs exert a baneful influence on each other, and recover much better under the stimulus of the more spirited patient.

The disadvantages of the system are mainly those of administration, and the difficulties connected with this may be shortly summarised as follows :—1. Supervision. 2. Distribution. 3. Association.

1. The control of the staff and the care for the general welfare of the patients during the daytime must, as a rule, give rise to a considerable expenditure of time and labour, and in severe weather efficient supervision by the superior officers must be almost impossible. In Alt-Sherbitz the attendants sleep in the dormitories with the patients, but in this country this principle is rightly thought objectionable, and due attention to the needs of the patients at night could not be managed otherwise without a very large staff, and even then the matter is beset with difficulties.

2. Under this heading are included the distribution of food, of the various classes of stores, medicines, etc., and the circulation of material to and from the laundry, needle-rooms, and workshops. At Alt-Sherbitz the dinners are taken round in specially constructed and heated vans. At St. Lawrence it is found necessary to have five separate kitchens.

3. Weekly entertainments have now become essential in the treatment of patients. How the patients are collected for these entertainments in winter-time in a segregated asylum is difficult

to understand. The same difficulties will attend the association of the patients for religious services.

Many other points will occur to those accustomed to the ways of a large asylum, but enough has been said to show that it is questionable if the few doubtful advantages obtained from the separation of the components of an asylum compensate for the many disadvantages connected therewith.

It may be noted that none of the disadvantages mentioned apply to an asylum of comparatively small numbers for private patients, where the staff possibly exceeds in number that of the patients. For such no better type of asylum could be suggested. In this paper, however, attention has been confined to the needs of the pauper classes only.

In conclusion the points that attention should be directed to in the construction of a new asylum may now be dealt with.

1. *The site.*—The site chosen should possess a subsoil of porous nature, such as sand or gravel. It should be slightly elevated, but not exposed in position, with slight slope towards the south. It should be in a central position in the district, easy of access, and near some large town. It is a mistake to build on a high hill, and banished by distance from the haunts of men, as seems to be so frequently done. The patients like to see their friends, and the staff should be in a position to enjoy outside associations when off duty. The asylum should have its own water-supply and a sufficiency (at least forty gallons per patient per day) should be assured before building operations are commenced. If a well be the source of supply the sides must be rendered proof against surface contamination. The water from the well should be pumped into tanks placed either in a water-tower or on a neighbouring eminence; if the water is taken from the chalk some softening apparatus will be required. The well should have underground reservoirs in which the water can collect in the intervals of pumping. A complete system should provide for an adequate supply of the whole asylum and detached buildings for the following purposes :—(1) Drinking. (2) Washing. (3) Hot water. (4) Culinary purposes. (5) Cleansing. (6) Flushing. (7) Fire. (8) Watering.

The fire arrangements should include—

External hydrants off the main to command each block, hall,

kitchen, stores, shops, and detached buildings from at least two sides.

Internal hydrants of a 2½-inch pipe to command all the wards, administration blocks, and places occupied by patients.

Every asylum nowadays has its farm, and the size of the estate should be liberal, to allow extensive farming. An estate of 200 acres is ample for an asylum of 800 patients.

2. *The plan.*—The plan of the asylum will necessarily require some modification to suit the peculiarities of the site. It is assumed, however, that the site is a level and extensive plateau, and that the size of the asylum is to be one for 800 patients.

Following the plan of the West Sussex Asylum, an entrance block placed on the north side will have rooms on the ground-floor for porter and telephonic exchange, medical superintendent's office, with clerk's office adjoining or near at hand, committee room and luncheon room, assistant medical officer's office, and lavatory accommodation. An admission room with weighing machine and height measure, and a studio lighted from the north should be provided. At the entrance a small waiting and visiting room is sufficient. The main corridors are now in many places (*e.g.* Bexley) being constructed with bays for use on the regular visiting days. The recreation hall is often used for the same purpose. The first floor should provide accommodation for the assistant medical officers and the matron, two staircases and a partition wall being constructed. A second floor would be of advantage to provide accommodation for housemaids and night nurses. Many of the newer asylums have their entrance block on the north, and a small block on the south corridor for the medical officers. The advantage of this is that the doctors are near the wards, but in practice it will be found that the medical officer will be so frequently required in his office, either to attend to his case-books or interview the friends of the patients, that it will prove a severe hardship if his rooms are, as in one case, one sixth of a mile distant from the front entrance. The entrance block is in many cases placed on the south in a central position, and has the disadvantage that the main approaches are in proximity to the wards. This defect can be largely minimised by the generous planting of trees and shrubberies, but in the early days of a new asylum it must give rise to serious inconvenience. There are, however, many advantages in this situation

1. The main approaches are of more striking appearance.
2. The medical officers' quarters are near the principal departments of their work, *i. e.* offices, surgery, and infirmary wards.
3. The planning of the stores, workshops, engineering buildings (which must be situated to the north), with their approaches, will be simplified.

As an example of the southern entrance block that of Cheddleton Asylum may be mentioned.

In an asylum of the type under consideration (pavilions connected by corridors) it will be found that the main corridor can be described as consisting of four portions corresponding with the points of the compass. The central axis of the building separating the male and female sides will be given up to the stores, kitchen, recreation hall, and chapel (if attached).

The stores should be placed to the north of the north main corridor to facilitate the delivery of goods. It will be found useful to have a subway from the outside communicating with a basement in the stores. Communication with the kitchen court should be rendered easy. A covered unloading shed will be valuable in damp weather. Two serving hatches opening on the corridor will be necessary.

The kitchen, with its court and offices, and the recreation hall, will be placed between the north and south corridors, and bounded on each side by a connecting corridor. On these connecting corridors will be placed on each side recreation, mess, and bed rooms for the staff. The matron and head attendants will also have their offices most suitably situated on these corridors. Leading to the kitchen serving counters will be two short corridors, one for each side. A serving counter, for use on entertainment nights, ought to be provided between the kitchen and the hall.

In many cases a central dining-hall is provided. The advisability of this is a subject much discussed. The advantages claimed for a general dining-room are—

1. It helps to relieve the monotony of the daily life and clears the wards for a time so that they can be ventilated.
2. The food is more easily distributed from the kitchen.

As regards this question, the patients who go to the dining hall are those who can go out, either to work or to the gardens, and there will thus be sufficient time to thoroughly ventilate

the wards. The patients who most require change are those who are unable to go to the general dining hall. The great aim and object of modern asylum construction is to render the life of the patients as little institutional as possible, and it is most disastrous to the home feeling to have gangs of patients from the different wards merging into one huge herd in the dining hall. The patients do not like this system, and the shock to the newly admitted one is such as to deprive him of appetite till accustomed to the crowd. The full staff ought to be present at meals, but this is impossible with the dining-hall system, as many of the attendants have to remain in the wards with those patients unable to attend. The question of facility of distribution of food is not a great matter when the true interests of the patients are at stake. It may be doubted, however, whether it is easier to transport the patients to their food than to transport the food to the patients. It is a very simple matter to distribute the food in properly constructed tins to the various blocks. The recreation hall, if made use of as a dining hall, is lessened in efficiency for the purposes of entertainment. To remedy this in the newer Scottish asylums the recreation hall is built above the dining hall. This is costly, and an upstairs hall will suffer from the disadvantages above described in connection with an upstairs chapel, and in the case of a panic from an alarm of fire it is to be feared that the exits usually provided would not be sufficient.

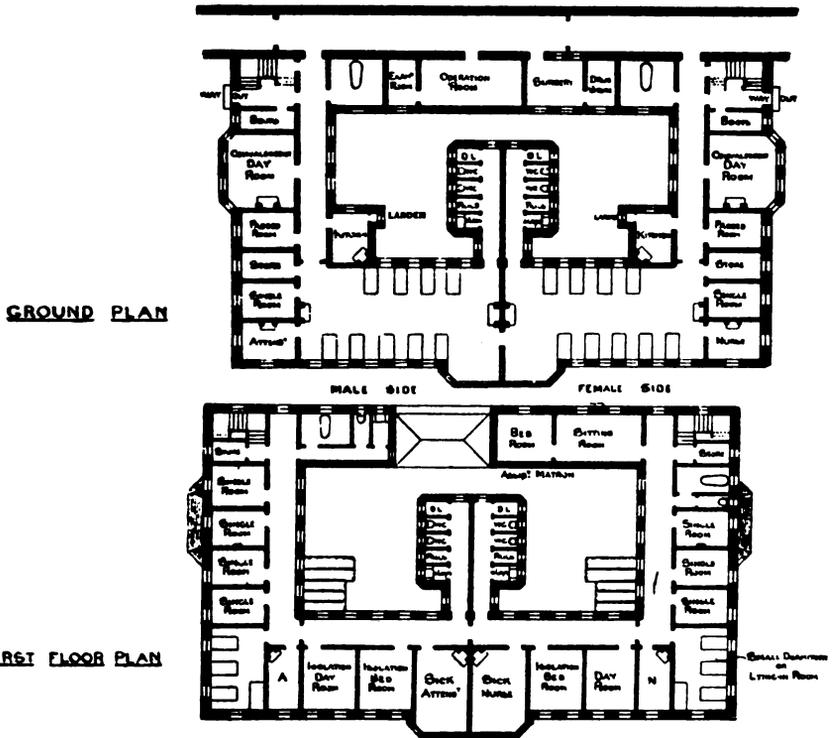
The patients' blocks will be next considered. These are usually of four varieties: infirmary; epileptic block; that for noisy patients; chronic class. To these should be added a fifth, the hospital.

The infirmary ward is used for the aged and infirm. It usually consists of two parallel wings connected by a gallery at right angles to these. One wing is composed of a small dormitory and adjoining day room, the other wing is a large dormitory. Single rooms are placed on the north side of the gallery. The large dormitory should be easily controlled from the gallery, a glazed partition being used in place of the more customary brick wall. A combined day room and dormitory is frequently provided, but is hardly necessary except in very large asylums. A verandah in connection with the infirmary is a useful feature in many of the newer asylums.

The hospital.—The best position for this block is in the

centre of the south corridor between the male and female sides. A plan designed by the author for the purposes of this paper is given. The block will be seen to be almost symmetrical on

HOSPITAL BLOCK



each side. On the ground floor is a hospital ward for nine patients with a sanitary annexe. A short gallery connects the main corridor with the ward. Off this gallery are a small convalescent day room, single rooms, padded room, stores, scullery, and attendant's room, and a bath-room is provided at the entrance to the ward. In the space enclosed by the ward and with doors on the main corridor are operating theatre, room for ophthalmoscopic or other examination, surgery, and drug store. On the first floor on both sides are isolation rooms, sick attendants' room, and a small dormitory. On the female

side there are added rooms for the assistant matron and a lying-in room. The advantages of having a block such as this may be stated as follows :

1. Its central position will enable the nursing arrangements to be undertaken by female nurses. Should it, however, be found necessary to employ male nurses on the male side, it will be seen that the two sides can be made absolutely separate.

2. Night supervision of the ground-floor can be effected by one nurse.

3. The surgery and operating room, besides being in close proximity to the ward that most requires them, are centrally placed as regards the rest of the asylum.

4. A case of infectious disease can be isolated speedily and effectively without undue expense. The elaborate detached isolation buildings could then be constructed on a much smaller scale, and would rarely be required.

5. The block will form a valuable training school for the junior nurses, and the assistant matron can effectively supervise the work done.

Each newly admitted patient will be sent to this block, placed in bed, and kept under observation as long as may be thought necessary. A case of illness occurring in the wards can be also sent to the hospital, and more carefully treated than if remaining in the ordinary ward. A patient deemed suitable for any special line of treatment will be under supervision day and night. The sick members of the staff can be treated in quietness, and separated from the noise and bustle associated with their ordinary room. This hospital it is suggested will supply all the requirements of the hospitals connected with the Scottish asylums, and will not suffer from the many disadvantages of detached buildings. The size of the block will depend partly on the size of the asylum, and partly on the liability to illness of the inmates ; one factor in the latter being the climatic conditions of the district in which the asylum is situated.

The epileptic block is best constructed with one large day room with dormitory adjoining, and of such form that all parts of the day room can be seen from any one portion. The communications between the day room and dormitory should be by means of large glazed doors, so that the patients in bed during the daytime can be under the observation of the nurses

in the day room. With this form of ward one sanitary annexe can be made to serve its purposes both by day and night. The plan of having the day room on one side and the dormitory on the other side of the main corridor, as is so frequent, is open to many objections.

Blocks for noisy cases are usually of the gallery type, with a larger single room and smaller dormitory accommodation, as compared with the rest of the asylum.

The chronic and workers' blocks usually consist of large day rooms on the ground-floor with large dormitories on the first floor ; a small proportion of single rooms being necessary only for the few who are likely to be restless at night.

In the planning of any one of the blocks the following details should be borne in mind :

1. Southern aspect of the block.
2. Thorough cross-ventilation of every dormitory.
3. Ventilating and heating arrangements for the single rooms, and padded rooms.
4. Each dormitory to have one attendant's room overlooking it.
5. Sculleries of ample size with larder provided for the staff.
6. Sufficient lavatory and bath-room accommodation, all w.c.'s, slop-sinks, and dirty linen closets being separated from the ward by cross-ventilated corridors.
7. Ward stores placed near the day room.
8. Clothes room placed adjacent to the dormitory. In the epileptic blocks this can be connected with the sanitary annexe.
9. Boot rooms of good size placed near the entrance to the patients' garden.
10. Sufficiency of closets for brooms, pails, and coals.
11. Fireproof staircases, and at least two in each block.
12. Fire hydrants commanding the ward from within, and on the outside from two standpoints.

The chapel, according to the wishes of the Commissioners in Lunacy, is now frequently a separate structure. The advantages usually claimed for a detached chapel are—

1. It is more pleasing to the patients, being in accordance with their previous habits of "going to church."
2. It is desirable to separate worship, as far as possible, from asylum associations.
1. As regards the first mentioned, it is undoubtedly pleasant

in fine summer weather for the patients to have a short walk before entering church, but in severe weather it is unpleasant, and even dangerous, for them to remain in damp clothes throughout a service, however short. In dark winter evenings it is a serious responsibility to keep under observation large numbers of patients, many of whom are suicidal and others epileptic. The feeble, deformed, and aged, who much enjoy the services, will be unable to attend if the distance to be traversed is great.

2. The presence of the asylum staff alone will militate against forgetfulness of the asylum associations.

The chapel is often used for choir practice, sacred concerts, organ recitals, morning prayers, and other purposes. If detached it will be found that the recreation hall will have to take its place on week days, and the chapel will therefore be only for Sunday use.

The chapel usually contains two small retiring rooms for epileptics. These are rarely used, and a spacious porch would prove convenient for this purpose and be an ornamental addition to the structure.

The house of the medical superintendent is in most cases connected with the asylum. This is according to the rules of the English Commissioners. The Scottish Board insist on this house being detached. It seems to be only right that the medical superintendent should be able at times to be completely separated from his duties, and as he is frequently a married man it is undesirable that young children should be exposed to the sights and sounds inseparable from an asylum.

Engineering works.—Heating and ventilating.—Many different systems have been introduced of late years, but it is doubtful if any one of them surpasses in efficiency the old-fashioned system of open fires.

Lighting.—Electric light has now established itself as the most suitable means for this purpose.

Sewage disposal.—The best method of dealing with the sewage of an asylum is a matter still under discussion.

The above subjects are of an extensive nature and much beyond the scope of the present paper. Want of space also forbids a description of laundry, workshops, mortuary, isolation hospital, farm, and the detached buildings for the staff which are essential to every asylum.

The following are the conclusions which have been arrived at by the writer :

1. Plans upon the villa system and those consisting of detached blocks placed at a distance from the main building present disadvantages which outweigh the advantages claimed for them ; and such systems are not likely to become popular in this country and under the existing conditions as to management.

2. The division of an asylum into two portions—the acute and the chronic—almost equal in size, is open to objection.

3. The most suitable plan for an asylum in this country is one made up of distinct pavilions, each complete in its details, connected together and with the administrative offices by means of corridors.

(¹) *Report of Metropolitan Commissioners in Lunacy, 1844.*—(²) *Hospitals and Asylums of the World*, Sir H. C. Burdett, p. 18.—(³) *The Construction and Government of Lunatic Asylums*, Conolly, p. 13.—(⁴) Burdett, p. 99.—(⁵) *On the Plans of Modern Asylums for the Insane Poor*, Sir John Sibbald, p. 15—(⁶) *Ibid.*, p. 20.

Clinical Notes and Cases.

Cases of Communicated Insanity. By E. W. GRIFFIN, M.D.,
Assistant Medical Officer, District Asylum, Killarney.

THE following cases are of interest as being of somewhat rare occurrence. A careful, if incomplete investigation reveals the fact that a sister's son, after "sunstroke," was treated to recovery in an American asylum, and remains well. But, as in so many similar instances here, nearly all the brothers and sisters emigrated to America, and have been lost sight of. However, Mrs. M— assured me that no case of insanity had occurred among her progenitors as far back as her grandparents, to her knowledge. Nor was there evidence of paralysis, epilepsy, hysteria, alcoholism, or phthisis. The mother is alive and well at the age of seventy. The father died a few

years ago at a similar age. I have seen the children of Mrs. M—, who are certainly not neurotic.

CASE 1.—Mrs. M—, married woman, æt. 50, farmer's wife, educated, was admitted into Killarney Asylum on 21st February, 1899. There was no direct hereditary predisposition, and the cause of the attack was attributed to anxiety about her sister's illness.

On admission.—She was much excited, talked continuously and incoherently. The friends informed the writer that they had experienced great difficulty in bringing her to the asylum. Pulse 85, full and bounding. Tongue furred, breath offensive.

Since admission.—Night nurse reported that patient walked about single room during the night, shouting, singing, and talking. Refused food. Is much exalted in manner and conversation, and cannot localise herself in time and space. Says she came here from America to attend her sister's wedding, and that several of the guests came into her room during the night. Is labouring under hallucinations of sight and hearing. Her delusions are evidently of a pleasing kind, as she danced, laughed, and sang continually whilst her case was being taken.

February 23rd.—Patient was fed with nasal tube last evening, and given calomel gr. iv. Bowels were moved three times during the night, and restlessness and excitement is not so marked this morning.

25th.—Still refuses food, and has to be fed twice daily. Gets grs. xx sulphonal in evening meal. Reported as having slept four hours during the night. Tongue cleaning. Pulse 80.

March 4th.—Patient has been taking her food for the past few days, and is sleeping fairly well at night. She knows where she is, and says she is sorry for the trouble she has given everybody. Has spent several hours in airing-ground daily since the 1st of March.

11th.—Is quite free from delusions and hallucinations of the special senses now, and she expresses herself as feeling quite well in mind. Remembers the events that took place at her home prior to admission, and says that she experienced a fulness and throbbing in her head for some days before she became insane, and a feeling that something dreadful was going to happen. Is sewing quietly in the ward, and takes the greatest interest in her sister, who is suffering from an attack of acute mania similar to her own.

18th.—Is quite coherent in her conversation, and rational in her manner. She is a sober, steady woman, and is very anxious to do anything that will expedite her recovery. Has been taking syrup of the hypophosphites (Fellows') during the past week.

The patient was discharged recovered on the 20th April, 1899.

CASE 2.—Mrs. T—, married woman, æt. 43, the mother of thirteen children, educated, was admitted into the Killarney Asylum 25th February, 1899. Had a mild attack about eighteen months ago, post-puerperal. The cause of the attack was the same as in the case of her sister, viz. over-anxiety about her sister's illness and want of sleep.

On admission.—The patient was noisy, violent, and impulsive in

disposition. Talked loudly and incoherently, and could not tell where she came from. Pupils dilated, equal. Tongue furred, and lips cracked. Pulse 90. Bruises on upper and lower extremities. In a state of acute maniacal excitement, noisy, shouting, laughing, gesticulating. Pays no heed to any questions put to her; laughs and puts out her tongue when addressed. Appears to have no memory, no self-control; is somewhat erotic. Fleeting delusions; talks about getting a sight of hell, heaven, etc. Laughing and singing loudly when not talking. Hallucinations of sight and hearing.

February 27th.—Had no food since admission, and did not sleep during the night. Was fed this morning with nasal tube, and given grs. iv of calomel.

28th.—Bowels were moved four times during the night, and the patient was reported as having slept from 2 a.m. to 6 a.m. Took 20 grs. of sulphonal at bedtime. Is still very noisy and restless in disposition. Took a fair amount of liquid nourishment to-day.

March 4th.—Is eating and sleeping fairly well since last noted, and is now capable of answering simple questions. Knows where she is, and was able to recognise her sister this morning.

11th.—Patient has improved in mind during the week, and is now able to converse rationally and coherently; is still exalted in manner and conversation. Slept without the aid of sulphonal for the past two nights.

18th.—Is now quite calm and rational in her manner, and walks about airing-ground with her sister, to whom she appears to be much attached. Is free from delusions and hallucinations of sight and hearing.

25th.—Patient became excited in dormitory on the 19th inst., and had to be removed to a single room. Since then she has been going on well, and had no return of the excitement. Sews industriously in the ward, and spends several hours every day in airing-ground. From this time forward the patient's progress was uninterrupted, and she was discharged recovered on the 29th May, 1899.

History of cases.—The two sisters went to see a married sister, Mrs. C—, on the 9th February, who was suffering from mental aberration, attributed to worry of mind and loss of sleep induced by an unsuccessful lawsuit prosecuted by her husband against a neighbour. It appears they nursed their sister a whole week by day and night, and had scarcely any sleep or rest during that time. They used to lie on the affected sister's bed at night trying to keep her quiet, as she was very restless, and talked the greater part of each night. Mrs. M— appeared to be all right when leaving on the 17th February, but developed symptoms of insanity next day. Mrs. T— became mentally affected on the 17th, and had to be taken home by her husband. They both attributed their attacks to want of sleep and rest. From the description of Mrs. C—'s insanity given to the writer by her friends and the two sisters in the asylum, it was somewhat similar to the cases above described, but of a much milder form. There was great restlessness, pleasing delusions, and hallucinations of sight and hearing. She recovered at her own house after a few weeks' illness. These two

cases may be described as examples of *folie simultante* (M. Regis), and are undoubtedly striking examples of persons becoming insane from companionship, not in consequence of any direct transference of morbid ideas, but from the shock arising out of the painful impressions caused by witnessing the attack and the strain of nursing the patient. The important facts about these cases are—(1) The exciting cause was the same in both cases, viz. the illness of their sister, Mrs. C—, who may be described as the active agent in the matter. (2) The form of insanity and mental condition were exactly similar. (3) Quiet and uninterrupted recovery in both cases. (4) No direct hereditary predisposition or any marked neurotic tendency. (5) Both sisters were intelligent and well educated for persons of their class (farmers' wives). The sister who recovered and remains recovered at home suffered from periodical headaches and gastric derangements. She had no children. (6) All three sisters were devotedly attached to one another.

Major Operations on the Insane.—Notes of a Case of Cataract. By Major J. H. TULL WALSH, I.M.S., Civil Surgeon of Berhampur; and Superintendent, Berhampur Lunatic Asylum.

I SEND the following notes in connection with Dr. J. H. Sproat's article on the same subject in the *Journal of Mental Science*.

Nimai M—, æt. 40 on admission to the asylum, 19th January, 1893. He committed rape on a woman in March, 1892, and appeared sane at his trial before the magistrate, who sentenced him to three years' rigorous imprisonment. He was sent to the Bhagulpur Central Jail, and was then in good health.

In his description roll it was stated that he had previously been insane, and the cause assigned was failure in business and loss of money. There is no reliable evidence that he was really insane, and no dates are given.

Shortly after admission to the Bhagulpur Jail, Nimai showed signs of insanity. He became quarrelsome, intractable, refused to work. He laboured under the delusion that he was illegally detained in jail, being sentenced to "one day's imprisonment only." He was certified as insane, and sent to the Berhampur Asylum.

On admission he was noisy, voluble, and incoherent; refused to do any work. He remained noisy and excited till July, 1893, when he became quieter as the result of treatment with chloral and bromide of potassium. He became worse again in 1894, and remained noisy and excited. He would sit in one place and scream all day. There was slight improvement in the beginning of 1898, but it did not last, and when I first saw him, in July, 1898, he was incoherent except in regard to

very simple matters, noisy, liable to outbreaks of excitement, and dirty in habits. He had double cataract, and was almost totally blind ; he had also a small right inguinal hernia. In October he improved somewhat, and, though very noisy at times, was fairly rational. He varied somewhat, but as I could generally make him understand me I decided to operate on him for his cataract.

On February 17th, 1899, I removed the lens from the left eye, and by keeping careful watch over him prevented any interference with the dressings. He recovered with good sight, and the effect on his mental condition was most marked ; he became quiet, rational, and clean in habits. He told us that he was a Christian, and as he had no friends I wrote to the mission to see if employment could be found for him. The missionaries were not able to do anything for him.

In May I operated on the right eye, but he removed the dressings the night after the operation, and the eye did badly, and could only tell light from darkness. He remained sane, however, and appeared very grateful for the restoration of sight. His sentence had expired in 1895, so that there was no difficulty about his release. He was brought before the visitors in May, 1899, and by their order released. I have not heard anything of him since.

Spurious Pregnancy. By G. FINDLAY, M.A., M.B., Brailes, Warwickshire.

ABOUT three years ago I was called to see Mrs. B—, æt. 54, a fairly stout, well-developed woman, mother of nine children, and the wife of an agricultural labourer. Some time before, I had attended her for climacteric disturbances, but her menstrual periods had previously been regular.

She informed me that she believed herself to be pregnant, as she had not menstruated for over three months. I told her that at her age she was not likely to be in that condition, and that the cessation of her periods was due to her time of life ; but she persistently said that she was convinced that she was with child, and refused to permit me to make a proper examination, saying that as she had had nine children, and the youngest fifteen years old, she knew perfectly what was the matter. About two months afterwards she called to tell me that her impressions were realised, as she had distinctly felt the child move, and could feel it then ; that she had first felt the movements about a fortnight before, when she was at a concert in the village, and that she was getting much stouter round the waist. I again told her that I should like to examine her when she was in bed, but she refused, and asked me to attend her when she was confined.

I did not hear anything more about her until about four months after our last interview. Her husband then came to me at two o'clock one morning, wishing me to attend at once, as his wife was in labour,

and as he had got a woman to look after her while he came for me. On arriving at the cottage I found her in bed, rather excited, and exclaiming that she was glad I had come as the pains were very strong, but seemed to make no progress, although she had been bad for two or three hours. I then made a vaginal examination, and found that there was not even an enlargement of the uterus, although the abdomen was distended. There was no evidence of any tumour. The abdomen was soft on palpation, except where she said she had a pain as I was examining her, where there was a distinct contraction of the abdominal muscles. I repeated that she had made a mistake, that there was no child and no labour; but she would not believe me, so I called her husband and told him in her presence that as there was no child to be born I was going home. Next day Mrs. B— was up and dressed, and could hardly even then believe that she had not been pregnant, although the pains and the distension had disappeared.

I saw her recently, and she told me that she had never menstruated again, that her impression of being pregnant was very real at the time, although she now knows that she was mistaken. Since then she has enjoyed good health, except for a slight attack of bronchitis last spring, and has shown no symptom of mental aberration. There was no hereditary predisposition to insanity.

Note on Mental Condition of a Girl who became a Mother at Fourteen Years of Age.—She lived with a married "aunt," who was childless. When visited before parturition she appeared unconcerned about her condition, rather vacant. During labour she was wonderfully quiet, taking everything as a matter of course.

After confinement she lay contentedly in bed at first, and did not take much interest in anything, but wished much to get up in three or four days. She took no notice whatever of the child, who was brought up on the bottle by the aunt, who took entire charge of the infant. The girl showed no maternal instincts at all, but was dull and indifferent.

There is no reason to doubt that conception occurred after criminal assault, a few months after irregular menstruation had begun. Her condition was not discovered until three months after the event.

An Attack of Epilepsy (Status Epilepticus) followed within six weeks by an Attack of Chorea, occurring in a Patient suffering from Acute Puerperal Insanity.

By C. C. EASTERBROOK, M.A., M.B., Assistant Physician,
Royal Asylum, Edinburgh.

THE following case is worthy of record on account of its rarity, and of the interesting association of neuroses which were manifested by the same patient within a comparatively short period:

R. B. B—, an unmarried shop-girl, æt. 22, was admitted into the Edinburgh Royal Asylum on August 19th, 1895, suffering from acute mania of the puerperium.

1. *Family history*.—Her parents were intelligent, respectable people of the working class. The father had always enjoyed good health, but a brother of his was melancholic, and committed suicide; another brother died at twenty of “heart disease,” and several of the father’s cousins were “consumptive.” The mother was a martyr to rheumatism, and had suffered from a definite attack of rheumatic fever at twenty-one. A sister of hers had always been “weak-minded” (imbecile), and her father died of “paralysis.” Hence, from the patient’s point of view, there were hereditary tendencies to—

- (1) Insanity (paternal uncle and maternal aunt).
- (2) Paralysis (maternal grandfather).
- (3) Rheumatism (mother, and possibly the paternal uncle, who died of “heart disease”).

The tendency to phthisis (paternal half-cousins) was less obvious. There was no history of epilepsy or of chorea in the family.

2. *Personal history*.—Patient had always been an excitable, highly strung neurotic subject. She took no convulsions in infancy, but in her seventh or eighth year she for a time was subject to “dizzy turns,” the precise nature of which it is now impossible to ascertain. She knew when they were coming, and would cry out, but she is said never to have lost consciousness or to have fallen during them. At fourteen she had a mild attack of chorea, brought on by a “fright in the dark;” it lasted between three and four months, and involved the face and limbs, and to some extent the function of speech. There had been no history of growing pains, and she never had (or has) been rheumatic.

Her psychical history since the onset of puberty at fifteen and during adolescence has been extremely bad. There have been four distinct attacks of insanity, for each of which she required to be sent to Morning-side Asylum. There was mental disturbance at the first menstruation, characterised by taciturnity and dulness; and this was the commencement of the first of her four previous attacks, which were as follows:

First, at fifteen. *Stuporose melancholia of pubescence*.—Lasted three and a half months—from January to April, 1889. This attack is described in the asylum records as “a good case of melancholic stupor.”

Second, at fifteen. *Acute mania of pubescence*.—Lasted four months—from July to October, 1889,—and was characterised by great forwardness and precocity, and a tendency to “show off” before the other sex.

Third, at sixteen. *Acute mania of adolescence*.—Lasted eight months—from December, 1889, to July, 1890. This attack was characterised by several monthly exacerbations, and finally by two months of stupor before recovery occurred.

Fourth, at nineteen. *Acute mania of adolescence*.—Lasted fourteen months—from July, 1892, to September, 1893. This attack was characterised by an initial five months of continuous mania, and then by a period of quiescence, and next by a relapse before final recovery. It is interesting to note that on the occasion of this, her fourth admission into the asylum, she is recorded for the first time to have a “systolic

mitral bruit." There had been no rheumatic, or choreic, or cardiac symptoms complained of since her previous admission.

3. *Present illness* (August, 1895).—The patient during the previous two years had become loose and unsteady in her habits, and on August 8th, 1895, she gave birth to an illegitimate male child. The labour was difficult; instruments were used, and much blood was lost both at and after the birth, and during the succeeding week she fainted on three or four occasions when sitting up in bed in order to attend to the calls of nature. The lochia were profuse but "sweet." She nursed the baby for two days, but had to give this up on account of soreness of the nipples. On the eighth day of the puerperium—*i. e.* August 16th—morbid mental symptoms supervened. She became elated, excited, and restless, decorated her hair, smashed her watch, would not stay in bed or take food or go to sleep, and in three days was so much worse that it became necessary once more to send her to the asylum (on August 19th).

On admission she presented the typical appearances of puerperal acute mania, being hilarious, laughing, singing, whistling, chattering, full of fitting fancies, cheeky, blasphemous, obscene, tricky, mischievous, very restless, confused, incoherent, spitting right and left, destructive, and inattentive to the calls of nature. Bodily she was anæmic and feverish, the temperature being 101° F., and the pulse 144. The pupils were large and sluggish. There was a mitral systolic bruit sufficiently rough in character to make one suspect more than a mere functional origin, but its direction of propagation could not be ascertained at the time, owing to the patient's restlessness. The mammæ were full of milk, and were hard and lumpy. There was no pelvic tenderness, and, as normally happens by the eleventh day after labour, the uterus could not be felt above the pubes. The lochia were "sweet," though now somewhat scanty. The nurse was unable to obtain a specimen of urine for examination. The treatment adopted was confinement to bed till the feverishness passed off; a preliminary half-ounce dose of magnesium sulphate; free nourishment, mainly by milk and egg custards; vaginal douching once daily with 1 to 60 carbolic lotion; belladonna plasters, applied to the breasts after they had been massaged and softened; and sulphonal as required to control the insomnia and restlessness.

The mania continued unabated in severity for nearly a week after admission; then for two days the violent motor restlessness diminished somewhat, and this was followed next morning, on the nineteenth day of the puerperium—*i. e.* August 27th—by the sudden occurrence of a severe epileptic convulsion. I was sent for at once, as the patient was not known to be subject to fits. The fit by this time had ceased, but she was deeply unconscious and in a state of general muscular relaxation, and the conjunctival and pupil reflexes were absent. The sleeve of her strong cloth dress (with which she had been robed on account of her destructive tendencies) was found to have been pulled up over the right biceps, the arm being tightly constricted at the point, and below this red and œdematous. During the rest of the day the patient did not properly regain consciousness, owing to the recurrence of a severe epileptic fit every three or four hours. Since the onset of the

first fit the mania had been entirely in abeyance, and had been replaced by the condition of *status epilepticus*. The convulsions were typically epileptic in character, the patient becoming at each fit suddenly and deeply unconscious, the eyes being turned strongly upwards, and the characteristic state of general tonic spasm being followed by clonic convulsions, which started at the lips and spread rapidly to the limbs and body generally. During the fit there was no wild talking or quasi-purposive throwing about of the limbs, as in hysterical convulsions. The only other condition which could reasonably be suspected to be present was puerperal eclampsia; but an examination of the urine, which was being passed copiously, and which it was now possible to obtain, proved such a diagnosis to be untenable. The urine had a specific gravity of 1023, was amber in colour, acid in reaction, and contained a healthy percentage of urea, and no albumen, blood, or sugar. Eclampsia gravidarum was thus not present, and this was all the more unlikely when we remember that, as a complication of child-bearing, eclampsia⁽¹⁾ sets in in more than half the cases during actual parturition, and in the remaining cases during the last two months of pregnancy or during the first two days of the puerperium, rarely, if ever, as late as the nineteenth day of the puerperium. Subsequent events confirmed the diagnosis of epilepsy, for, whereas a patient with eclampsia seldom survives more than twenty-five fits, this patient remained for eight days in the condition of *status epilepticus*, during which she had about a hundred severe fits and many lesser ones. On an average there were twelve severe convulsions in the twenty-four hours, and many slighter ones in addition. During the eight days of *status epilepticus*—August 27th to September 3rd inclusive—the patient remained comatose, feverish (temperature usually about 102° F.), and exhausted. Feeding was accomplished with great difficulty. At first sips of custard could be trickled down the throat between the paroxysms, but finally nutrient enemata had to be resorted to; and it was by means of medicinal enemata, each containing chloral hydrate 45 grains and potassium bromide 60 grains, that the condition was finally controlled. On the eighth day (September 3rd) of the *status epilepticus* three such enemata were given—*i. e.* 135 grains chloral and 180 grains bromide; but notwithstanding these large doses, there were twelve severe convulsions and many slighter ones. On the next day two similar enemata were administered, and no convulsions occurred, the patient gradually returning to consciousness. During the following week she regained strength, and the condition of post-epileptic mental confusion wore off, the mania now returning, but in a milder form than at first, with much less motor disturbance, the condition being essentially one of subdued mental exaltation and excitement, characterised by hilarity, constant chattering of nonsense, and playful tricky ways. This condition of mania continued, becoming gradually milder, during September and October, when another neurosis made its appearance. It was difficult to say, owing to the playful movements and mannerisms of the patient, when the chorea precisely began, but on October 14th—that is within six weeks of the cessation of the *status epilepticus*—distinct choreic movements were present, affecting the face and upper limbs. She made faces and grimaces, and moved about her head,

shoulders, and hands in the short, jerky, involuntary, irregular manner characteristic of the disease. The mitral systolic bruit, which could now be listened to under more favourable circumstances, was distinctly propagated towards the axilla, indicating organic mitral disease. The chorea was mild in type, and disappeared under arsenic treatment in a fortnight. Meanwhile the mania was gradually subsiding, and by the middle of November she was regarded as convalescent, and was discharged recovered on January 11th, 1896.

[4. *Note on the subsequent history of patient.*—Patient again became pregnant, was married in April, 1897, and confined two months later. This time the labour was natural, and she nursed the child for four months, when melancholia set in, which in three weeks was succeeded by mania. She was readmitted into Morningside Asylum in November, 1897, suffering from lactational acute mania, was treated with mammary gland tissue, which had no apparent effect on the course of the disease, and, after passing through a melancholic phase during convalescence, was discharged recovered in June, 1898.

At the time of writing (November, 1899) I hear from her parents that she had her third baby in May, 1899, that she nursed it, but again "took the trouble," and was admitted into Middlesbrough Asylum, Yorks, at the beginning of the present month. Dr. Pope, of Middlesbrough, kindly writes to me that Mrs. R. B. B. M— is suffering from lactational subacute mania, with features strongly suggestive of hysteria, so that yet another neurosis must be added to this strange history.]

Pages of theory might be written on the strength of the above case as to the nature of insanity, epilepsy, and chorea, their pathogenetic relationships to one another, and their particular localisations in the common dwelling-house of the nervous system.

The following considerations, however, show the necessity of great caution in generalising from such a case.

1. *Child-bearing is one of the commonest causes of insanity in women*, accounting for 10 per cent. of all the cases, puerperal insanity claiming 5 per cent., lactational insanity 4 per cent., and gestational insanity 1 per cent.⁽⁷⁾

2. *Child-bearing is an occasional cause of epilepsy*, but the epilepsy usually begins during pregnancy, and this form is apt to recur in successive pregnancies and in time to become chronic.⁽⁸⁾ Puerperal epilepsy is much less common and is less apt to recur. Puerperal *status epilepticus*, as the sole manifestation of epilepsy, must be considered as distinctly rare, for the "epileptic state" itself, according to Sir William Gowers,⁽⁸⁾ is "very rare" in comparison to the frequency of the disease epilepsy.

When epilepsy and insanity are associated, the epilepsy, as

is well known, is generally the forerunner of the insanity. This is epileptic insanity, which accounts perhaps for 9 per cent. of the total insanity in Britain,⁽⁴⁾ being somewhat less common in women than in men. Epilepsy consecutive to insanity is rare,⁽³⁾ although epileptiform convulsions are not uncommon in the course of insanity, both chronic and acute; witness especially the convulsions seen in the recent alcoholic insane.

3. *Child-bearing is an occasional cause of chorea*, but chorea gravidarum nearly always occurs during pregnancy, this form of chorea being usually very severe, apt to be complicated with delirium and mania, and often fatal.⁽⁵⁾ Choreia arising during the puerperium is rare.⁽⁶⁾ In the above case distinct symptoms of chorea appeared during the ninth week after labour, so that if the puerperium is limited to the period of six weeks following parturition the chorea in this case could hardly be called puerperal. However, the puerperium is stated by various authorities to last from one to two or even to three months after parturition, and whether the chorea in this case was to be regarded as a puerperal manifestation or not, the fact remains that the chorea was consecutive to puerperal insanity. Now when chorea and insanity are associated the insanity is nearly always consecutive to the chorea.⁽⁷⁾ This is choreic insanity, and it forms a very small percentage of the insanities. Rarely is chorea consecutive to insanity, although choreiform movements are not uncommon in the insane. When chorea occurs in the course of insanity the insanity usually disappears, the chorea remaining and becoming chronic.⁽⁷⁾ In the above case the mania was subsiding as the chorea appeared, and the chorea itself only lasted about two weeks.

Applying these considerations to the case of the patient in question, we recognise—

1. That she suffered from puerperal insanity, a common form of mental disease in women.

2. That during her illness she developed first epilepsy and then chorea, both of them rare conditions to arise during the puerperium and also (especially the chorea) as consecutive to insanity.

3. That the epilepsy was in the comparatively rare form of *status epilepticus*, and that the chorea was peculiar in not becoming chronic.

Hence it would seem unjustifiable, in consideration of the rare developments of the illness, to form generalisations as to the nature and affinities of the above neuroses.

However, looking at the whole facts of the case, one may conclude—

1. That the patient had a bad family history.
2. That she herself was a very neurotic subject. This, in the present state of our knowledge, probably means a marked chemical instability in the nerve centres.
3. That the occurrence of acute mania or of epilepsy or of chorea in such a subject was not to be wondered at.
4. That the occurrence of the three diseases in succession within a short period in the same patient favours the view that the three diseases have a common site, namely, in the "highest level"⁽⁸⁾ of the cortex. If one carefully analyses the symptoms of acute mania, epilepsy, and chorea, it seems to me that the functions of the nervous system essentially at fault in these diseases are the mental and the motor. This favours the view that the three neuroses have their site in the pre-Rolandic portion of the "higher" cortex, rather than in the post-Rolandic cortex, which is more essentially mental and sensory in function.⁽⁹⁾
5. That in the absence of a definite pathology, the fact of the curability of the three diseases shows them to be essentially functional neuroses, dependent upon morbid molecular activity of the nerve centres and not upon gross nutritional or structural changes.
6. That in the absence of a definite proof of any autotoxic, toxic, or microbic agency, the ultimate cause of the three neuroses is an inherent chemical instability of the nerve centres, and a consequent tendency on their part to morbid chemical activity and functioning when they are brought under the influence of any "irritant" in the wide sense, the "irritant" merely acting as spark to powder. I do not agree with those⁽¹⁰⁾ who hold the essential cause of chorea and epilepsy to consist in a microbic or toxic agency in the blood. The great incidence of these neuroses and of the insanities during the developmental period of life, especially during the period of maturation of the nervous functions, is strongly in favour of the view that the *fons et origo* of these disorders is in the cerebral cortex. It is the metabolism of the nerve centres, not

the metabolism of the blood, which is the root of the evil of the "developmental" neuroses, and there is reason to believe that the toxins which have been found are an expression, not the cause, of the morbid chemical activity of the higher neurons.

(1) Hermanen, "Puerperal Eclampsia," Clifford Allbutt's *System of Medicine*, vol. vii, 1899.—(2) Clouston, *Mental Diseases*, 5th edit., 1898.—(3) Gowers, "Epilepsy," in Clifford Allbutt's *System of Medicine*, vol. vii, 1899.—(4) Savage, "Epilepsy and Insanity," in Hack Tuke's *Dict. of Psycholog. Medicine*, vol. i, 1892.—(5) Osler, *Principles and Practice of Medicine*, 3rd edit., 1898.—(6) Risien Russell, "Chorea," in Clifford Allbutt's *System of Medicine*, vol. vii, 1899.—(7) Ludwig Meyer, "Chorea and Insanity," in Hack Tuke's *Dict. of Psych. Med.*, vol. i, 1892.—(8) Hughlings Jackson, *Evolution and Dissolution of the Nervous System*, 1888.—(9) Ferrier, "Regional Diagnosis of Cerebral Disease," in Clifford Allbutt's *System of Medicine*, vol. vii, 1899.—(10) Macpherson, *Mental Affections* 1899.

DISCUSSION

At Autumn Meeting of the Scottish Division of the Medico-Psychological Association.

Dr. IRELAND hoped that, in the future, inquiry would be made as to the children born of this unhappy person, whose neurotic tendencies were so marked. He was puzzled to distinguish between epileptic and epileptiform convulsions, and between chorea, reported as being rare in insanity, and choreiform motions which are not uncommon. How were these terms to be used and understood?

Dr. BRUCE thought that Dr. Easterbrook would have general support in stating that epilepsy and chorea are very closely connected. He remembered two cases, one starting with chorea and the other with epileptic seizure. Both ended in death. The first was a lad of about seventeen years of age. He became gradually weaker from loss of power, and choreic movements began in the right hand, extending to the arm, and later to the side of the body. Following upon these choreic movements a severe epileptic fit occurred, which seemed to clear the mental atmosphere. On the following day the movements began to affect the whole of the right side, and the patient had another fit, from which he never recovered. The other case was one of general paralysis. The chorea came on gradually, and afterwards became rapidly general. In three days a severe congestive seizure ended in death. He thought that there was still a great deal to be said in favour of the view that certain congestive states were due to poison in the blood, which, he believed, could, by inoculation of the blood, produce a condition of toxine poisoning in another person.

Dr. G. M. ROBERTSON said he would refer to the treatment of *status epilepticus*. He thought that in chloroform they had got a means of actually stopping the convulsions in all these cases, and he felt certain that if chloroform had been used by Dr. Easterbrook long before the expiry of seven or eight days the convulsions would have ceased. In Jacksonian epilepsy there was a gradual march of the spasm. It started, say in the thumb, and gradually spread up the arm and shoulder, affecting the side of the head; then spread to the leg. In true epilepsy, on the other hand, the convulsions were supposed to be sudden and universal, perhaps more in one side than the other, but practically simultaneous. In one of the cases of *status epilepticus* which he had treated the patient was kept under chloroform only sufficiently deeply to prevent the convulsions being very severe. The convulsions then, instead of being sudden and universal, had a march exactly the same as the march of the convulsions in Jacksonian epilepsy. In true epilepsy the amount of discharge was greater and more sudden, and therefore they were not able to follow the march of the spasm, except in the manner referred to. This point had never been confirmed. It would therefore be very interesting to have further observations in similar cases treated by chloroform.

Dr. KEAY said that he had tried venesection in the treatment of *status epilepticus*, as recommended by the late Dr. Wallis. He had bled two patients, and both had died very soon afterwards.

Dr. URQUHART said he had precisely the same experience. The bleeding certainly stopped the fits, but the fatal event followed within a few hours.

Dr. CAMPBELL CLARK said he had a case of *status epilepticus*, and the patient was bled about eighteen months ago, but was still alive. He had been interested in puerperal insanity for a very long time, and he had made very careful notes of all his cases; and he had been struck by the point which had been raised as to whether they had to deal with nerve-cell metabolism or with some other condition. Dr. Easterbrook thought there was no evidence of septicæmia. He was of opinion, however, that septicæmia was present much more often than they supposed. There was evidence of it in many cases in the shape of small boils or pustules scattered over the body, and especially over the buttocks. The poisoning of the blood in the great majority of these cases did not necessarily show itself by the appearance of abscesses which they could not always detect in the lungs or other internal organs. It might show itself externally and in other ways. In the case under discussion he would be inclined to think that there might be not only the nervous instability due to irregular metabolism, but also due to changes in the blood. The fact that cases of puerperal insanity with bad neurotic histories did not always develop epilepsy showed that there was some further explanation than had been given. It was most important that they should consider these two points in the possible explanation of chorea and epilepsy.

The PRESIDENT said that he had a case of post-puerperal insanity giving rise to trouble and anxiety. The week after insanity occurred serious epileptic fits supervened. These passed away, and having remained conscious for forty-eight hours she then lapsed into a stuporose condition. Was there a chance of her recovery? He had read Dr. Clark's series of papers with very great interest, and as they did not draw special attention to this point he took it that it was a very uncommon occurrence.

Dr. EASTERBROOK, in reply, said that he had recently seen the child, now a boy of four, who was born just before the illness described, and who so far had enjoyed good health. He thought that the terms "epileptiform" and "choreiform" should have a descriptive value only, without reference to the nature of the morbid processes described, otherwise confusion might arise. Thus "epileptiform" was generally applied to the convulsions characteristically seen in Jacksonian epilepsy. These were usually attended at first by consciousness, but in time often by unconsciousness, and then the cases were indistinguishable from true epilepsy. Sir William Gowers said the cases were then "not practically separable," the specific explosive brain habit being present in both. Epileptiform convulsions, however, might occur in other conditions than epilepsy. Similarly choreiform movements occurred in other conditions than true chorea, to which, however, they were probably allied. The prognosis in puerperal epilepsy was said to be not unfavourable. It was certain that products capable of producing convulsions had been obtained from the blood of epileptics, but it was possible that these poisons were formed in the diseased nerve centres, and that in *status epilepticus* a vicious toxic circle was established comparable to that which is said to exist in the congestive seizures of general paralysis. He had no experience of bleeding or of chloroform as remedies for the epileptic state. In reply to Dr. Campbell Clark he would say that there was no local evidence of sepsis in this case, and the temperature was only 101° F. He quite agreed with Dr. Clark that puerperal insanity often had the appearance of a poisoning, but he was not inclined to say that the majority of the cases were due to septic poisons. Most of the cases he had seen presented no signs of sepsis locally or constitutionally, and he therefore thought that the rapid involution of the uterus during the early puerperium (when puerperal insanity was most common) supplied a toxine which poisoned the unstable higher nervous centres. It was, however, good practice to use an anti-septic douche in cases of puerperal insanity to begin with.

Occasional Notes.

Tuberculosis in Asylums.

IT is well that the appeal of our President has not fallen on deaf ears. The Association have considered it advisable to form a small Committee to co-operate in the National Movement, which was inaugurated so nobly by His Royal Highness the Prince of Wales, and to enforce by every legitimate means the advantages of the modern treatment of tuberculosis. We have much pleasure in congratulating our General Secretary on the results of his arrangements, which have placed the important question of phthisis in asylums in a position of prominence, with the prospect of authoritative solution.

Our readers will doubtless carefully consider the relevant and cogent facts which have been presented to them in this and the last number of the JOURNAL. Dr. Crookshank's prize essay is not only an honour to himself, but also an honour to the Association which elicited it. Dr. France, following up the work published by him in 1897, opened the discussion of the 9th November with a paper which met with sincere and hearty approbation. Although there may be some slight difference of opinion between them as to the value and interpretation of difficult statistical inquiries, the outstanding facts are beyond dispute. Phthisis has been shown to be largely one of the preventable diseases. The condition of affairs in the asylums of this country is not in accordance with the demands of recent scientific developments. Our common humanity insists that the requirements of modern sanitation should be met, however hardly these may bear on the ratepayers of the country. It is a part of the White Man's Burden; but, lightened by the assurance that it is a compassionate, a beneficent, a patriotic duty, it will be borne without a grudge. The tendency of public opinion is assuredly towards the alleviation of the evil fortune of the insane in their cloistered lives; and, when it is clearly shown how alleviation may be secured with scientific precision, we may count upon active co-operation in dealing with difficulties as they arise.

Sir James Crichton-Browne in his eloquent speech reminds us that he first attacked the problem of tuberculosis in asylums in 1883. In the intervening years much knowledge has accumulated, and the scientific position has been fortified till it is now impregnable. It is not sufficient for us, however, to hold that position. The country is astir with hopes of relief from the intolerable assaults of a wide-spread and deadly foe. Now is the time to range ourselves with those who have already entered on a vigorous campaign, with the augury of a successful issue.

Pensions.

We are informed that the Parliamentary Committee has followed up the ideas expressed at the Annual Meeting, in the discussion of the report it then brought up. A communication has been sent to the County Councils Association, and is receiving attention at the hands of that important body. We know that the Lord Chancellor is in favour of a pension scheme, and if a satisfactory one can be arranged with the County Councils Association, we may look forward to the time when asylum authorities can go into the employment market with offers of pecuniary conditions equal to those now made by other services. We cannot too urgently ask each superintendent to furnish any information required for the guidance and assistance of the Parliamentary Committee.

The Sale of Intoxicating Liquors.

The final Report of the Commission appointed to inquire into the operation and administration of the laws relating to the sale of intoxicating liquors is now published, and contains much that is of interest to the members of our specialty, who probably see more of the extreme evils of intemperance than any other class of the medical profession. We can, however, allude only to a few of the more important of the many far-reaching suggestions contained in the Report.

“Simple drunkenness,” apart from disorder, the Commission proposes “should be liable to arrest.” Their recommendation,

by making this condition practically a crime, will probably do more for the cause of temperance than all the other suggested legislation. Our people are so law-abiding that this view of drunkenness, it may be predicted, will soon be generally adopted, with satisfactory results. It is well to recall that not so long ago it was regarded as the "duty" of a gentleman to get drunk after dinner; but now that "society" regards intoxication as disgraceful the habit is abandoned. In the lower classes of the present day drunkenness is widely regarded as rather a fine thing, certainly not as a matter to be ashamed of. If they can be brought to view it as criminal and disgraceful, a similar change of habit will doubtlessly follow.

The "*particeps criminis*" must logically be held responsible for his share in the offence, and the Report is consistent in recommending that "licence-holders" should be called upon to show that they did not know of a drunken person "being upon" or "leaving their premises." This, again, is an important step in the right direction.

"Habitual drunkards," it is further recommended, should be placed on a black list, and the licence-holders of the district in which such drunkards reside should be warned by the police not to serve such persons under penalty; also, that the persons prohibited should be liable to penalties for attempting to evade the prohibition. Although there are obvious difficulties in carrying out this proposal, it would, without doubt, have beneficial results, even with limitations.

"Habitual drunkenness," the Report recommends, should be treated as "persistent cruelty," entitling the wife or husband to separation and protection for herself, or himself, and children. This, if it becomes law, will save an immense amount of unmerited suffering, from which at present there is no legal escape.

The initiation of investigation in regard to habitual drunkenness before a magistrate, on the action of a member of the drunkard's family, which is also proposed, though open to abuse, could probably be made a useful and workable provision.

The Habitual Drunkards Act, at present badly halting in its progress, by the aid of these and many similar recommendations would be greatly helped in its beneficial results.

Incipient habitual drunkards would by these provisions be brought under the operation of the Act at a stage when the hope

of cure would be greatest, and the time required for treatment at its lowest limit.

The "van system," in connection with "grocers' licences" in Scotland, appears to be the most pernicious custom in the sale of intoxicating liquors. The van may be briefly described as a perambulating drink-shop, combined with the worst evils of the tally-shop. The system is a most pernicious and insidious incitement—not only to drink, but to debt.

The Commission recommends that these vans should be liable to search ; that the drivers must produce when called on signed orders from customers, must carry no liquor beyond that in supply of such orders, and that each order should bear the name and address of the sender. These regulations it is to be feared are too easy of evasion, nor do they touch the worst feature of the system—the debt. We would suggest that all transactions under van system should be for cash, and that there should be no recovery for debt thus contracted.

The Report concludes by urging that licensed houses should be greatly reduced in number, and by asserting that, "while no claim to compensation can be urged by those who lose their licences, some allowance might be made as a matter of grace, which, however, should be raised, not from public rates or taxes, but from the trade itself."

Statistics of great value and importance in regard to the consumption of liquor in this and other countries (especially in Norway and Sweden), of cases of drunkenness, of deaths from alcoholic causes, etc., are given in an appended memorandum by Mr. Whittaker.

The Report, indeed, contains a large amount of information on the drink question, and should be studied by all interested.

The Medico-Psychological Association as a body, moreover, should note the fact that the Commission does not seem to have troubled itself with statistics in regard to the share of intoxicants in the production of mental disease.

London Lunacy.

The tenth annual Report of the Asylums Committee of the London County Council has now attained very closely to the

bulk of the blue-book of the Lunacy Commission, and contains information of scarcely less interest.

The total number of pauper lunatics of the county of London is now upwards of 21,000, being rather more than a fifth of the whole lunacy of England and Wales. This vast number, moreover, is increasing by an annual addition of upwards of 600; it is not, therefore, a matter for surprise to find that, in despite of all efforts, the provision of asylum accommodation has not yet overtaken the demand, although by the completion of the asylums now in hand (including a working colony for 300 epileptics) the total number of beds on January 1st, 1901, will be 16,500, giving a surplus of 600 at that date, which will about meet the estimated increase for that year.

Receiving-houses seem to be in a fair way to become accomplished facts, since the statement is made that their establishment has been recommended by a special sub-committee, and by a conference of guardians representing the metropolitan unions and parishes. The Commissioners in Lunacy also are said to favour their institution.

This matter has been so often and so long advocated in this JOURNAL, that the carrying out of this system of early treatment is welcomed with great satisfaction, and its influence on the admission rate to the asylums will be watched with much interest.

The examination of attendants by the Medico-Psychological Association is spoken of very favourably, and this no doubt will lead to a considerable increase in the number of candidates from the London asylums.

The statistics of relapse receive special consideration in two tables. The first shows that the relapsed cases readmitted into the asylums from which they were discharged up to the 31st March, 1899, amounted to 20·53 per cent. of those discharged recovered during the four years ending December 31st, 1898. A second table shows that 13·49 per cent. of these relapses occurred within twelve months of their discharge.

The readmissions into the same asylum in England and Wales, as stated in the Report of the Commissioners in Lunacy, varied from 14·3 in 1894 to 16·1 in 1897, but these relapses relate to patients discharged at any date, and not, as in the London County Council Report, within the four years ending

31st December, 1898. Hence the excess of relapses is probably greater than that which is shown by the figures 20·53 per cent., as compared with a mean of about 15 per cent. for the whole country.

Accurate records and other circumstances may account for some of this apparent excessive relapse rate, but not for all ; and it would be of interest to arrive at any facts that might throw light on the question. Is there, for instance, any relation between the period under treatment and relapse ? Do early discharges produce early relapses ? What proportion of relapses is due to intemperance ? Many other questions of importance might be asked.

The prevention of relapse is one of the most important subjects with which we have to deal in arresting the accumulation of lunatics, and it involves the recognition of the fact that legal mental recovery is not the same as medical recovery ; that a person who is no longer certifiable may still be in such a physical state that discharge from the asylum is certain to be followed by relapse.

Convalescent care, in or out of the asylum, is needed for such cases—in asylums as voluntary patients, or out in suitable homes. Recovered inebriates should be sent to inebriate homes when the Habitual Drunkards Act comes into full action.

The report is replete with evidence of the vigorous activity of the London County Council, as, for example, in the publication of the *Pathological Archives*, edited by Dr. Mott, which are the most brilliant evidence of the dawn of a new era in the treatment of London lunacy.

The Treatment of the Poor.

There can be no doubt that legislature is tending towards methods of treatment of the poor which are indicative of the total downfall of Bumbledom. In that large class with which we are more immediately concerned, there are unfortunately all sorts and conditions of men. As Mr. T. W. L. Spence showed so clearly in a recent pamphlet, the great majority of "pauper" lunatics are gathered from strata of society which would never have touched the depths of pauperism except by reason of

mental disorder. We gladly note that the Cottage Homes Bill, reported without amendment by the Select Committee to the House of Commons last August, has reference to the aged and deserving poor, and their separation from those whose character or habits are bad or disagreeable.

With regard to imbeciles and epileptics the Committee report that "they are of opinion that all pauper imbeciles and epileptics should be provided for outside the workhouse. Not only would the removal of this class of pauper leave further room for a better system of classification, but it would obviate what would appear to be a great source of discomfort to the aged poor in many of the smaller workhouses.

"In London, pauper imbeciles are removed from the workhouses, special institutions having been provided for their accommodation by the Metropolitan Asylums Board. Your Committee think that the principle should be extended to the rest of England and Wales, and that throughout the country pauper imbeciles should be provided for in institutions separate from the workhouses. They think that pauper epileptics should also be maintained in separate institutions, and not in workhouses. If this were done, the suffering would be diminished which is now endured by many who resist entering a workhouse at the time when in their own interest indoor relief should be sought, owing to the feeling of repulsion entertained at the idea of living with such associates.

"Your Committee consider that these separate institutions should be provided by the councils of counties and county boroughs. These councils now are charged with the provision of asylums at which pauper lunatics are maintained, the guardians paying the cost of maintenance. Your Committee do not suggest that pauper imbeciles and epileptics should be admitted to the lunatic asylums, but that separate institutions should be provided expressly for their accommodation. Such institutions need not be so costly as lunatic asylums, as the inmates would not require the elaborate accommodation and attention which is essential for lunatics."

The physicians of our asylums have long been urgent in their efforts to classify the cases under their care, and much has been done in this direction. We feel that the recommendations of the Select Committee will command general support, and that they are of special importance to those whose proper work is

psychological. Appended is the summary, which will be read with interest.

“ I. That it is desirable so to classify the inmates of work-houses, that the aged and respectable poor shall not be forced to mix with those whose character or habits are bad or disagreeable.

“ II. That, in order to make room for proper classification, all children, other than infants, be provided for outside, and apart from the workhouse premises.

“ III. That it should be the duty of the county councils to provide suitable accommodation in separate institutions for the proper treatment of all pauper imbeciles and epileptics.

“ IV. That the aged and deserving poor, so far as it is possible, should receive adequate outdoor relief, and that where they are in the workhouse they should constitute a special class and receive special treatment and privileges.

“ V. That guardians should provide special cottage homes within the unions, or other suitable accommodation for married couples and respectable old persons whose poverty is not their own fault, but the result of misfortune.”

Masturbation in Schools.

A well-known and very successful Irish schoolmaster, now retired from business, Maurice C. Hime, LL.D., is one of the last contributors to this difficult subject. Dr. Hime's little pamphlet (*Schoolboys' Special Immorality*) seems to assume that there is generally too much reticence on this topic, and that a little more plain speaking might do good. If good is to come of it, we will not object to any plainness of speech.

It is perhaps natural that a schoolmaster should get into the habit of thinking that argument and precept are the chief guides of human life, and therefore we are not surprised to find that Dr. Hime holds that boys should be particularly warned against self-abuse. He also advocates a much closer surveillance over schoolboys than is at all usual in English schools. Some of his proposals strike us as being flatly absurd, such as that schoolboys' trousers should be made without pockets; and his parenthetic denunciation of tobacco seems almost comic; but the

general issues which he raises, first, whether boys ought to be more closely watched to prevent their indulgence in masturbation, and secondly, whether they ought to be warned against it, are suitable enough subjects for discussion. It does not appear to us that Dr. Hime quite appreciates the dangers of the course he advocates. He truly grasps the advantages of work and organised play, and the ill effects of idleness and slipshod habits. He also lets us see that one of his great aims as a teacher was to produce a manly and self-reliant habit of mind among his pupils. In our judgment the latter ought to be the chief end of education at school, but we do not think this can be well achieved by increased surveillance. Such a habit of mind among the majority of boys in a school, and the healthy public opinion which is associated with it, are the best safeguards against this, as against all other boyish vices. It is, we apprehend, a mistake to suppose that boys are generally ignorant of the wrongfulness of masturbation; quite the reverse is the fact. Curiosity and the excitement of puberty tempt them, and they give way to vice because their minds are not sufficiently virile to enable them to resist; but they know that they are doing wrong. The sense of sin and shame is so closely associated with the sexual feelings that very little instruction on this point is required. At all events, to argue with vice, to demonstrate by the closest reasoning to the vicious that their courses are illogical and unnatural, has never proved of the smallest efficacy in dealing with adults. What reason have we to suppose that the puerile intellect will prove more amenable?

It may become—no doubt from time to time it does become—the duty of the schoolmaster to address corrective remarks to a boy or to boys on sexual subjects, but to his personal influence infinitely more than to his arguments will be due the result. Such remarks, when required, should be brief, dry, and manly. Tom Brown's father in Hughes' famous book, after much heart-searching, comes to the conclusion that an oldster cannot talk on certain subjects to a boy, and dismisses his son with the simple advice to do and say nothing which his mother and sisters would be ashamed to hear of. Dr. Hime's own method shows that he recognises that reserve is desirable, for he tells us of an address to his boys on the subject, and says, "The guilty ones quickly understood what I was speaking about—none of the others did. They only knew that I was speaking about

something awful, and that the less was thought or spoken about it the better." Can anybody with the least knowledge of human nature, whether shown in boys, men, or Bluebeard's wife, believe the latter part of this sentence? or fail to see that the boys both spoke and thought of the incident? The narrator, indeed, goes on with apparent satisfaction—"The boys listened to my address with breathless attention." Sexual topics even among grown-up people, nay, even among elderly scientists are sure of attention, often of more attention than they deserve, and always command "breathless attention" among the young; but we take it that this just shows the danger of such subjects.

There are other considerations which most physicians of experience will endorse. Tissot and his school undoubtedly exaggerated the evils of masturbation. It is, of course, both a filthy and "unnatural" vice, but it is not credible that a habit which is so common among boys that some have held it to be universal can be solely responsible for all the ills which have been laid to its charge. One of the worst things it does is to produce sexual hypochondria, and the tendency to that unfortunate affection is certainly increased by mysterious references to the terrible consequences of "this dread vice," and so forth, as the spermatorrhœa quacks, to whom it is the chief stock-in-trade, have found out long ago.

The influence of school life, by associating boys together in large numbers, may increase the tendency to self-abuse, but it is idle to suppose that the vice does not occur in boys who are brought up at home, or that it is not frequently self-taught. Dr. Hime seems to think that a more constant association of boys with masters than is usual will check the habit. He does not notice the proposal, which has found some favour on the other side of the Atlantic, to educate boys and girls together. We can imagine this plan having disadvantages sufficient to counterbalance its supposed gain. Every individual, boy or girl, who lives so long, must pass through the trying organic change which constitutes puberty, and must battle through the mental struggle which accompanies that change. The best preparations for the fight are a sound mind in a sound body, and with these victory is pretty sure. Occupations and enthusiasms for higher things help much; admonitions, we fear, little. The child, agitated by curiosity, inexperience, and a tempest of new and half-understood passions, wholly fails

to grasp the arguments or appreciate the standpoint of the old, and much which one reads upon this subject seems to show the old have, in some marvellous way, forgotten the time of trial which they passed through in youth. Happily, perchance, there is another side to Elia's touching exclamation, "From what have I not fallen, if the child I remember having been was indeed myself!" But, on the other hand, the ordinary adult has indeed fallen profoundly, if he was ever in a state in which a few guarded words on the wickedness of sin would confer on him an immunity against committing any sin to which his age and physical condition strongly tempted him.

Dr. Hime believes that he succeeded in stamping out self-abuse entirely in his school. If he did we heartily congratulate him, but we believe that the enforced example of his own enthusiasm, high-mindedness, and hard work did more than any dehortations from vice to bring about this most desirable consummation.

Varieties of Mental Disease in their Relation to Crime.

In the Report of the Prison Commissioners for the year ending March, 1899, we note that the Medical Inspector, Dr. Herbert Smalley, has continued the admirable modifications which he introduced the previous year in the statistical tables dealing with the insanity of convicted prisoners.

The variety of mental disease is now specified in accordance with a modernised system of classification; and a table of peculiar interest is appended, showing the forms of criminal conduct related to the various types of alienation.

Seeing that, in the overwhelming majority of these cases, as Dr. Smalley has pointed out in previous reports, the mental state is obviously unsound on reception into prison, and symptoms become sufficiently definite to allow certification in the very early stages of imprisonment, we may safely regard the developing insanity as the cause of the criminal act. These records should, therefore, in a few years offer excellent material for a study of crime as a part of the semeiology of mental disease.

During the last two years 287 convicted prisoners (216 males and 71 females) were certified in the local prisons of England and Wales. This number is, of course, too small to

afford a basis for generalisations ; but it suggests, nevertheless, some interesting points.

The forms of mental disease which bulk most largely in the tables are the insanities characterised by systematised delusion, acute mania, and general paralysis. The delusional insanities account for nearly 37 per cent. of the whole ; they play the most important rôle in crimes of violence against the person, and are also the main factor in crimes against property. General paralysis, sufficiently pronounced for diagnosis, is noted in 28 cases (24 men and 4 women). As is usual in what Legrand du Saulle has termed the medico-legal period of this disease, the illegal acts committed with most frequency in these cases were petty crimes of acquisitiveness. Sexual offences appeared to be mainly related to states of dementia and congenital imbecility. Epileptic insanity was extremely rare, only three cases figuring in the statistics.

We trust that this interesting table will be a permanent feature in the Prison Blue Book.

Part II.—Reviews.

The Fifty-third Report of the Commissioners in Lunacy, England.
London, 1899. Pp. 476. Price 2s. 4d.

THE Commissioners in Lunacy in their annual report to the Lord Chancellor for the year 1898 startle us by recording an increase to the total number of known lunatics in England and Wales of 3114. This is the largest annual increase yet recorded, and exceeds the annual increase for the preceding year by 507. Undoubtedly these figures add weight to the remarks we made in reviewing the report for 1897. On that occasion we drew attention to the fact that the number of active Commissioners was too small for the work which is expected from them, and suggested as a possibility that the Lord Chancellor might, after some years, perceive the necessity of revising the constitution of the Board of Commissioners. When such a change occurs, we hope some statistical reformer may be added to the Commission—some one who may recognise the unrivalled opportunities which such a position holds out for the increase of our general knowledge of insanity, and its comprehensive scientific investigation—to inaugurate new procedure for the care of the insane, improved methods of treatment and suggestions for the prevention of insanity.

The increase in the total number of reported insane of 3114 includes 231 private patients, 2868 pauper and 15 criminal. The chief increase

in the number of pauper patients has been in county and borough asylums, where the stationary death rate and also the diminishing recovery rate account for much of the increase.

We regret to see once more the table showing the ratio (per 10,000) of total insane to the population, and that showing the ratio (per 10,000) of the insane admitted during the year 1898 to the whole population. The conclusion the Commissioners arrive at is that, whereas there was 1 lunatic in every 337 persons in 1889, there is now 1 in every 302. We would draw a distinction between tables which are useless, and tables which are misleading. We think Tables II and III fall under the latter heading. The Table IV, showing the ratio (per cent.) of pauper insane to paupers of all classes on the first of each year, gives us an approximate estimate of the fluctuations of insanity, since the ratio of the sane paupers to the population is nearly constant. The ratio of pauper insane to all paupers on January 1st, 1898, is 11·64, which shows an increase of 0·56 per cent., or an increase slightly greater than any yearly increase since 1889.

The number of patients resident in asylums, hospitals, and licensed houses on January 1st, 1898, was 78,932. The appended table gives the variations in increase and decrease in the different institutions.

	County and Borough Asylums.	Registered Hospitals.	Metropolitan Licensed Houses.	Provincial Licensed Houses.	Naval and Military Hospitals.	Criminal Asylum, Broadmoor.	Private single patients.	Idiot Estab- lishments.	Total.
Increase . . .	2418	74	—	—	28	1	15	24	2560
Decrease . . .	—	—	20	31	—	—	—	—	51
Total increase									2509

The number of admissions into asylums, etc., during 1898, exclusive of transfers and readmissions due to lapsed orders, shows an increase of 488 on the number for 1897.

	County and Borough Asylums.	Registered Hospitals.	Metropolitan Licensed Houses.	Provincial Licensed Houses.	Naval and Military Hospitals.	Criminal Asylum, Broadmoor.	Private single patients.	Idiot Estab- lishments.	Total.
Increase . . .	331	—	141	—	1	—	23	23	518
Decrease . . .	—	11	—	11	—	8	—	—	30
Total increase									488

We see by this table that there is once more an increase in the number of certified patients.

The portion of Table V which deals with transfers is given as usual. The readmissions on fresh reception orders, rendered necessary by previous reception orders having expired, have diminished from 103 in 1897, to 92 in 1898.

The recoveries during the year 1898 numbered 7121, a decrease on the total of 1897 of 109. The decrease occurred in county and borough asylums (21), in registered hospitals (8), in metropolitan licensed houses (11), in provincial licensed houses (63), in naval and military hospitals (14), in criminal asylum (3), in idiot establishments (1); while among private single patients there was an increase of 12.

The percentage of recoveries to the total number of admissions showed a falling off from 38·35 per cent. in 1897, to 36·87 per cent. in 1898, or 1·94 per cent. below the average rate for the ten years 1889–98; while the total recoveries in 1898 bore a ratio of 9·06 per cent. to the average daily number of patients as compared with 9·31 in 1897. This gradually diminishing recovery rate we believe to be due to the increased influx into asylums of the chronic senile insane.

Year.	Percentage ratios of recoveries to admissions.	Percentage ratios of recoveries to average daily number resident.
1879	40·50	10·96
1880	40·29	10·77
1881	39·72	10·51
1882	39·41	10·22
1883	38·50	10·28
	Average 39·68	Average 10·54
1884	40·33	10·30
1885	41·99	9·89
1886	41·16	9·73
1887	38·56	9·41
1888	38·71	9·54
	Average 40·15	Average 9·77
1889	38·81	9·44
1890	38·59	9·87
1891	41·04	10·58
1892	38·94	10·08
1893	38·45	9·95
	Average 39·16	Average 9·98
1894	40·31	10·13
1895	38·18	9·78
1896	38·53	9·54
1897	38·35	9·31
1898	36·87	9·06
	Average 38·44	Average 9·56

That the percentage of ratios of recoveries to admissions does not correspond to the percentage of ratios of recoveries to average daily number resident is evident from this table, and we continue to regard the latter as the more accurate method of estimating the recovery rate.

Age-periods.	Death-rate per 1000 reported insane, 1897.		Death-rate per 1000 whole population, 1897.		Insane to sane proportionate death-rate.				
	1897.	1896.	1897.	1896.	1897.	1896.	1895.	1894.	1893.
Under 5	—	—	{ M. 60.2 F. 50.3 } = 55.25	—	—	—	—	—	—
5—9	{ M. 5.4 F. 45.5 } = 25.45	—	{ M. 3.7 F. 3.8 } = 3.7	11.4 to 1	17.5 to 1	25.5 to 1	8.5 to 1	—	
10—14	{ M. 44.1 F. 55.4 } = 49.7	—	{ M. 2.3 F. 2.3 } = 2.3	16.1 to 1	28.0 to 1	23.9 to 1	25.0 to 1	—	
15—19	{ M. 55.0 F. 59.1 } = 52.8	—	{ M. 3.6 F. 3.4 } = 3.5	11.9 to 1	11.4 to 1	11.1 to 1	14.6 to 1	—	
20—24	{ M. 51.0 F. 58.4 } = 55.05	—	{ M. 5.0 F. 4.3 } = 4.6	13.0 to 1	9.0 to 1	11.7 to 1	12.1 to 1	—	
25—34	{ M. 76.5 F. 102.2 } = 67.45	—	{ M. 6.6 F. 5.9 } = 6.25	10.3 to 1	11.8 to 1	10.4 to 1	8.9 to 1	—	
35—44	{ M. 102.2 F. 110.1 } = 79.9	—	{ M. 11.3 F. 9.3 } = 10.3	7.7 to 1	7.5 to 1	7.5 to 1	7.9 to 1	—	
45—54	{ M. 59.5 F. 125.8 } = 84.8	—	{ M. 18.2 F. 14.0 } = 16.1	4.9 to 1	5.0 to 1	5.1 to 1	5.7 to 1	—	
55—64	{ M. 75.4 F. 196.0 } = 105.6	—	{ M. 34.1 F. 27.0 } = 30.5	3.2 to 1	3.2 to 1	3.7 to 1	3.3 to 1	—	
65—74	{ M. 145.4 F. 419.4 } = 170.7	—	{ M. 64.2 F. 55.1 } = 59.6	2.9 to 1	2.7 to 1	3.0 to 1	2.5 to 1	—	
75—84	{ M. 243.4 F. 533.3 } = 331.4	—	{ M. 143.3 F. 125.4 } = 134.3	2.3 to 1	2.1 to 1	2.7 to 1	2.3 to 1	—	
85 and upwards	{ M. 362.0 F. 447.65 } = 447.65	—	{ M. 270.9 F. 251.8 } = 261.3	2.1 to 1	1.5 to 1	1.3 to 1	—	—	

The deaths during 1898 numbered 7602—an increase over that of 1897 of 270. The ratio of deaths to the average daily number resident was 9·45 per cent.—an increase on last year's ratio of '02, but '21 below the average rate for the ten years 1889-98.

This table gives the comparative death-rates deduced from the Commissioners' Table XIV. It shows how the death-rate of the general population and the death-rate of the insane tend to approximate as age advances. An inspection of this table shows the diminishing death-rate among women with advancing age when compared with the rate for the general population. It throws some light on the accumulation of the senile female insane in all asylums. We add columns which show the ratios of the death-rate among the insane for each age-period to the death-rate among the whole population for the same age-periods.

Table XV gives the causes of death of all the insane who died in 1898, and the number of cases in which the cause of death was ascertained by post-mortem examination. This is an interesting table, and much information may be obtained from it. We hope the Commissioners will not allow it to degenerate. We trust they will insist on accurate returns as to the causes of death, and avoid in future such vague terms as "apoplexy," "congestion of the brain," "softening of the brain," "cerebro-spinal disease," "spinal sclerosis," "non-malignant disease of the stomach," "atrophy," "disease of the spleen." In classifying the diseases why place abdominal aneurysm in the division set apart for thoracic diseases? The classification of causes should, we think, advance *pari passu* with the general progress of medical knowledge, and should be prevented from becoming a chronicle of the fanciful notifications of some medical officers of asylums.

Post-mortem examinations were made in 5699 deaths out of the total deaths, 7578. This represents 75 per cent. Since so many causes of death are verified by an autopsy, we think a table giving a classification of the causes of death ascertained by post-mortem examination would be much more accurate than Table XV; inaccuracies would be fewer, and vague "portmanteau" or actually faulty diagnoses would have less weight.

We append a table (p. 140) showing the percentages of the principal causes of death to the total number of deaths for the last four years.

Table XVI again gives the admissions with daily averages for the several months of 1897. In January, May, June, and July the daily average was highest. The forms of insanity, which are also given in this table, are of a most antiquated type. Year after year we have asked for a more scientific classification, yet "ordinary dementia" still holds a position of prominence.

The Table XVII, setting forth the ratios per 10,000 of the yearly average of the number of the insane in the five years 1893 to 1897 to the whole population at the time of the census (1891), each classified according to their occupations or professions, is most untrustworthy; for the number of the insane are only the number of the officially known insane, and the population of England and Wales has not remained stationary since 1891. Then as regards the occupations and

Causes of death.	1895.	1896.	1897.	1898.
General paralysis	20'00	20'41	18'97	17'44
Phthisis pulmonalis	14'88	13'88	14'57	14'38
Senile decay	7'71	8'69	9'31	9'10
Pneumonia	7'01	6'36	6'13	6'96
Cardiac valvular disease	4'78	5'73	6'02	6'45
Epilepsy	5'16	4'89	4'66	5'23
Exhaustion from mania and melancholia	3'87	3'62	3'65	3'37
Organic disease of brain	2'60	3'50	3'46	3'25
Apoplexy	3'16	3'21	3'13	2'90
Chronic Bright's disease	2'92	2'56	2'72	2'96
Cancer	2'01	2'56	2'13	2'11
Bronchitis	2'89	2'46	2'09	2'58
Accident	40	42	45	47
Suicide	25	14	28	29
Other maladies	22'36	21'57	22'43	22'51

professions in this table, we hold that any attempt to group them is almost certain to end in absurd failure. What can we gain by putting professors and governesses in the same category? What is a professor? Then why couple authors and reporters? Why should shepherds have to throw in their lot with rat-catchers, and cheesemongers with chocolate-makers, while "hatters and hat-makers (not straw)" have a ratio of their own?

Table XIX gives the yearly average of the number of patients admitted during the five years 1893 to 1897 (inclusive), with their ages and condition as to marriage. It also shows that $3 + 2 = 4$ and $6 + 2 = 7$.

In Table XXI we find the yearly average occurrence of the classical forms of mental affection for the five years 1893 to 1897. 48·2 per cent. are reported as suffering from mania, 28·2 per cent. from melancholia, 11·1 per cent. from ordinary dementia, 4·9 per cent. from senile dementia, 4·6 per cent. from congenital insanity, and 3·0 per cent. from other forms of insanity. Of the yearly average, 70·8 per cent. were first attacks, 7·7 per cent. were epileptics, 7·8 per cent. general paralytics, and 24·3 per cent. suicidal cases (females to males as 27 to 21·5). In Table XXI, as well as in Table XIX, we find several small arithmetical errors.

When we compare Table XXIII with the similar table in the previous reports we see that general paralysis is apparently making no increase in the proportion of those admitted to asylums. We see, too, by this table that among private patients there is only 1 female general paralytic to every 15·4 male general paralytics; whereas among the pauper insane the proportion is 1 to 4. (In making this small calculation we do not feel confident about our data, for we find that 139 males + 9 females = a total of 149.)

The Commissioners in the preamble to their Report attempt to disarm all criticism of Table XXV by stating that the information on which it is based was obtained from "friends of patients or relieving

officers," and therefore not "altogether trustworthy;" while on page 136 they assure us in a foot-note that the causes mentioned in the table "have been verified by the medical officers of the asylums." It appears to us that the causes enumerated in this table are insufficient. The moral causes do not exclude one another, and symptoms of insanity are classified as causes. "Venereal disease" is too indefinite a term. The table is really more a gauge of the opinion of the man in the street on the causation of insanity than a scientific attempt to investigate the ætiology of disease. Intemperance in drink appears as the cause of insanity in 22·0 per cent. of male insane and in 9·1 per cent. of the female insane; while "venereal" disease is stated to account for 2·1 per cent. of the male and 5 per cent. of the female insane. Hereditary influence was ascertained in 20·4 per cent. male and 25·9 female. Mental anxiety, worry, and over-work appear to exercise a much more injurious effect among private patients than among pauper; whereas intemperance in drink has a slightly greater causative influence among paupers.

There is quite a multitude of causes of general paralysis to be found in Table XXVII, and the percentages resemble the percentages of the causes of insanity as a whole. Who would believe for a moment that "love affairs (including seduction)" could account for even 2 per cent. of male general paralytics? Further, we cannot but think a table misleading which makes hereditary influence the most important causative agent of general paralysis in women. "Venereal" disease is given as a cause of general paralysis in 7·6 per cent. of male and in 3·0 of female general paralytics. Every year the Commissioners lose a golden opportunity of collecting valuable information concerning the ætiological connection of syphilis and general paralysis.

The number of voluntary boarders on 1st January, 1898, was 142; 84 in registered hospitals, 24 in metropolitan licensed houses, and 34 in provincial licensed houses. One hundred and seventy-one boarders were admitted into registered hospitals during the year; while 52 ceased to be voluntary boarders, and were certified as patients.

The admissions into the county and borough asylums during 1898 numbered 19,234, which exceeds that for 1897 by 331, and the average of the ten preceding years by 2183. Of the total admissions for the year, 19·9 per cent. had been previously discharged from institutions for the insane. The Commissioners, commenting on the annual increase in the percentage of readmissions to all admissions, state that it "possibly bears some relation to the pressure for asylum accommodation, and the difficulty of being able to retain patients sufficiently long to consolidate their recovery." The recoveries came to 6168, and the deaths to 6908. Post-mortem examinations were made in 78 per cent. of the deaths, which is a falling off from the percentages for the two years 1897 and 1896. The suicides in county and borough asylums amounted during the year to 14, which exceeds the number for the previous year by 3. Three of these suicides were by strangulation, 3 by cut throat, 2 by hanging, 1 by precipitation from a height, 1 by a patient placing himself in front of a train, 1 by a patient throwing himself under a waggon, 1 by the drinking of thymo-creosol, 1 "by gouging out both

eyes," and 1 caused by a table-spoon which a female patient "pushed down her throat." Though in many cases the details are given, the Commissioners refrain from entering on the particulars in the last-mentioned case. We may assume that it is the same incident as was recorded in this JOURNAL for April last. Four deaths occurred from suffocation during epileptic fits. This exceeds by two the number of deaths from this cause which occurred in 1897.

Insanitary conditions have existed in fourteen asylums, and serious overcrowding has prevailed in several other asylums.

Table XIII, Appendix B, gives statistics connected with the care and treatment of the patients in county and borough asylums. From it we gather that Wakefield and Sussex East Asylums possess the highest percentage of general paralytics—6·1 and 6·0 respectively. The percentages of bedsores found at death vary between wide limits, and this may not so much depend upon differences in the efficiency of nursing as in differences in the accuracy of the returns.

The number of single patients on the 1st January, 1899, was 415, which shows a decrease of 21 patients during the year.

We congratulate the Commissioners on their attempt to prevent the examination at police courts for the purposes of certification, of all patients who are not accused of crime. We agree with them that a visit to the police court is a very injurious preliminary to the treatment of many cases of insanity.

In conclusion, we desire to express our regret at the retirement of Dr. Southey from the Commission, of which body he has been a member for fifteen years.

Forty-first Annual Report of the General Board of Commissioners in Lunacy for Scotland. Edinburgh, 1899, pp. 154. Price 1s. 3d.

While this, the latest report of the Commissioners in Lunacy for Scotland, bears the usual ample evidence of their zealous and unremitting care for the welfare of the insane of all classes coming under their jurisdiction, it also reveals the melancholy fact of the ceaseless accumulation of mental wreckage, and the ever-increasing proportion of people whose mental organisation proves unequal to the strain that it is subjected to.

The population of Scotland increases at the rate of 7·7 per cent. in ten years. In the past ten years its total number of lunatics has increased 28·8 per cent., and the percentage increase in the number of those appearing for the first time on the *Lunacy Register* in 1898, as compared with 1888, is no less than 34·9 per cent. Taking the figures of Table III of Appendix A, it is found that the total increase in ten years of 57 per 100,000 of population is made up of 7 for private patients and 50 for pauper patients; and, excepting in the case of private patients, the record for 1898 when compared with 1897 is still more unfavourable. The increase in 1898 of the total number of lunatics in proportion to population amounts to 8 per 100,000, and the

increase in the number appearing for the first time is 3·6. These figures indicate for the whole country increasing accumulation of lunacy, and disproportionate increase of occurring insanity. The amount of this increase, however, varies very considerably in different districts, and the condition of affairs in the case of two solitary counties does something even towards redeeming the situation. The proportion per 100,000 of population of pauper lunatics annually placed on the Register in the ten years 1879—1888 for the whole of Scotland was 56, whereas in the succeeding ten years it was 62. In the first period there were 19 counties in which the rate was below the average for the country generally, while in the second this number is reduced by 2. With the exception of these two, the same counties which in 1879—88 had a low rate of insanity figure under the same category in 1889—98. In only two counties, Peebles and Linlithgow, is there an actual diminution in the proportion of pauper lunatics annually placed on the Register in the second period of ten years as compared with the first. In Elgin, on the other hand, the corresponding increase is four times that of the country generally, while in seven other counties the increase is more than twice the average.

With but few exceptions it is those parts where the total lunacy rate is high, and where poverty most prevails, that are marked by a relatively high proportion of annual registrations. This disproportionate lunacy and poverty seem likewise to go along with a standard of education below that prevailing in other parts. According to the report of the Registrar-General for 1897, five of the six counties where education, as judged by the numbers unable to sign their names by writing on marriage, is low, are among those where the lunacy rate is high. In connection with this variation in the proportion of lunacy there is a further curious fact worth passing mention. While the rate for the whole of Scotland of illegitimate to total births in 1897 is 7 per cent., that for the seventeen counties in which the proportion of insanity is below the average is $8\frac{1}{2}$, and that for the remaining sixteen counties is $6\frac{1}{2}$. Various deductions might be drawn from this, and the question might be raised as to whether a high rate of illegitimacy or a high rate of lunacy is the more to be reprobated.

Compared with 1897, 241 more patients were placed on the Register in 1898, 167 more were removed by recovery or otherwise, and 7 less by death, and the result is an addition over the year of 81. The recovery rate in all classes of establishments shows a marked improvement over last year, and the death-rate is little removed from the average except in private asylums, where it is greater by 1·2 per cent. of the average number resident. The number of escapes in 1898 is greater by 40 than that in 1897; and while the total recorded accidents are 2 less, and those which were fatal 3 less, the deaths by suicide are 5 more. Though the total fatal accidents are stated to be 14, only 13 appear under that head in Tables X and XXII of Appendix A. The death-rate from suicide is 8·1 per 10,000 of the average number resident in asylums, while that for England is only 2·8; but there is no indication that this difference is any way due to the larger amount of liberty which is generally supposed to be granted to the patients under the

open door system. Of the 5 suicidal deaths to which reference is made in the Commissioners' entries in the patients' books of the asylums, 2 probably occurred during the night, and inadequate supervision may have been responsible. This question of night supervision was prominently brought forward at the last Annual Meeting of our Association, and in the JOURNAL for October the matter is referred to in the "Occasional Notes." The necessity for it in the case of suicidal patients is recognised, but in this report the Commissioners urge that its use may be largely and profitably extended, and the use of the single room be proportionately discontinued. There is always the risk that such a method as is here advocated may be carried too far, and the result be detrimental to the best interests of the patients. For some cases the single room constitutes the best mode of treatment; others are more suitably treated in a dormitory under night supervision, and the proper method to adopt in this as in other matters of treatment is that which is best for each particular patient.

Although the death-rate from phthisis in Scotch asylums is, as was pointed out by Dr. Crookshank in his prize essay published in the October number of the JOURNAL, a decreasing one, it is felt that much more may be done in the way of prevention of this disease, and the subject is specially dealt with in this report; but it is of course a hopeless business to attempt to institute preventive measures so long as that most potent factor in the causation of the disease, overcrowding, exists to such an extent in nearly every asylum in the country.

With regard to the system of boarding out of patients in private dwellings, there is little to be said beyond the fact that the same steady decline in the proportion of those so accommodated continues unchecked. During the past ten years the percentage of those boarded out has fallen 1·7, and this decline is distributed in varying amount over no fewer than 26 out of the 33 counties. While the expenditure by local authorities on account of pauper lunatics in establishments has increased 32 per cent. in ten years, that for patients in private dwellings has increased only 26 per cent.; and comparing the year under review with the preceding one, the expenditure for establishments represents an increase of 5·7 per cent., while that for private dwellings represents a decrease of 1·4. The increasing stringency of the Commissioners' requirements may partly explain this falling off in the number of pauper patients in private dwellings, for if licences are granted only to those "people who are willing to regard them as their social equals, and to share with them a common sitting-room and a common table"—which represents the ideal of the Commissioners—the supply of accommodation will naturally be more limited.

Four circulars are appended to this report, relating to the registration of attendants, transfer of patients from one asylum to another, the conveyance of pauper lunatics by sea, and precautions against accident from machinery. The last was issued to asylum superintendents in consequence of accidents occurring to patients in connection with the use of mangles driven by steam power; and if "there are simple means," as the circular says, "by which the risk of such accidents from mangles driven by steam or other mechanical power may be almost, if not

entirely removed," we know that there are not a few readers of this JOURNAL who are unaware of any such means of protection against accidents from mangle rollers, and who would be only too glad to be enlightened on the point.

Number of Lunatics on January 1st, 1899.

Mode of Distribution.	Male.	Female.	Total.	Private.			Pauper.		
				M.	F.	Total.	M.	F.	Total.
In Royal Asylums . . .	1,888	2,229	4,117	835	924	1,759	1,053	1,305	2,358
In District Asylums . . .	3,133	3,190	6,323	69	93	162	3,064	3,097	6,161
In Private Asylums . . .	49	87	136	49	87	136	—	—	—
In Parochial Asylums, <i>i. e.</i> Lunatic Wards of poor- houses with unrestricted licences	313	355	668	—	—	—	313	355	668
In Lunatic Wards of poor- houses with restricted licences	447	463	910	—	—	—	447	463	910
In Private Dwellings . . .	1,129	1,696	2,825	40	83	123	1,089	1,613	2,702
	6,959	8,020	14,979	993	1,187	2,180	5,966	6,833	12,799
In Lunatic Department of General Prison	42	6	48	—	—	—	—	—	—
In Training Schools . . .	232	140	372	93	72	165	139	68	207
Totals	7,233	8,166	15,399	1,086	1,259	2,345	6,105	6,901	13,006

Forty-eighth Report of the Inspectors of Lunatics, Ireland, for the year 1898.

There is but little of interest to note in this Report as far as regards the statistical information supplied within its pages. We confess to a feeling of impatience at the conservatism which can rest contented with the antiquated and imperfect form in which the statistical tables are still cast. In order to estimate the increase, and more particularly the rate of increase, of insanity, whether as regards the number of insane under detention or the number of admissions, tables giving ratios to population of these numbers are absolutely essential; but these are conspicuous by their absence. No doubt for the years between any two consecutive census-takings the figures can only be regarded as approximate, still they are probably not very far wrong, and ten years is rather too long a period to wait for each new basis of calculation. A table, however, which could be given with a close approach to accuracy would be a similar one to Table IV of the English tables, showing the proportion of pauper insane to paupers of all classes. We have commented before in these columns on the necessity for more comprehensive tables

giving the figures for *a series of years*, and ratios for the same, as in so many of the English tables ; but, so far, any suggestion of this kind has been merely a *vox clamantis*. It is to be regretted that statistical tables of this kind should be deficient in just those characters which would make them of some practical value. It is probably a fact that the Lunacy Office in Ireland is wholly undermanned, but a strong representation on this head, persisted in if necessary, ought eventually to obtain a favourable response even from an ultra-economical Government. The question of lunacy has now attained to such vast and far-reaching dimensions, affecting every class in the social polity, that the public have a right not only to information, but to the very fullest information that is available on this important subject. More time and labour should be spent on the analysis of the figures at the disposal of the Lunacy Office, and if the present staff is inadequate for this purpose a firm demand should be made for the requisite help, and on the ground not of convenience but of necessity, and in the public interest.

The usual summary is given, showing the number and distribution of the insane in establishments in the year 1898 and in the previous year for comparison :

	On 1st January, 1898.			On 1st January, 1899.		
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
In district asylums	7,945	6,653	14,598	8,323	6,966	15,289
In Central Asylum, Dundrum	150	20	170	148	21	169
In private asylums	325	366	691	327	387	714
In workhouses	1,657	2,373	4,030	1,674	2,365	4,039
In prisons	1	2	3	2	—	2
Single Chancery patients in unlicensed houses	49	49	98	48	43	91
Total	10,127	9,463	19,590	10,522	9,782	20,304

There is still a *progressive* increase in the number of patients under detention, the figures for the three years ending 31st December, 1896, 1897, 1898, being 609, 624, and 714 respectively ; the increase in 1898 being ninety over that of the previous year, and 270 over the average of the preceding ten years—a rather disquieting fact. However, this increase is quite likely to continue yet for some years to come, and until all unregistered lunatics are absorbed into the ranks of the registered. If this consummation were once reached, certain opinions as regards the “increase of insanity” would possibly become less alarming.

As usual the main increase has been in the population of district asylums. The proportion per cent. in these institutions of the total number under care in 1898 was 75 ; 20 per cent. being in workhouses, and the remaining 5 per cent. in all other institutions. In the eighteen years from 1880 to 1898 there was a rise of 8 per cent. in the proportion in district asylums, and a fall of 7 per cent. in that of workhouses,

so that there is but little doubt that the former have been reinforced at the expense of the latter. This is made still more apparent if we study the percentage of transfers from workhouses for some years past. These have increased steadily from a percentage of 12.79 to the total number of admissions in 1890 to one of 18.28 in 1898, being a rise of 43 per cent. (We welcome the additional column of percentages in this workhouse table.)

If, as authorised by the recent Irish Local Government Act, the several counties or groups of counties were to provide auxiliary asylums for the reception of harmless imbeciles, and, as the next step, if the workhouses were to be emptied of all their idiot and lunatic inmates, there would be a huge and sudden increment of some 4000 to the class of registered insane, but probably after that the increase would be small, as we have above indicated. The question is already being agitated in some of the county councils, and it is to be hoped that they will be able to arrive at some satisfactory decision as to the future of these unfortunates.

The total number of admissions into district asylums was 3469, of which 2676 were first admissions and 793 were recurrent cases. These figures show an advance on those of the previous year of 184 in the total admissions and 125 in the first admissions. A useful table giving the admissions and readmissions for each year from 1880 up to 1898 is introduced on p. 8 of the Report. There does not seem any reason why this table and the subsequent ones which are inserted in the body of the Report should not be placed in the appendix along with the other statistical tables for greater convenience of reference. The arrangement is calculated to cause confusion, as there are two of each of Tables I, II, and III, one set immediately at the end of the Report, the other in the appendix, while a third set are not numbered at all, and do not appear in the index. The tables could be consulted with more ease were a better method adopted in their arrangement.

The recoveries show a percentage of 36.9 on the admissions—an advance over that of 1897 (36.3).

Eleven hundred and five patients died during the year, giving a percentage of 7.4 on the daily average. The death rate in Irish asylums remains very constant; for if we compare the last two quinquenniums, we find that the average percentage death rates were 7.98 and 7.52 respectively. Consumption is the most fatal disease in Irish asylums, the death roll from this cause last year numbering 2553 patients, a percentage of 30.7 on the total mortality. This proportion is *more than double* that of English asylums, a fact which certainly demands explanation. Forty-one deaths were assigned to general paralysis, or 3.7 per cent. of the whole; and epilepsy accounted for forty-nine. Five deaths from suicide occurred, and four from misadventure. In four of the suicidal cases hanging was the method selected, and one patient was drowned. Very costly appliances, patent gas fittings, etc., have of late years been employed extensively in asylums in order to remove every possible opportunity of injuring themselves from suicidal patients. The deaths which occurred in this way last year point grimly to the futility of trusting to such contrivances. A determined patient, if not closely and

continuously watched, will carry out his self-destructive instincts despite the most perfect mechanical devices. The unceasing vigilance of intelligent trained attendants is imperatively required. Besides, it is a question whether extreme precautionary measures of this mechanical kind do not tend to encourage carelessness and over-confidence on the part of the attendants by inducing a false sense of security. One of these patients was found dead *hanging from a window shutter*; another was found dead with a strip torn from her shawl round her neck; and a third was found hanging by a string used as a boot-lace which she had tied to the handle of a brush, *the brush being laid across the partitions of a water-closet*.

In a special section of their Report the Inspectors draw attention to the very unsatisfactory sanitary condition of several asylums, as evidenced by outbreaks of erysipelas, typhoid, dysentery, and diphtheritic sore throat. Overcrowding would appear to be one determining cause of these outbreaks, Ballinasloe and Richmond Asylum specially suffering in this respect. At Letterkenny the diphtheritic epidemic was attributable to an infected milk supply. In Sligo, however, where thirteen cases of typhoid occurred with five deaths, the sanitary accommodation is described as "antiquated and defective."

Post-mortem examinations were held in 298 cases, or about 27 per cent. of all the deaths. This is a very distinct advance upon the number in the previous year, 255.

As to causation, as given in Table XIII, we have nothing further to add to what was said in last year's Review. The table would be better omitted than published in its present fossilised shape. It is not true to facts, and therefore not merely useless but mischievous. According to certain of the highest authorities, from 16 to 20 per cent. at least of all cases of insanity are due to intemperance. According to this Table scarcely 9 per cent. are attributable to this cause. Hereditary influences, again, are stated to have existed in only 859 out of a total of 3469 cases admitted, a proportion of only 24·7 per cent. Returns of this kind are absolutely valueless.

The daily average, which was 14,340 in 1897, increased to 15,019 in 1898. A table is given on page 11 from which it appears that the daily average has all but doubled since the year 1875. In latter years the rate of increase has been much more rapid than previously, for if we compare the figures for the last two decades we find that during the period 1878 to 1888 the daily average rose 24·7 per cent., while in the following ten years the proportional increase was 40·4 per cent.

The changes brought about in the government and management of district asylums by the passing of the Local Government (Ireland) Act, 1898, are summarised by the Inspectors, and are briefly as follows :

Abolition of the Board of Control.

Management of asylums to be in the hands of a Committee of the County Council, instead of a Board of Governors, as formerly, half of whom were appointed by the Lord Lieutenant, and the remainder selected by him from a list of names sent up by the contributing bodies to the maintenance of the asylum.

All appointments to be made in future by the Committee, those of

the medical officers alone requiring the approval of the Lord Lieutenant.

Financial administration to be wholly in the hands of the Committee. This includes the power to provide for the accommodation and treatment of private patients, and for the maintenance of chronic and harmless lunatics in auxiliary asylums ; and the granting of superannuation will be vested solely in the local authorities.

The Privy Council rules, which up till now formed an uniform code for the management of all asylums, now cease to operate ; and each Committee has power to make its own rules, which must, however, receive the approval of the Lord Lieutenant.

The capitation rate in aid, formerly made by the Treasury out of money voted annually by Parliament, will in future be paid out of the Local Taxation Account, with the important proviso that the county councils must satisfy the Lord Lieutenant that they have fulfilled their duties as regards asylums.

It does not seem an altogether wise enactment that each asylum authority should frame its own rules of management. Lunacy is now a thoroughly organised system, a highly specialised department, just as our poor-law and prison systems are. It would therefore seem very desirable that its administration should be based upon an uniform code of rules and regulations, applicable to all asylums ; each being, of course, at liberty to make bye-laws suitable for local requirements. This would give unity and solidarity to the department, the advantage of which few will probably be prepared to dispute.

As regards the provision of increased accommodation, we learn that in twenty out of the twenty-two district asylums extensive structural additions and alterations have been, or still are being, effected. Besides these the new County Antrim Asylum has been practically completed, and is at present partially occupied by a number of patients from Belfast Asylum. Another contingent of patients from the same asylum has been transferred to the auxiliary asylum at Purdysburn ; this depletion of the parent asylum has greatly relieved the chronic congestion from which it has so long been suffering. Portrane Asylum is still in the hands of the contractors, but some 400 patients out of the overgrown population of the Richmond Asylum are comfortably lodged in temporary buildings on the estate, pending the completion of the permanent buildings. In connection with the Londonderry Asylum an auxiliary block to accommodate sixty-five patients has been erected on the Gransha estate, but beyond the drafting of plans and bills of quantities no further steps have been taken with reference to the proposed new asylum for the county.

In private asylums there was an increase of twenty-three patients over the previous year. The number of first admissions increased by twelve, while the readmissions were fewer by seventeen, making a decrease of five in the total number of admissions. During the past eighteen years there has been an increase of only ninety-two patients, with respect to which the Inspectors remark that, "having regard to the low death rate, such an increase cannot be considered any proof of the growth of insanity amongst the opulent."

Three superintendents in this department of lunacy have been removed by death during the year: Dr. Pim, who was for so many years superintendent of the Stewart Institution; Dr. Thomas Fitzpatrick, the founder and patron of St. Vincent's Asylum, to whose memory the Inspectors pay a kindly tribute; and Dr. John Eustace, of the Hampstead and Highfield Asylums, whose genial presence is missed at the Dublin meetings of our Association.

The Universal Illusion of Free Will and Criminal Responsibility. By A. HAMON, Lecturer in the New University of Brussels, etc. London and Watford: The University Press, Ltd., 1899. Royal 8vo, pp. 138. Price 3s.

Dr. Hamon sets himself to solve once for all the great question that has puzzled philosophers and agitated theologians since first philosophy and theology began to be. From Spencer and Huxley to Hobbes and Locke, from Hobbes and Locke to Luther and Calvin, from Luther and Calvin to Aquinas and Erigena, from Aquinas and Erigena to Augustine and Pelagius, from Augustine and Pelagius to the Sadducees and Pharisees, we can trace the controversy in uninterrupted continuity and in unmitigated acerbity; and if we fail to trace it further we may be sure it is from lack of records, and not because we have reached or approached its origin. Doubtless it enlivened those convivial meetings of the man of Uz with his four argumentative friends, some account of which has come down to us. Doubtless it was a subject of frequent speculation under the stars of Chaldea. Doubtless the family of Noah discussed on their tedious voyage the respective views of Mahalaleel and Jared on the question. Indeed, there is great reason to suppose that the first theological controversy of which we have any account was concerned with this subject, and that Adam's eldest son, who was, no doubt, a determinist, initiated that method of closing the controversy which determinists have since shown such readiness to imitate.

The problem which has employed for so many ages the best efforts of so many master-minds, and on which so many libraries of books have been written without any definite result, is now finally solved by Dr. Hamon in 138 pages of double-leaded print. It is an achievement of whose success an onlooker might entertain a doubt, were it not that Dr. Hamon himself has none; when it is asserted over and over again, with a certainty amounting to cock-sureness, that free will is an illusion, and responsibility a dream, we have no alternative but to submit our own judgment to that of one who evidently knows.

Considering the vigour with which Dr. Hamon enforces his conclusions, it is surprising that he does not carry them a little further. If free will is an illusion, if the human being is an automaton, if all his acts and thoughts are determinate, it is difficult to understand how Dr. Hamon can hope to alter these determinate opinions by his assertions. It is doubtful whether even argument would have any result. On

second thoughts we perceive that this is a superficial view. Of course, Dr. Hamon's action in writing the book was predetermined, and in doing so he was acting merely as an automaton. It must be admitted that the whole tenor of his book lends countenance to this view. It should be added that the translation is very badly done ; but for this, of course, the translator is not responsible. He was merely an automaton, and could not help himself. If free will were not an illusion we should recommend Dr. Hamon to employ a different translator for his next book ; but, as his translator was predetermined while the earth was still a boiling gas, the advice would be futile.

Report of the Chairman of the Commissioners of Prisons upon the Treatment of Crime in the United States.

In recent years the extension of the methods of positive science to the study of social phenomena has largely modified our conception of the social organism, not only in its normal but also in its morbid activities.

Notably there has been a readjustment of our ideas regarding the nature and genesis of crime, and, as a corollary thereto, regarding its treatment. It has been recognised that, in a large proportion of instances, crime is the natural reaction of a nervously unstable subject under the influence of more or less malign conditions in the *milieu*, and that it is therefore irrelevant to apply to such cases a rigid system of retribution which assumes the existence in the offender of average normal capacity of conduct. Such a system, operating on the degenerate with incipient criminal dispositions, can only aggravate his condition and further his development into the habitual criminal, while methods directed rather to his physical and mental culture might conceivably render him eventually a useful member of the community.

Efforts have accordingly been made to modify in this direction the classic penal systems by the substitution, to some extent, of reformatory for purely punitive agencies ; and in this quest American penologists have been specially prominent.

The principles and results of their experiments have been, both in America and in this country, the theme of much discussion, which, however, from the frequently extreme and partisan attitude of the critics, has hardly led to complete illumination.

It has, therefore, been eminently desirable that we should have a further estimate of the value of these novel systems from a competent observer, familiar with the working of penitentiary methods in England. This desideratum has been supplied in the Report to the Home Secretary on the treatment of crime in the United States, by the Chairman of the Prison Commission, Mr. Ruggles-Brise, to whose enlightened administration are owing so many recent reforms in English prisons.

The Report embodies the result of a personal study of the penal institutions in five of the most progressive States of the Union, viz.

New York, Massachusetts, Illinois, Ohio, and Pennsylvania. The obvious bearing which many of the methods discussed have on several pressing penological problems at home invests this important document with an added interest of actuality.

In his preliminary remarks Mr. Ruggles-Brise indicates as an important feature of the American system that in the United States crime and its treatment are a matter of local and not of federal concern ; each State has its own code of criminal law and its own penal system. The main lines of the latter are, however, similar in all the States : petty offenders and prisoners awaiting trial are under the care and control of the local authority representing the counties and the cities ; persons convicted of serious crime are under the control of the State. The former are detained in workhouses and gaols, the latter in State prisons, and in some of the States in State reformatories. The two classes of institution correspond roughly, as regards their inmates, to local and convict prisons in England, with the difference, however, that a far larger proportion of American prisoners—considerably over half—are confined in the State prisons, which are to be regarded as constituting *the* penal system of the country.

After briefly adverting to the fact that the workhouses and gaols are admittedly the dark side of the system, and are in crying need of reform, Mr. Ruggles-Brise proceeds to deal with the State institutions.

With regard to the internal administration of the State prisons he notes these characteristics : there is no progressive stage system as in England, though there is a somewhat rudimentary system of "grades," and prisoners can also earn a "good time" remission ; in spite of the Labour Laws the prisons are run as vast factories, and thus contribute materially to their own maintenance ; after working hours discipline is considerably relaxed, prisoners being allowed to chew tobacco, read the papers, etc. ; the warden has practically a free hand in the management of his prison, being controlled only by a Board of Governors. The "spoils system" unfortunately extends to prison administration, the Board of Governors, and in most instances the warden, going in and out with the political party to which they belong. It is further noted that the structural principles adopted in these prisons are most excellent.

The part of the Report which will prove most interesting from our point of view is that dealing with the State reformatory system for juvenile adult criminals, of which the well-known institutions of Elmira and Concord are the most typical examples.

Mr. Ruggles-Brise prefaces his discussion of this system by pointing out the extent to which American penologists have been influenced by the ideas of the doctrinaires of the French revolutionary period touching the responsibility of society for the genesis of the criminal, and the mode of reaction towards him which that responsibility should entail : "it is held that a youthful offender, or rather a juvenile adult (the age is fifteen to thirty at Elmira, fifteen to thirty-five at Concord), however serious his crime, is more sinned against than sinning. His crime is due to inherited defect, mental or physical, to vicious environment, to his not having had a chance." Hence the duty of society is his regeneration, and not his punishment.

The system pursued Mr. Ruggles-Brise describes thus:—"The methods of reform employed at Concord and Elmira, though differing in detail, are in principle the same. They are, shortly, physical development, by gymnastic and military exercise; intellectual training, *i. e.* from the grammar school of the illiterates to advanced lectures on political, ethical, and economic subjects; manual training, from the elementary Sloyd process to advanced technological study, *e. g.* engraving, etching, carving; industrial training in the ordinary outside trades—masonry, carpentering, etc.

"The classification is by a system of grades kept with mathematical exactness, showing the advance or relapse of each inmate in each department of letters, art, industry, and general conduct. The inmate is first put into an intermediate or probationary grade for six months. For bad conduct he may be at any time reduced to the lowest grade. After good conduct for six consecutive months he is advanced to the highest grade. The basis of the whole system is the indeterminate sentence, by which parole can be earned in twelve months, but the average time for parole is about twenty-two months. No inmate is paroled until he has a situation provided for him, and from that time he is under surveillance for six months, during which time he may be at any time returned to the reformatory for breach of parole. It is a mistake to suppose that the discipline is lax, or that these places are hotels where the prisoners go to enjoy themselves and have an easy time. The contrary is nearer the truth. At both institutions it is a common thing for the inmates to express a preference for the State prison. . . .

"A distinctive trait of the Elmira Reformatory is its reliance on the so-called physical method as an instrument of reform. The principle of it is that physical degeneracy lies at the bottom of the criminal character. I saw a batch of inmates at Elmira going through a course of Turkish baths, fitted in a most costly and elaborate manner. Thence they are taken to a shower-bath and given a cold douche, and then put through a course of gymnastic exercise, the purpose being to repair and fit the organism for its normal and healthful functions, increasing the amount of nervous energy, and by this means strengthening character."

In criticising this system Mr. Ruggles-Brise observes that too much stress must not be laid on statistics of probable reform: firstly, because the large proportion of the prisoners are first offenders, who are ordinarily less liable to relapse; and secondly, because the surveillance after release is too short to show whether the cure is permanent. "But," he adds, "I lay great stress on the general character and object of these institutions, as evidencing an effort deliberately made, ingeniously contrived, and systematically executed, to deal with the great criminal problem of adult-juvenile criminality."

As regards the application of similar principles to this country, Mr. Ruggles-Brise recalls the fact that two recent committees, viz. the Committee on English Prisons and the Committee on Reformatories, in their reports expressed a strong opinion in favour of a differential treatment of young and first offenders as an alternative to ordinary prison methods, and in the light of these reports he considers that it is

not impossible that public opinion in England would encourage an experiment having for its object the treatment of adult-juvenile offenders between sixteen and twenty-one on methods specially directed to their physical and moral reform, adequate length of treatment being secured by the adoption of the principle of the indeterminate sentence.

Naturally the reformatory system as it is worked in America is an expensive affair: thus the net cost per head is a shade over 133 dollars at Elmira, and 183 dollars at Concord; at the State prison of Sing Sing, on the other hand, it only comes to 71 dollars, and at Joliet to 20·6 dollars.

While Mr. Ruggles-Brise is thus favourably impressed with American reformatory methods as applied to first offenders and juvenile-adults, he is by no means prepared to endorse their extension to confirmed criminals. Of recent years a tendency in this direction has appeared, and several State legislatures have introduced for ordinary convicts the parole system based on the indeterminate sentence. This in effect gives to boards of elective managers the power to discharge from prison, possibly after some twelve months' imprisonment, any criminal who succeeds in making them believe that he is not likely again to violate the law. Mr. Ruggles-Brise criticises this system adversely, as being opposed to the fundamental aim of the Criminal Code—the protection of the community; the reasons which support this mode of treatment for individuals with incipient criminal tendencies are not valid in the case of recidivists.

Another detail of penological method dealt with in the Report is the probation system in use in the State of Massachusetts. Under this system the courts appoint special probation officers whose duty is to inquire into the character and antecedents of persons before trial and to report to the judge, and after trial to take charge of persons whom the judge shall place on probation and commit to their care. The system appears to be mainly applied to cases of drunkenness. It is stated by a public commission, which inquired into it in 1896, to have "worked with admirable results."

In an appendix Mr. Ruggles-Brise discusses the movement of crime in America and the relative criminality of America and England. He points out that the absence of accurate statistics in the United States renders investigation difficult, the only method available being the comparison of the prison population at given dates. The following table shows the proportion to total population of the prisoners in the two classes of prisons in the years 1880 and 1890:

	1880.	1890.
State	1 in 1395	1 in 1358
Local	1 in 2214	1 in 1721
All prisoners	1 in 855	1 in 759

—which shows a very slight increase in serious crime and a considerable increase in petty crime in the ten years 1880–90.

Still greater difficulty attends the comparison of the amount of crime in England and in America. Calculating roughly from the latest available statistics for the two countries, one finds that in England

there is 1 prisoner in every 1764 inhabitants, in America 1 in every 759. Incidentally Mr. Ruggles-Brise demolishes the theory that the prevalence of crime in America is due to the foreign immigrants; he shows that this conclusion is arrived at by comparing the total native-born population with the total immigrant population, overlooking the fact that the young children who furnish hardly any criminals belong nearly all to the former category. When the populations compared are the males of voting age, it is found that there is an actual excess on ratio of native over foreign-born prisoners of 50 per cent.

Judicial Statistics, England and Wales, 1897. Part I.—Criminal Statistics. London, 1899.

This volume of the *Criminal Statistics* is the fifth of the new series inaugurated in 1892.

The improvements in the amount of matter and in its method of presentation, which were made in accordance with the recommendations of the Departmental Committee of that year, have enormously increased the value of these returns, and have done much to remove from our statistics the stigma of inferiority to those of other European governments. With some further modifications and additions they would come up to the level of the best Continental models.

Their most notable defect is still in information concerning what may be termed the criminal individuality; on such points, for instance, as domicile, civil state, economic condition, religion, they are entirely silent. And in the case of those individual factors which are dealt with, such as age, sex, nationality, the information furnished might be more extensive. At present, for instance, in these tables account is only taken of convicted prisoners. This is of course in most cases natural and sufficient, but in a few instances it involves a sacrifice of interesting results. To cite a striking case, attempting to commit suicide is an offence of great and growing frequency; as it is, however, usually viewed with leniency, only a very small proportion of persons charged therewith are eventually sent for trial; hence the statistical information regarding this very interesting phenomenon is available in only about 8 per cent. of the cases. In special circumstances of this kind supplementary details might be given for accused as distinguished from convicted prisoners. Such information is in fact furnished at present for all forms of indictable crime in the police reports of many of the larger boroughs.

In a few other matters dealt with in the tables more minute details might also be given. For instance, it should be possible, as is done to some extent in the new Scottish tables, to indicate in charges of homicide, wounding, etc., the number of cases in which the victims were relatives of the offenders. In sexual crimes, again, the value of the statistics would be enhanced by distinguishing cases of rape and indecent assault on adults from cases of such offences committed on

children ; the psychological import of these two varieties of sexual crime is probably very different.

The information given in the coroners' tables might also be amplified, especially as regards the statistics of suicides ; details, for instance, of age, etc., might be included, and the age groups might be assimilated to those used in the other tables, to facilitate comparison with the different categories of crime, and with suicidal attempts.

Apart from such slight defects as we have indicated, the present volume is excellently prepared ; the comparative tables and diagrams in particular are of the same admirable lucidity to which the editing of Mr. Troup and Mr. Simpson has accustomed us.

In his introduction the present editor indicates, as the chief inference deducible from the year's figures, the further evidence they afford of the tendency to decrease in serious crime which has been observable in this country during the last twenty years. The progressive character of that decrease, apart from merely fortuitous oscillations, is clearly shown in tables and diagrams presenting for each year from 1875 to 1895, not the actual number of indictable crimes in that year, but the annual average estimated on five years' figures, viz. the year in question, the two years preceding, and the two years following that year.

If we now regard the different categories of indictable crime separately, we find that the decrease in the total is due almost entirely to a falling off in the class of offences against property without violence. In malicious injuries to property and in coinage offences the decrease is less regular. In offences against property with violence there is rather a tendency to increase, due most probably to the short sentence system allowing a larger number of professional burglars to be at large. Crimes against the person have also tended to be more numerous. The class of miscellaneous offences shows a large increase, due entirely to the steady rise in the number of attempts to commit suicide.

Viewed in relation to the estimated growth in population the diminution in the figures is of course more marked ; for indictable crime as a whole the decrease from the quinquennial period 1878-82 to the quinquennial period 1893-7, estimated on the ratio of the number of cases reported to the population, amounts to 27.6 per cent. Amongst the categories of crime showing an increase in the absolute figures, it is found that the increase has been in excess of population only in the cases of sexual crimes and attempts to commit suicide ; the latter offence has increased during the period mentioned by over 58 per cent.

The statistics of sentences awarded show a continuance of the recent tendency to more lenient treatment of indictable crime. For example, in 1897 of persons convicted on indictment of burglary and house-breaking only 13 per cent. were sent to penal servitude, as against 21 per cent. in 1877.

The figures relating to summary proceedings show the usual rise, corresponding to the growing complexity of the collective life, with the resulting multiplication of social sins of omission.

The comparative tables this year include an interesting return regarding coroners' inquests for the last twenty years. It is curious to note that the annual number of verdicts of death from excessive drinking has

in that period just doubled. The coroners' returns also show the increasing rarity of the verdict of *felo de se*. As an interesting point in the psychology of the jury, it may be observed that the survival of this verdict appears to be related not to social or economic conditions in the localities where it persists, but solely to the personal views of the coroners; that is to say, it tends to recur in the jurisdictions of individual coroners, while in the adjoining districts within the same towns or counties the juries return the usual euphemistic verdict of "suicide in unsound mind." Oddly enough, of recent years verdicts of *felo de se* have been relatively much more frequent in the case of female suicides.

A table of much medico-legal interest is that dealing with the offences of criminal lunatics. The figures here show, as in previous years, that inquiries into the mental state of offenders are practically confined, at all events outside the large centres, to grave homicidal cases. Thus in the year 1897, of forty-three lunatics who had committed offences of this character, the mental state of the prisoner was recognised at or before the trial in thirty-eight cases, leaving only five cases (11·6 per cent.) in which insanity either did not develop, or at least was not certified until after sentence. On the other hand, amongst ninety-five criminal lunatics who had committed other forms of indictable offence, the proportion not certified until after trial amounted to no less than 76·8 per cent.

Contribution à l'Étude du Prognostic de l'Épilepsie chez les Enfants. Par le Dr. E. LE DUYGON. (Contribution to the Study of the Prognosis of Epilepsy in Children.) Paris: aux Bureaux du Progrès Médical, and Félix Alcan, pp. 56.

In this *brochure* an attempt is made, upon the strength of ten clinical observations of patients at Bicêtre, to appraise the curability of epilepsy occurring in childhood. The conclusions arrived at by the author are that—

1. Epilepsy termed idiopathic may be cured in a certain number of cases.
2. Epilepsy which commences with convulsions, appearing for the first time at the age of two years or later, is more curable than that in which they manifest themselves in the first year.
3. Though aggravating in a general way the prognosis of epilepsy, heredity, whether direct or indirect, does not fatally compromise the cure.
4. Intellectual enfeeblement, moral perversions, onanism, etc., involve a more unfavourable prognosis.
5. Epilepsy associated with infantile hemiplegia disappears much more frequently than that termed idiopathic.

It is to be regretted that the author has been obliged to found his generalisations upon so small a number of cases, and it would be very satisfactory if he were able (as it seems he originally intended) to follow up the statistics of all the cases of epilepsy under treatment at Bicêtre.

Such a study would be of much interest, and its value would at the present time be specially appreciated in England in view of the various arrangements now pending for the treatment and education of epileptic children.

Recherches cliniques et thérapeutiques sur l'Épilepsie, l'Hystérie, et l'Idiotie. Par BOURNEVILLE, avec la collaboration de MM. Cestan, Chapotin, Katz, Noir (J.), Philippe, Sebilléau, et Boyer (J.). Vol. xix. (Clinical and Therapeutical Researches on Epilepsy, Hysteria, and Idiocy. Bourneville, etc.) Paris: aux Bureaux du Progrès Médical, and Félix Alcan. Pp. 236, 13 plates, 13 illustrations in text, large 8vo. Price 5 fr.

This annual volume consists, as usual, of two portions: the first being a report of the arrangements for defective and epileptic children at the Bicêtre and at the Fondation Vallée, with remarks on the desirability of establishing special instruction classes in Paris; and the second being devoted to clinical and pathological observations. At the Bicêtre there were on the 11th of January, 1898, 459 children, of whom 435 were idiots, imbeciles, or epileptics of unsound mind, and 24 classed as non-insane epileptics. The last named were placed in the Bicêtre at the charge of the municipality, and not like the others at the charge of the department, so that the problem of dealing from public funds with epileptic children not insane seems to stand much on the same footing in France as in England. On the 31st of December, 1898, of 462 children in the Bicêtre, not less than 45 were classed as non-insane epileptics. During the year 74 patients were admitted, 19 patients died, and 54 were discharged. Of the deaths, 8 were due to epilepsy, 3 to pulmonary tubercle, 1 to tuberculous enteritis, and 5 to typhoid or its sequelæ.

It would appear that at the Bicêtre the proportion of deaths from tubercle is this year less than the average in English institutions. At the Fondation Vallée there were on 31st December, 1898, 189 imbecile, epileptic, and hysterical girls, the admissions having been 62, the deaths 13, the discharges 20, and the transfers 24. (There is an error in the headings of the table on p. 54.) Tubercular disease seems to have been a factor in 7 out of the 13 deaths. A powerful appeal for the creation of special classes for feeble-minded children in connection with the primary schools of Paris closes this portion of the volume, and this appeal is strengthened by a recital of satisfactory results obtained from such classes in Switzerland, England, and Belgium.

We may perhaps say that the more interesting sections are those which relate to the observation of cases. The use of bromide of camphor in chorea forms the subject of an exhaustive article by Bourneville and Katz, and is very favourably reported on. A case of double athetosis with imbecility is carefully described, and Bourneville records his opinion that children of this type are susceptible of much amelioration if subjected to proper treatment at an early age (two or three years),

after which their chances diminish. So far as mental improvement is concerned, apart from control of muscular movement, we have seen good results from education even at twelve or fourteen years of age, and we have seen excellent macramé work and even wood-carving done by children of this type, whose training was not commenced in early infancy. A graphic account is given of a case of adolescent mania with nymphomania, in which the starting-point seemed to have been a sermon on death! Cure is recorded after seven months' treatment at Bicêtre. Another terrible example of juvenile depravity is given under the heading of "infantile alcoholism, mental instability, and moral imbecility," the patient being a boy of thirteen who drank, smoked, and attempted suicide, but whose condition speedily improved under treatment at Dr. Bourneville's "Institut médico-pédagogique."

As usual the report contains some excellent plates, one of a case of imbecility with athetosis at various ages, another of meningitic idiocy; and there are large-sized illustrations of the brains of these and other cases, such as hydrocephalic and sclerotic idiocy.

Leçons sur les maladies nerveuses. Deuxième série (Hôpital Saint-Antoine). Par E. BRISSAUD. Recueillies et publiées par HENRY MEIGE. Paris: Masson et Cie., Éditeurs, 1899, pp. 560, 165 figs. Price 18 fr.

In this second volume of twenty-seven clinical lectures on nervous diseases, some of which have been already published in scattered periodicals (*Presse médicale*, *Bulletin médical*, *Progrès médical*, etc.), Prof. Brissaud has given us a collection of most interesting and carefully made observations accompanied with valuable remarks and comments, forming an important contribution to neurology.

After a chapter devoted to the general pathology of the neuron, some of the reactions of which he compares with the phenomenon of polarity in static electricity, in accordance with which he refers to the axion as the positive and the dendrite the negative end of the cell, and to the questions of chromatolysis, Prof. Brissaud discusses the distribution of herpes zoster, especially in its relation to spinal localisation. It is not so long ago that most clinical teachers seemed to close their eyes to the fact that the eruption of herpes zoster on the chest rather crosses obliquely the tracts of the intercostal nerves than follows their course; but since the work of Head, Starr, and others we have been taught to look for a central lesion to explain this. The distribution of zoster as well as that of the thermo-anæsthesia of syringomyelia points to a problematical persistence of the embryonic metameric disposition along the whole length of the neural axis in the adult. "Each primitive segment," as Brissaud says, "of which we are formed in embryonic life indefinitely preserves the material imprint of its initial differentiation." While the study of herpes zoster on the trunk and the limbs leads to the conclusion that it is often of central origin, there are of course cases of peripheral origin (alcoholism, beri-beri, etc.).

In connection with the question of metamerism it is important not to confound radicular metamerism (*i.e.* of spinal nerve-roots) with true spinal metamerism; there is nothing in common between the peripheral distribution of radicular fibres and the peripheral representation of spinal metamers.

In this relation the study of the distribution of anæsthesia in bands and in sections (*e.g.* in the direction of the axis, and at right angles to the axis, of a limb) in certain diseases is very interesting. In the case of the cervical and lumbar enlargements of the cord Brissaud holds that a secondary metamerism of the spinal enlargements corresponding to the limbs is demonstrated.

The sixth lecture deals with ophthalmic herpes, and attention is drawn incidentally to the importance of a guarded prognosis in these cases on account of its frequent association with crossed hemiplegia.

In three of the following lectures Brissaud dilates on the support which dermatology gives to the thesis of spinal metamerism; for example, in the study of the distribution of the eruption in lichen, pigmentary scleroderma, etc. If the diagnosis of radicular localisation has been made possible by the convincing works of Ross, Allen Starr, and Head, everything leads one to hope that that of spinal localisation will soon not be insurmountable; in other words, if we owe it to these authors that we can localise disorders of the radicular zones or rhizomes, the day seems near when we shall be able to localise the disorders of the spinal zones or myelomers.

In the discussion of transverse myelitis Brissaud especially dwells on the question of flaccid paralysis, which may occur early, or may be secondary to spasmodic paraplegia after an interval of time. He rejects the view of Marinesco, who holds that no single case has been observed (with post-mortem confirmation) of complete transverse myelitis with presence of knee-jerks. The secondary flaccid paralysis is believed to be due to generalised peripheral neuritis. Every case of degeneration of the lateral tract, either on one side or on both sides together, exhibits as an inevitable consequence permanent contracture or spasm whenever the sclerosis is not complicated with an accessory destructive lesion of the grey substance of the roots, or the nerves, or the muscles.

In Lecture XI is the description of a very interesting case of paralysis of the roots of the brachial plexus, which could not be diagnosed from syringomyelia.

The subject of syphilis of the spinal cord affords the author an opportunity of discussing the syndroma of Brown-Séquard (hemi-paraplegia with crossed hemianæsthesia), in which the anæsthesia habitually exhibits the dissociation so characteristic of syringomyelia; the question of the tracts for heat, pain, and sensation in the cord is also touched upon.

Lecture XIV is devoted to cases in which is observed the late reappearance of atrophic and paralytic disorders in the subjects of early infantile poliomyelitis, due generally to a subacute adult poliomyelitis, and no doubt arising from an original imperfection of the body of the motor cell of the myoneuron.

Lecture XV deals with the fascia lata reflex. After a superficial plantar excitation the first contraction noticed is that of the tensor vaginæ femoris, and it is important to note the early atrophy of this muscle in certain paralyzes of central origin.

In Lectures XVI and XVII we find a very good account of bulbar paralysis and pseudo-bulbar paralysis, with an analysis of the lesions which produce them. In pseudo-bulbar paralysis the paralysis is frequently a spasmodic one, hence the laughing and crying crises, etc.; and on account of the facial appearance and other manifestations it is important not to diagnose incipient dementia in these cases.

Lectures XVIII and XIX are devoted to the slow pulse of cerebral origin. Many authors refer cases of more or less frequent and more or less permanent attacks of "slow pulse" to some cardiac cause. Brissaud shows that it is frequently associated with attacks of syncope, occasionally with facial paralysis, and is most commonly a bulbar symptom. In one interesting case which he details at length it was probably due to the pressure of a tuberculous growth on the pons.

Among the subjects considered in the concluding ones of these fascinating lectures we note especially "infantilism," which Brissaud shows to be a much too comprehensive term. The "infantilism" related to cardiac, arterial, tubercular, etc., disorders should be clearly differentiated, he shows, from myxœdematous infantilism (dysthyroïdean), a condition which is itself different from true myxœdema, although it is also markedly benefited by the administration of thyroid extract. Some reason for the difference just referred to may possibly be found in the distinction which Brissaud draws (see Lecture XXV) between thyroïdean myxœdema and parathyroïdean myxœdema, the former condition not being accompanied with intellectual apathy, and the latter (due to a *total* alteration in the thyroid glandular apparatus) exhibiting cretinoid idiocy or dementia.

This collection of clinical lectures is another testimony to the great ability and activity of Charcot's pupils and successors in the field of neurology, and forms a worthy sequel to the works of the master.

Gênèse et Nature de l'Hystérie. Par le Dr. VAUL SOLLIER. 2 vols. Paris: Ancienne Librairie Germer, Baillière et Cie.; Félix Alcan, éditeur. Vol. i, pp. 526; vol. ii, pp. 333.

Dr. Paul Sollier, in the course of his researches into the mechanism of hysterical manifestations, and into the nature of the disease, became irresistibly led, without any preconceived notions, he is anxious to inform us, to a new conception of hysteria, and these two bulky volumes are the result. In the second volume are copious notes of observations and experiments on twenty marked cases of hysteria, an analysis of which has led him to the deductions and conclusions concerning the pathogeny of hysteria which he brings forward in his first volume.

While the tendency is to consider hysteria as a mental or purely psychical affection, Dr. Sollier is convinced "that it is a physical one, although simply functional."

Early on, struck by the amnesia and insomnia noticed in confirmed hysterics, he discovers that hysteria is in reality a condition of pathological sleep or "*vigilambulism*," practically resembling somnambulism, with this difference, "that in somnambulism patients have their eyes closed or appear to be walking in their sleep, while in the case of hysterical patients they appear, *even to observers who are careful*, to be awake."

Hysteria is, therefore, a disorder of sensation arising from numbness or sleep of the cerebral centres, and it suffices to awaken the patients and they are cured.

The next step forward in his theory was taken with the discovery that awakening in hysteria is only complete when sensation is normal, and that anæsthesia, which by its intensity and extent reveals the degree of somnambulism, is the cause of hysterical symptoms or attacks. As a corollary, make your patient feel and you cure him.

Since telling the patients to wake up did not always succeed in causing the anæsthesia of hysteria to disappear, it became necessary to facilitate the return of sensation by other means. Therefore Dr. Sollier tried the effect of telling his patients, while in a state of hypnotic sleep, to feel their arms, their legs, their stomach, their heart, etc., in succession, and pages upon pages of his observations tell us of the wonderful sensations experienced by the patients during this process, "supervening in a definite order which appears to be subject to physiological laws."

Hypnotism, while necessary in a certain number of cases, is not always required to awaken sensation; other means are at our disposal—simple fixation of attention upon the anæsthetic parts, mechanical means (hydrotherapy, electricity, etc.), and isolation.

When dealing with the viscera which cannot be influenced by electricity and passive movements, their normal function must be excited by the most powerful of their habitual stimulants (feeding in the case of the stomach, etc.), and sensation reappears.

The general conception underlying these methods of procedure is "awakening the cerebral centres."

At first sight, says Sollier, this all seems to be *suggestion*, but nothing is further from the truth: "I have taken the greatest care to eliminate the element of suggestion, which, deplorable from a therapeutical point of view, is the most detestable of procedures in experimental psychology."

That suggestion is not involved is, he says, proved by the fact that when once started the return of sensation takes place in a certain definite unchangeable order, that it is propagated to other organs than those to which the patient's attention is drawn, and that the centre presiding over the organs in which sensation reappears is the seat of special sensations—painful hyperæsthesia. This may seem convincing to the author, but it is difficult in wading through the accounts of the numerous experiments (*séances* which must have lasted hours, one would surmise) made upon "*grandes hystériques*," most suggestible among suggestible patients, and not infrequently "*grandes actrices*" as well, and reading long accounts of their subjective symptoms, not to conclude that all the results appear to fit in wonderfully well with what

Dr. Sollier would expect; and one may well be excused for asking for more proof of the existence of stomach, bowel, heart, etc., anæsthesia in these cases—more proof of the existence of those cerebral centres which are supposed to preside over the various viscera to which the author draws marked attention. A patient is hypnotised, for example, and asked whether she feels her heart. “No,” is the answer, “I have none.” The observation is then made that over the precordial area there is a large zone of anæsthesia and analgesia. “Feel your heart and chest,” she is then told. Thereupon a number of subjective symptoms are described by the patient; she says she feels her heart beat, etc., and lo and behold! the anæsthesia and analgesia have disappeared; *ergo* they were related to anæsthesia of the heart. When on page 119, vol. ii, we are told concerning ‘Yvonne’ that, “although her pulse is regular, she feels her heart beat irregularly,” it is obvious that the hysterical patient’s account of her sensations is not an unfailing guide to the condition of her organs, and we fear that Dr. Sollier has attached too much importance to these subjective phenomena. Not only the heart, but the brain, it appears, has its sensation proper; “it can perceive what takes place within it as well as without it, . . . and . . . can act on itself.” *Mirabile dictu!* And anæsthesia of the brain has also its hyperæsthetic painful spot on the top of the head, above the frontal lobe. It is the site of the famous hysterical clavus which appears at the onset of the disease, and persists when other signs have disappeared.

We have said enough to show the general drift and argument of the book. While one may differ from the author’s conclusions, it is nevertheless worth reading on account of the novelty and originality of his views, and because there is a collection of material of the greatest interest to the psychologist. While the greatest part of the book deals with the relation of anæsthesia to hysteria, and the author looks upon the presence of anæsthesia as of capital importance, he does not consider it the sole basis of the condition; his *definition* of hysteria is: “*a physical, functional disorder of the brain, consisting in a numbness (or torpor) or localised or generalised sleep, temporary or permanent, of the cerebral centres, manifesting itself in consequence, according to the centres affected, by vaso-motor, and trophic, visceral, sensorial and sensori-motor, and finally psychical phenomena, and according to its variations, its degree, and its duration, by transitory symptoms, permanent stigmata, or paroxysmal attacks. Confirmed hysterics are but ‘vigilambulists,’ whose state of sleep is more or less deep, more or less extensive.*”

Introduction à la Médecine de l'Esprit. Par le Dr. MAURICE DE FLEURY.
Paris: Ancienne Librairie Germer, Baillière et Cie.; Félix Alcan,
éditeur, 1897. Pp. 477. Price 7 fr. 50 c.

In some respects this book, especially addressed to the general public, may be said to have been written in vindication of the medical profession. At a time when, especially in France, the novelist, the journalist,

and dramatic author are at pains to magnify the abuses and foibles of the doctors, Dr. de Fleury reminds one and all of the work which is being silently accomplished by them. In the first part of his work he dwells on the share which medical science has taken in expanding and emancipating human thought, and in the second he shows that medical studies in physiological psychology lead to a moral—to the truly efficacious therapeutics of the soul. The knowledge of the human brain is instrumental in diminishing suffering and in furthering the culture of the *ego*.

In Chapter I is a summary of the teaching of *la Salpêtrière*, in which full appreciation is given to the work of Charcot and his school in elucidating the complex problems of hysteria, hypnotism, etc. Dr. de Fleury, at the same time that he lays stress on the defined results of their numerous experiments, and on the sound knowledge arising therefrom (the light thrown on history, etc.), is careful to eliminate the chaff. Of clairvoyancy, telepathy, transmission of thought, *envoûtement*, etc., we cannot be said to possess any real scientific knowledge.

Chapter II—"Doctors and Justice"—deals with important medico legal questions. Medical men may be called upon to decide whether hypnotism is concerned in certain crimes, but the author deprecates hypnotising accused persons in order to obtain information. He recognises the rarity of crimes committed under hypnotic influence. The interesting question of criminal responsibility is touched upon, and he incidentally urges the advisability of magistrates possessing some knowledge of psychology. Until the day—which he appears to hope will not be far distant—when there will be a "formal negation of the doctrine of free will," he is in favour of verdicts of partial responsibility, and favours Magnan's ideas of the institution of hospital-prisons.

Dr. de Fleury bemoans the absence of the religious feeling in France, and the suppression of religious instruction in schools. "The fear of eternal punishment is a curb of great power," and although the notion is perhaps false, says he, it is of great practical utility. Perhaps, after the experience of Messrs. Voulet and Chanoine, he would reconsider his suggestion that a colonial army might usefully be compounded with such ingredients as "graine de meurtriers, de voleurs, d'anarchistes."

In the chapter on "Doctors and Literature" we find a useful contribution to the question of "tobacco smoking," with the opinions of quite a number of celebrated French literary men concerning their reaction to the "noxious weed." The author looks forward to the time when medical science will pursue its researches into the domain of art, and learn much from the exaggeration and pessimism associated with certain schools of literature. Incidentally there is some valuable criticism of some aspects of modern French writings, and interesting remarks on the creative and critical faculties in art.

Chapter IV is devoted to an attempt to convey to the uninitiated some knowledge of the physiology of the brain, including recent researches into the structure and functions of neurons.

In Chapter V, on "Fatigue and Energy," are discussed the factors which facilitate the recuperation of the nervous system—rest, training, and methodical stimulation. Dr. de Fleury is evidently much impressed

with Dr. J. Chéron's work on hypodermic medication, and refers on several occasions throughout this book to the great benefits to be derived from the hypodermic injection of artificial serum or salt solution in nerve exhaustion—"the most powerful, the most manageable, and the most useful of stimulants to the nervous system," as he calls it on p. 397. He is sceptical of the view that physical exercise, except in great moderation, is beneficial after mental overwork, considering that the brain only undergoes one form of fatigue. That some brains apparently seldom experience this fatigue he illustrates by references to the labours of men like Dumas, Balzac, and Michelet.

In the second part of the work we are shown how modern observations and experiments lead to a rational treatment of the mind. Indolence, sadness, morbid love, and anger being especially found in neuropaths, successive chapters are devoted to these conditions, and hints given concerning their treatment. It is here that the doctor must lead and watch his patient. While such men as Darwin and Zola can overcome unaided such tendencies to indolence, most subjects of this weakness require rules of hygiene and the treatment which is generally efficacious in neurasthenia. The substitution in the mind of some beautiful fixed idea for an absurd obsession, with patience, may be accomplished, and forcing the patient into good habits is urged,—a habit, the author reminding us, being merely the substitution of an automatic act, practically unaccompanied with distress or fatigue, for a voluntary act which induces brain weariness.

Dr. de Fleury recommends that intellectual work should be undertaken daily, should be regulated, begun at a fixed time, and matutinal. Pessimism, which is so rampant in the modern literature of his own country, is found in proportion as passive meditation is practised, and in inverse ratio to the outward activity of the mind—"Bonum est diffusum sui."

Sadness is a symptom of brain fatigue and nervous exhaustion, and may be frequently cured by attention to details. A regulated dose of serum is here most efficacious. Sadness and anger are especially analysed with a view of showing that they can be reduced to problems of cerebral mechanics; and the author, in support of this view, draws deductions almost *à outrance* from Lange and James's work on the emotions, etc. Hence treatment is to be carried out with mechanical stimulants, such as the douche, salt baths, massage, static electricity, the air cure, and lastly (but certainly not least in his estimation), hypodermic injections, which act on the sensory nerves. "Methodical progressive stimulation in emotional disorders causes the nerve-cells to assume their 'normal tonus.'"

Chapter VII, dealing with love and jealousy, is curious and suggestive. Sentimental love is an emotional intoxication. Its course, symptoms, treatment, etc., are those observed in intoxications by morphia, drink, tobacco. Its usual accompaniment, jealousy, with its characteristic attacks, is so markedly influenced, the author shows, by purely physical conditions, that the mechanical theory receives additional support or proof.

Anger is found especially in two classes of patients: on the one hand

it is closely associated with brain fatigue and profound nervous exhaustion—the asthenic form; and on the other hand it is found in the “hypersthenic.” “Hypersthenic” anger manifests itself in attacks—true psychical convulsions—which are often the mental equivalent of epileptic attacks, and are observed in cases with bad heredity (alcoholism, *petit mal*, etc.). Bromides do good.

In the last chapter Dr. de Fleury endeavours to formulate some modern system of ethics. Anglo-Saxon ideals appeal to him more than the Latin, and incidentally he speaks in high praise of the sweet and comforting influence of Sir John Lubbock’s writings. After a judicious course of nerve tonics, and the adoption of measures calculated to improve the nutrition of the brain and the temper of the will in neuropaths, the perusal of *The Use of Life*, or some such like book, should prove a practical and wholesome means of completing the cure.

While one may well feel some doubt as to the simple mechanical view of the author concerning the varying phases of emotions, and as to the potency of the means at our command for favourably influencing them, it is impossible not to conclude that he has written a most interesting and suggestive work. It is evidently the result of painstaking labour—six years of observations and experiments, the author tells us,—breathes a scientific spirit, and is permeated with a pleasurable aroma of culture.

L'Année psychologique. Par A. BINET. Paris: Schleicher, 1899.
Pp. 902, large 8vo. Price 15 fr.

This fifth issue of Dr. Binet’s year-book shows an interesting change of method. We have more than once pointed out that the plan of including a number of very special and detailed investigations in a year-book, which should appeal to all interested in psychology, is a serious error. The memoirs are still here—indeed, they now occupy two thirds of the volume,—but they have wholly changed in character; instead of detailing minute investigations carried out in the Sorbonne laboratory, they present us with broad and comprehensive summaries of the present state of various generally interesting questions. Some of them are by the best living authorities on their subjects, and in several cases extremely useful bibliographies are appended. On the whole, Dr. Binet has thus greatly increased the value of his work, and it is not now possible to bring forward any serious criticism.

The first memoir, a general review of the investigations on muscular fatigue, is by Mlle. Joteyko, who is known as a diligent investigator into this subject. It begins with a reference to the Greeks, and ends with a summary of the just published results of Maggiora; to it is appended a chronological bibliography from 1846 onwards. This is followed by a discussion and account of experiments concerning the question why objects seem to diminish in rising above the horizon, written by Professor Bourdon. Dr. Claparède, of Geneva, then discusses stereognostic perception; that is to say, the appreciation of

form by touch. He finds that this is strictly a "perception," not a "sense;" he also deals with its absence, or "stereo-agnosia." Then the editor deals at length with suggestibility from the point of view of individual psychology. The memoir has nothing to do with hypnotism, but simply with those forms of suggestion which are exercised in daily life. There is an interesting section on the suggestion exercised by the conjurer. Then M. V. Henri deals briefly with the mathematical question of the calculus of probability as applied to psychology; and in another paper, also short, with the influence of intellectual work on metabolism. Professor Clavière summarises the chief facts and theories of colour-hearing, while M. Larguier des Bancelles compares the different methods of measuring intellectual fatigue. Professor Zwaardemaker, of Utrecht, deals at some length with his own special subject, olfactive sensations; he shows that when combined in suitable quantities certain odours balance and annihilate each other, and suggests that we may ultimately reach a vibratory theory of smell. Dr. Marage discusses the use of the phonograph in studying vowels, and the same author has a long and interesting historical study concerning the investigation into the relation between intelligence and the size and form of the head; he emphasises the result of Manouvrier (founded on Broca's registers), that the volume of the frontal lobes has no relation to intelligence, since these lobes always remain at about the proportion of 43 per cent. of the whole brain. How little we yet know is shown by the doubt finally expressed by Dr. Marage: it is clear, he remarks, that a large brain is associated with high intelligence; but as regards the various parts, it is not yet even clear whether the proportions of the cranium are not more significant than the proportions of the brain it encloses. Professor Blum summarises recent investigations, especially Vitali's, into the characteristics of children. M. Demy deals with chronophotographic apparatus, and other authors briefly describe various apparatus, such as the ophthalmometer for measuring the anterior curvature of the cornea, the ophthalmophalcometer for determining the position and curvature of the crystalline lens, Maxwell's colour-box, etc.; while Professor Obersteiner, of Vienna, describes the psychodometer, which he has devised in association with Professor Exner for measuring reaction times in the insane (price and maker are not mentioned): it is stated to be simple, solid, and cheap, though less precise than the chronoscope. The longest memoir in the volume (160 pages) is by M. V. Henri, and is a general review of the muscular sense, though at the outset the writer protests against the term, as it merely stands for an *ensemble* of sensations. This valuable study is followed by a bibliography of not less than 391 entries. Finally, Professor Manouvrier furnishes an *aperçu* of anthropological character, dealing with the measurement of the head in the living subject. This paper contains various useful suggestions by a highly experienced investigator; at the outset he points out that no book knowledge can replace practical instruction in learning anthropological methods, since there are so many minute but important sources of fallacy; but he remarks that an intelligent medical man only requires two hours of practical apprenticeship so far as the head is concerned.

It is impossible in a brief space to summarise lengthy memoirs which are themselves condensed summaries. The foregoing enumeration, however, may suffice to show the valuable character of a volume which every alienist taking any scientific interest in his work will do well to keep among his reference books.

The Human Machine. By J. F. NISBET. London: Grant Richards, 1899. Pp. 297, 8vo. Price 6s.

This book is by the author of a volume on *The Insanity of Genius* (reviewed in the JOURNAL at the time), which attracted considerable attention a few years ago. Notwithstanding, however, the skill and lucidity with which it was written, and the author's wide knowledge of literary history, it was obviously not the work of a writer properly equipped for his task on the pathological side, and we were unable to regard it as a serious contribution to the difficult problem it attempted to settle. The present book is its author's last work; he died within a few days of its appearance, at the age of forty-seven.

Nisbet cannot be considered a psychologist; at the best he was only an amateur psychologist. By profession he was a journalist, and at his death, and for some years previously, he was dramatic critic to the *Times*, and a regular contributor to other journals. A native of Glasgow, he came to London at an early age, and by native force of character and stolid unobtrusive energy quickly won a position for himself in the journalistic world, while devoting his leisure to more abstract problems. Though not a psychologist, Nisbet had in intellectual matters the temperament of the philosopher. He was always devoured by a passion to see things clearly, and to see them for himself. Though his vision of the world was often singularly one-sided, he was determined to be relentlessly sincere, at whatever cost to himself or others. His creed was a convinced and thorough-going materialism of a somewhat old-fashioned type, and this he was always prepared to defend. A man of exceedingly slow and deliberate speech, he was never afraid to express, even with some grimness on occasion, and no undue tenderness for his interlocutor's feelings, whatever seemed to him to be the inflexibly exact truth concerning the matter in hand. These characters he retained to the last. It so chanced that the present reviewer, who had met Nisbet many years previously, spent much of last winter at a little hotel near Malaga, at which Nisbet also appeared. Reduced by influenza and its complications—acting on a constitution doubtless enfeebled by his arduous profession and an acknowledged thirst to know all that life can give—he was the mere shadow of his former robust self, but with characteristic independence he came alone, and when, a few weeks later, having corrected the final proofs of this work, he left the warm sunshine of the South for London in March, to die a few days after arrival, it was with the calm consciousness of the fate awaiting him.

In the present work, which, according to its sub-title, is "An Inquiry

into the Diversity of the Human Faculty in its Bearings upon Social Life, Religion, Education, and Politics," Nisbet has left a very personal testament and witness to the faith that was in him. He here sets down his conclusions concerning all the questions that interested him, not only on such special points as genius, criminality, dreams, but on all the great and ultimate problems which every man must face for himself. It will be found helpful and stimulating, not least so by those who cannot always share the author's point of view.

La Nouvelle Monadologie. Par CH. RENOUVIER et L. PRAT. Paris : Armand Colin, 1899. Pp. 546, 8vo. Price 12 fr.

M. Renouvier, it is unnecessary to say, is one of the most distinguished of French philosophers. In the present work, written in co-operation with M. Prat, he has attempted the task—which in most hands would be presumptuous—of inviting comparison with Leibnitz. The book touches on all the questions of life and thought, with that distinction and elevation which have always marked M. Renouvier. To deal with such a book adequately would be quite beyond either our limits or our scope, for it makes no special appeal to the psychologist and alienist. The work is divided into seven parts, under the headings successively of "The Monad," "The Composition and Organisation of Monads," "Mind," "Passion," "Will," "Societies," "Justice."

The Evolution of General Ideas. By TH. RIBOT. Authorised translation by FRANCES A. WELBY. Chicago : Open Court Publishing Co., 1899. Pp. 231, 8vo. Price 6s. 6d.

This is a translation of the distinguished French psychologist's *Evolution des Idées générales*, which appeared two years ago, and was duly reviewed by us at the time. We note that the translator has sensibly added an index.

On Deafness, Giddiness, and Noises in the Head. By Dr. EDWARD WOAKES, assisted by CLAUD WOAKES. London : H. K. Lewis, 1896. 4th edition, 8vo, Part I, pp. 224, 5 illustrations. Price 10s. 6d.

It is not every day that we have the pleasure of perusing a book which might serve as a model of what a medical treatise ought to be, in these days when medicine calls to its aid nearly all contemporary science. Throughout, it is a closely reasoned sequence of statements, precise and logical, with little or no redundancy or padding. It is only in one place that the author embarks on an imaginative career. Wherever there is a gap in the evidence adduced, such is at once honestly stated, and the hope expressed, and even the prophecy made, that in

future years, so promisingly prolific in scientific research, such will be repaired. The subject is one of no little interest to the alienist. With regard to vertigo, the symptom-complex, subjective and objective, renders it fairly distinguishable. The "falling," however, the coarsest symptom of the vertiginous state, may closely simulate certain epileptoid states, such as *petit mal*, and it is questionable whether the two states are not often correlated. The gait also of vertiginous patients may become chronically affected, and may require distinguishing. Other common symptoms are nausea, vomiting, and dyspepsia. Others suffer from agoraphobia, a sense of dread, or an uncontrollable tendency to sobbing and weeping. Aged subjects exhibit picking and fidgeting with the fingers, and in prolonged cases increasing loss of memory, incoherence, and mental decrepitude are final sequelæ.

The allied state of tinnitus is also important. The ever-present clashing of bells, rhythmical thuds, chattering voices, bubbling waters, etc., pursue the victim with relentless torture night and day; and it is no small wonder that mental disease may supervene. It is in considering this part of his subject that the author diverts us somewhat with speculative history. He claims Mahomet and Joan of Arc to have been distinguished sufferers from tinnitus, and the former also from vertigo. While in the mountain of Hira, Mahomet became subject to fits, voices, bells, and visions. The nature of the fits as recorded points to their vertiginous origin; while the noises are explicable by imagining the co-existence of tinnitus. Joan of Arc, a being of like temperament, was the subject of tinnitus, chiefly of the chattering variety, which she soon translated into "commands spoken to her by the saints." Whether the environment of the

"Cold mountains and the midnight air"

was more favourable to the development of the ecstatic mood than to the occurrence of catarrhal affection of the ear and nose, we leave to the reader to decide.

Other chapters deal with progressive deafness, furuncle, post-nasal growths, the ear affections of infancy, etc., and are written with the same logical and scientific acumen so eminently characteristic of the book.

Nervenleiden und Erziehung (Neuropathy and Education). Von Prof. H. OPPENHEIM. Berlin: Williams and Norgate, 1899. Royal 8vo, pp. 56. Price 1s. 2d.

In this pamphlet Dr. Oppenheim discusses a subject which the physician in general practice should make himself well acquainted with, for specialists in neurology are not often consulted unless the child's deficiency is of a pronounced character. The professor lays down at length a scheme of treatment—dietetic, hygienic, and educational—for a child in whom there is a neurotic tendency. He observes that the susceptibility to be disagreeably affected by noises is a cardinal symptom of such an infirm temperament; healthy children do not dislike noises,

especially if they themselves are the cause of them. Dr. Oppenheim's recommendations are likely to be accepted in this country—an exciting diet, accustoming the child not to shrink from small discomforts, a country life if attainable, and much exercise in the open air. It is important that the child should have a good allowance of sleep. Everything which forms a character, which makes the will fast and strong, also serves to the maintenance of sound nerves. To make the child have a pleasure in work is a part of the education. Nervous children should be kept from premature vanities, and should not be encouraged to overwork themselves at school in order that their parents should boast that they keep at the head of the class. As the child gets older the dangers increase, and demand much greater care and circumspection. Anyone who has perplexities in dealing with the many difficult questions which are sure to arise in so difficult a charge will derive light from Dr. Oppenheim's well-written pamphlet.

Kliniske Forelaesninger over Nervesygdomme (Clinical Lectures on Nervous Diseases). Af Dr. KNUD PONTOPPIDAN. Copenhagen, 1898. Crown 8vo, pp. 158.

The author is known by his lectures in the Clinique of the Kommune Hospital of Copenhagen. Some of these he has already published in three volumes under the title of *Psychiatric Lectures and Studies*, clinical descriptions of the various forms of insanity, which have spread his reputation through Scandinavia and Germany. In the little book under review the professor deals with diseases of the nervous system. The first paper is on a case of softening of the brain complicated with double hemianopsia occurring in a man of seventy-one years of age. The second is on a case of cerebro-spinal meningitis in which a puncture was practised in the lumbar region of the spinal cord. The next paper is on cerebral apoplexy with accessory phenomena and hemiplegia. The fourth is on masked hysteria and hysterical deceit. The next is on a distressing case of cancer of the œsophagus and spinal cord in which there were paraplegia, superior dolorosa amyotrophica, and in the end complete paraplegia. The sixth is on some rare nervous puerperal affections. Dr. Pontoppidan then deals with paralysis of the medulla and tumour of the pons. The ninth is an essay upon traumatic lesions of the brain, and the book finishes with a lecture on hypochondria and the psychical treatment of the functional neuroses. One of the best features of these admirable lectures is the skilful elaboration of a diagnosis worked out upon a careful study of every symptom, taking advantage of all means of scientific observation. This book cannot fail to be highly instructive to the student of the more serious forms of diseases of the nervous system, and we should like to see it translated into English.

Part III.—Psychological Retrospect.

AMERICA.

By Dr. H. M. BANNISTER.

AN adequate review of the progress of psychiatry in America during the past two years is not exactly an easy task. The field is so wide, and the possible details so numerous, that any statement of the facts within reasonable compass is difficult, if not impracticable. From another point of view there is really not so much to write, and the discrimination of what will be of interest is a matter of some embarrassment. I shall therefore only note such matters as occur to me, and admit that my judgment may be at fault in some particulars.

The session of the Medico-Psychological Association at St. Louis, in 1898, was in all respects a success; its spirit was excellent, and the papers presented mainly of a superior order. The annual address by Dr. Eskridge pictured an ideal hospital for the insane, an ideal that, while in many respects it will be hard to realise, is altogether along the lines of the best thought in this direction. Another paper of special practical interest which aroused some discussion was that of Dr. Burr, giving his impressions of the county asylums of Wisconsin. As your readers are aware, there is a certain faction of philanthropists who advocate the county care of the insane on the Wisconsin plan, and this statement by a competent observer was of interest. It may not be necessary to say that his impressions were not the most favourable, that he found the care of the insane in these institutions far below that given them in the state asylums. The counties here it should be remembered are the minor divisions of the state, and it is only exceptional that their tax-paying capabilities are such as to enable them to support a properly equipped institution for the care and treatment of lunatics. It is only in Wisconsin that county care is preferred to state care for any considerable portion of the chronic insane, or where it is regarded as anything but a necessary evil in the lack of proper state accommodation. It has been, however, so vigorously advocated by the Wisconsin authorities, that it is sometimes proposed elsewhere in legislatures when the question of provision for the insane arises, but not so far with success. There is no doubt but that the county asylums of Wisconsin are a great improvement over many of the poor-houses and gaols, where the overflow from the asylums goes in many other states; but the claim that they furnish an ideal or even an approximately adequate provision is absurd.

The New York meeting of the Association last May was equally a success, judging from the testimony and reports of its proceedings, though the writer cannot personally testify, on account of unavoidable absence. The papers presented were generally of a high order, indicating earnest and well-directed work, which it may, I think, be said

is becoming more and more the rule in our better organised hospitals for the insane. There has never been any backwardness in adapting every practical discovery to its best utility or in originating new features of value by our American alienists ; but it is more within the past few years than ever before that they have so generally shown the tendency to contribute to the higher grade of scientific work in the specialty. Two new periodical publications started within the past two years are to some extent evidence of this fact. The *Archives of Neurology and Psycho-pathology*, issued by the New York State Laboratory, is one of these ; it is perhaps not entirely a new publication, being the successor of the *State Hospitals Bulletin*, but it has been completely changed, and is in every respect even more than its predecessor a high-class scientific publication. The other serial alluded to is the *Bulletin of the Ohio State Hospital for Epileptics*, which has thus far been the medium of the publication of the work of its pathologist, Dr. Ohmacher. His memoirs are thorough and scientific, though every one may not accept his views as to the lymphatic origin of so-called idiopathic epilepsy. Good work is also being done in other places and in other states, but the results have not such a special means of communication to the world, and are scattered through the general and special medical periodical literature of the country. It is a fact, not perhaps generally appreciated, that in all departments of medicine American workers are probably more familiar with European medical literature than foreigners are with American contributions. The tendency of American neurologists to overdo the foreign references in their articles was alluded to by Dr. Lloyd in his presidential address before the American Neurological Association, and the tendency is not confined altogether to the neurologists. It is a significant fact, however, in one respect ; if perhaps we do still have a little too much regard for the "made in Germany" trade-mark, our writers are beginning in all departments to keep themselves well informed not only in the contributions in their own language, but in all others. Owing to political appointments, etc., our alienists have been in times past somewhat behindhand in this respect, but we believe that this is yearly becoming less the fact.

We cannot record any notable advance in the therapeutics of mental diseases, other than to say that the ideal of a psychopathic hospital is more and more before our alienists, and that practical suggestions in this general direction are being tested in various quarters. The often discussed question of the curative effects of gynæcological treatment of insane women is being extensively written upon by one or two enthusiastic Canadian authorities, who report very striking results. This it will be remembered was one of the subjects strongly advocated by the late Dr. Robé, but since his death there have not been many, in this country at least, who have taken it up as vigorously as he did. It is probable that there are few alienists who do not recognise the right of the insane woman to be relieved of her infirmities ; but there are not so many who have had the encouraging experience from gynæcological surgery that is reported by the writers referred to, and there are many who think that there are possible valid objections to such treatment in

very many cases. On the whole the consensus of opinion in this country on this question, both among alienists and neurologists, based on their experience covering many years, is, I think, conservative rather than radical.

An interesting phenomenon from some psychological points of view, and one that may be mentioned here, is the recent growth of certain cults such as "Christian Science," "Divine Healing," etc. These of course are not special to this country, but they have a large freedom here and have developed accordingly. What will be their fate, whether they will die out, or, losing some of their salient features, settle down amongst the ruck of heterodox sects, is a question for the future. At present "Christian Science" at least has quite an extensive following, not confined by any means to the poorer classes. As an interesting fact bearing on their ideas as to science, I may mention the protests made by some of the adherents of "Mother Eddy" against the teaching of physiology in the public schools of Chicago; there being no such thing as pathology, there can, of course, be no physiology, and the youthful mind should not be burdened with such a useless and fictitious study. Possibly a few years from now we will be able to make a psychiatric study of the results of "Christian Science," "Divinism," and other kindred delusions, to say nothing of "Osteopathy" and the like.

The movement for the special care of epileptics, though not as active, is still in evidence, and it is probable that Illinois will before very long follow the examples of New York and Ohio in providing a special institution for their care. The subject was presented to the last legislature, but it takes time for movements of this kind to mature and overcome the timidity of economical legislators. Sooner or later, however, it is probable that such institutions supported by public funds will be common in this country, at least in the richer and older portion.

FRANCE.

By Dr. RÉNE SEMELAINÉ.

Secondary systematised insanity.—According to Dr. Anglade, of Toulouse, this disorder can be classified into—(1) Systematised insanity secondary to mania. This really has its basis in one or more delirious conceptions remaining fixed after one or several attacks of mania. They are often contradictory and do not unite, the ideas becoming separately systematised. These patients are generally megalomaniacs with blunted affective processes and some loss of moral and social sense. Memory and physical activity remain intact. Dementia, if it occurs, appears late. (2) Systematised insanity secondary to melancholia, which can be further divided into those depending upon some delirious idea surviving the symptoms of agitation and sometimes hallucinations; into those of a progressive systematised type, simulating paranoia, but in reality having relationship to neither melancholia nor the latter, being the

product of only a tendency on the part of the patient to these neuroses ; and also those post-melancholic states of an exclusively depressive character. The *délire des négations* is a prototype of such mental states. These subdivisions have characters in common occurring in persons of neurotic heredity, a prominent symptom being disorders of general sensibility, the result of morbid changes in the central and peripheral nervous system due perhaps to auto-intoxications. (3) Systematised insanity secondary to *folie à double forme*. (4) Systematised insanity secondary to neurosis and intoxication. Neurosis is a source of painful sensations, and may be the origin of insanity in predisposed persons. Intoxication affects the peripheral nervous system and awakes painful sensations which, wrongly interpreted, may produce systematised insanity. In the latter case the systematisation has a paranoiac taint. Dr. Régis, of Bordeaux, admits, with Dr. Anglade, the occurrence of post-maniacal and post-melancholic insanities, but thinks they might be divided into early and late, as they appear at the beginning or the end of a maniacal or melancholic attack. Their early appearance is more common in melancholia and the late in mania. The *délire des négations* is not always secondary. Melancholic persons commonly become *négateurs*. There are also *négateurs d'emblée* (primary), as instanced by a patient with visceral anæsthesia who denied the existence of his viscera without having passed through a period of melancholia. Such anæsthesia is generally the result of an auto-intoxication. Dr. Régis points out a secondary insanity which occurs in the course of mental confusion. One or two ideas arise which have a tendency to systematisation, and persist after the mental confusion has disappeared.

Polyneuritic psychosis.—Dr. Ballet, of Paris, includes under this term mental disorders having various clinical forms, the symptoms of which are generally associated with polyneuritis, having origin in a toxic or infective agent, which may influence the nervous system as a whole or in any part. There are three principal forms. The first is characterised by "recovery" during the day, a semi-insane state during the evening, with hallucinations at night. This variety does not, as a general rule, last more than three weeks, but not infrequently some delusions persist which are more or less systematised. The second form is characterised by primary mental confusion ; and the third might be called amnesic.

Early dementia of puberty.—The main features of this disorder are characterised by Dr. Christian by its appearance at the age of puberty, a variability of symptoms at first, impulsiveness, and a rapid or more and less complete and incurable dementia. The incubation period extends from infancy to puberty, and although there are no noteworthy symptoms, yet the onset of the disease can usually be recognised. The onset of active disease is marked in a few cases by a loss of interest in the child's surroundings, a loss of memory, an inability to learn lessons, headache, and a progressive weakening of general intelligence. Such cases are, however, rare. More commonly, the child suddenly complains of fatigue, becomes indolent, capricious and disobedient, absent-minded, forgetful, restless, irritable, and suffers from dizziness and headache. After some weeks hypochondriasis develops, his affections change, he finds fault with his brothers and sisters, is disregarding of, and imperti-

ment to his parents, and is generally unruly. Sometimes his ideas become ambitious and persecutory, but never systematised, and vanish with the failing of intellect. In all cases one finds impulsiveness. Later stages are characterised by dementia. Any improvement is more apparent than real; and the disease is of more or less long duration. If the acute symptoms disappear, the child remains intellectually weak and is quite useless in life. Attacks recur until the dementia is incurable. In many cases the physical health does not suffer any alteration, but they frequently have a senile appearance. The diagnosis of early dementia from imbecility and idiocy is very easy, the history being the main guiding point. The disease is incurable, but, according to Dr. Christian, it may possibly be preventable.

Acromegaly in an epileptic dement.—M. Farnarier, of Paris, reports the case of a man, aged 48, who had suffered epileptic fits from puberty, and who was admitted to an asylum twenty-eight years ago. At present he is demented and presents the typical features of acromegaly. The nose, cheek-bones, jaws, tongue, penis, and feet are enlarged, the hands *en battoir* (racket), he has cervico-dorsal kyphosis and ocular disorders. According to the author, a neuro-arthritis or an insane heredity predisposes to acromegaly. The disease is due to a disturbance of the glands of internal secretion, which react on an unstable nervous system, producing nervous or mental symptoms according to predisposition, but in all cases depending upon a special form of degeneration.

A case of general paralysis with hallucinations.—M. Truelle, of Paris, describes a female case of general paralysis, in the course of which hallucinations of sight and hearing appeared. Her mother had suffered from melancholia with refusal of food and suicidal proclivities. At the age of thirty-seven she began to suffer from headache and dizziness. Six months ago her memory failed, she became incoherent, began to drink and to be extravagant in money matters. For six weeks sleep has been impaired, she started suddenly and began to shout, and saw murders, blood, snakes, wolves, and rabbits. She had no feeling that these imaginary animals hurt her, they merely ran about her; but sometimes she suffered great apprehension. Then aural hallucinations appeared. She heard a small voice giving her evil advice, recognising in the voice the tones of a man who lived with her many years ago, and who robbed her of her money. She heard commands to kill her husband, to poison herself, to jump out of the window, etc. At the same time confused ideas of persecution supervened. Lately, the voice commanded her to steal, and she did so. This resulted in her arrest, and she was sent to St. Anne's Asylum. On her admission she showed altered speech, irregular pupils, fumbling movements of the fingers, fine tremors of the tongue, amnesia, missed or cut-short words and syllables when writing. She was careless, irresponsible, and self-satisfied. Visual hallucinations seemed to have disappeared, but aural perversions persist.

Juvenile paralysis and epilepsy.—Dr. Toulouse, of Paris, reports the case of a girl, æt. 19, who was sent to the Asylum of Villejuif about the latter end of December, 1897, as a case of mental debility and epilepsy. She was agitated, incoherent, confused, violent, and refused her food. Next day she had an attack characterised by dizziness, sudden pallor,

and syncope. A few days afterwards she had a genuine epileptic fit. These symptoms occurred for twelve days, until one morning she seemed to awake, as if from a dream, and asked what had happened, as she could remember nothing. Her mother said that her daughter had suffered from fits since the age of eleven; the first following an attempt at rape by her step-father. For the last two years the fits had been more or less followed by the series of events noted since admission.

During her stay at the asylum she had about three seizures a month. At the beginning of March, 1898, there occurred an excited attempt at suicide, with hallucinations of sight and hearing. After some days she was better again. In the May following another period of excitement was noted, the patient remaining confused, with speech disturbance and amnesia. The symptoms rapidly increased, and Dr. Toulouse came to the conclusion that he was dealing with a case of general paralysis, which was afterwards confirmed by a post-mortem examination.

GERMANY.

By Dr. J. BRESLER.

The evolution of psychiatry in Germany, as in other countries, is by no means rapid; yet the year 1899 can be looked back upon with satisfaction. The year opened well with what was practically an act of benevolence on the part of the Lunacy Board of the Province of Brandenburg. It decided that for the future, both medical and administrative officers should include in their period of service qualifying for a pension the years they had formerly spent in private asylums, the work in the latter being practically identical with that they afterwards engaged in under public bodies.

The "After-care Association" of the Grand Duchy of Hesse, founded by Dr. Ludwig in Heppenheim twenty-five years ago, has since then been a very active factor in the progress of lunacy administration in Germany. A considerable raising of the pay of attendants is one of its latest accomplishments, besides a Grand Ducal order that attendants, male and female, after six years' good service shall receive a donation of 1000 marks, and that male attendants, after such service, can be employed by the State or railway administration in inferior offices.

The question of the care of criminal lunatics has been to the fore several times this year. The Prussian Government has acknowledged the necessity for a proper care of the criminal with mental disturbances while undergoing imprisonment, but declines to take any further steps in the matter. The asylums must therefore continue to receive criminal lunatics; and it is to be hoped that the lunacy boards will soon resolve upon erecting special institutions for this class of patients. A commencement has already been made at Düren, in Rheinland.

The "Association for combating the Abuse of Alcoholic Drinks" at Hildesheim, repeated its motion before Imperial Parliament for

special legislation, but was not successful. The deputies paid but little attention to it, and referred the question to the Government for consideration. As regards another matter, a true advance was made. It was decided that, for the future, no individual should be licensed to hold a private asylum but a legally qualified medical man with sufficient experience in lunacy. A phenomenon, illustrating the improvement of public opinion as regards lunacy, occurred recently in the Wurtemberg Parliament. In former years, there has been a tendency for members to dilate upon the unjustifiable detention of sane people in asylums, and to make charges of bad treatment, etc. In these days it is much more common, on the part of the majority of those who speak on the subject, to accuse us of discharging patients who are not sufficiently recovered.

The year under review saw the birth of a new association for alienists, known as the "Association of Alienists of Northern Germany," which held its first meeting at Schleswig, on August 3rd. The meetings are to be held annually.

All the German Universities have now psychiatric clinics with the exception of the University of Kiel. It is satisfactory to note that the new "Clinical Asylum," in connection with the latter, is fast reaching completion.

The Inaugural Ceremony of the Uchtspringe Asylum occurred in December. This hospital for the treatment of the insane, epileptic, and feeble-minded was built under the direction of its medical superintendent, Dr. Alt, and is provided with all possible appliances for practical psychiatry, together with excellent appointments ensuring the personal comforts of its patients.

On April 15th, at Görlitz, death removed from our midst one of our greatest alienists in the person of Dr. Karl Ludwig Kahlbaum, at the age of 70. It is needless to ask why he occupied such a high place in our estimation. To him we are indebted for the clinical images of several well-recognised mental diseases. His two elder sons are following in his footsteps, and have taken over the asylum formerly held by him, and now famous in the annals of psychiatry.

The Annual Meeting of the Association of German Alienists was held at Halle on April 21st and 22nd. Great attention was given to a report by Prof. Wottenberg (Hamburg) upon the degree of responsibility in those afflicted with mental disease, and to a paper by Dr. Hoche (Strasburg) on the present position of the neuron theory. The former was followed by an interesting discussion upon the so-called "diminished" responsibility in mental disease. It was generally accepted that there are many cases in which responsibility is not entirely abrogated, but only diminished, as, for example, in epilepsy, hysteria, neurasthenia, sexual perversion, eccentricity, etc. The practical side of the question, both as regards those wholly responsible and those only partially responsible, was acknowledged to be a difficult problem. It was generally conceded, however, that any punishment must be qualitative, not quantitative, with all except those wholly responsible. Prof. Wottenberg feared, with reason, that the occurrence of diminished responsibility having been conceded, it would often happen that those

wholly responsible would be considered and treated as if only partially so. A proposition by Dr. Siemerling (Tübingen) was adopted, recommending that full information regarding the practical application of the doctrine of diminished responsibility be collected and presented to the Association. It cannot be said, however, that any real progress was made in the matter. Much attention was also given to a paper by Dr. Werner (Owinsk) on *The Public Asylum with regard to its Size and Administration*. He advocated that no new asylum should be built for more than 600 patients; that the director should give the fruits of his long experience to the actual treatment of each patient individually; and that there should be a medical officer for each 100 of the latter. The Committee of the Association awarded a prize of 500 marks to Dr. Scholz (Waldbruel), one of seven competitors, for the best Handbook for Attendants. The founder of modern lunacy, Dr. Johann Christian Reil, who died in 1813, having lived and worked in Halle, where the meeting was held, Dr. Alt proposed to do honour to his memory, by granting a sum of 1000 marks from the Treasury of the Association for the renovation of his grave, which still exists, but in bad condition, on the so-called Reilsberg of Halle.

BELGIUM.

By Dr. JULES MOREL.

The past year has been marked by the very considerable amount of attention given to the study of alcoholism. Certain of these papers are of importance, and I send the following notes:

The responsibility of the alcoholic.—Dr. de Boeck devotes his presidential address to the consideration of those cases of acute alcoholism with delirium held to be irresponsible in Belgium, France, Germany, and England. His conclusions are formulated on the basis of scientific, moral, and social studies. Having referred to the opinions of Aristotle, the Romans, and St. Thomas Aquinas, who agreed that accidental drunkenness with loss of consciousness is not a condition involving responsibility, while voluntary drunkenness, consequent on neglect or carelessness, is a condition involving responsibility, Dr. de Boeck gave an account of the German code, which makes a distinction between drunkards who retain or lose consciousness. When consciousness is affected the accused person is held partially responsible; when it is completely lost he is held wholly irresponsible. Dr. de Boeck believes that it is more reasonable to try to establish a scientific distinction between a state of health (implying responsibility) and a state of disease (implying irresponsibility); but he recognises the difficulty of defining these conditions and of classifying intermediate cases, and therefore admits the doctrine of partial responsibility. As the medical expert appointed by the judge remains a physician, the accused must be a

diseased person. As alcoholism is so common it is almost impossible for the public to regard its victims as diseased persons. The question must be studied in view of the reaction of the individual to alcohol—whether habitual or not, whether extra-cerebral abnormal factors interfere with it or not. Having related two very interesting cases of pathological inebriety, Dr. de Boeck concludes that, as a necessary condition of this state, the superior psychological centres—the centres of inhibition—of the person must be weakened and degraded, and that his cortical degradation is congenital, hereditary, or acquired. Still, the task of the expert in forming an opinion is very difficult, owing to the uncertainty of the feebly marked symptoms; but it would be rendered easier if there were special legislation for habitual drunkards, and if notification of irresponsibility were followed by detention in special institutions.

The influence of alcohol on mental work.—Dr. de Boeck, referring to the work of Kräpelin and the deductions of Schmiedeberg and Bunge, shows that the exciting action of alcohol is but temporary, that it is soon followed by paralysis, and that it produces a qualitative and quantitative alteration of the higher functions of the brain, while setting free the lower centres. These observations very well explain the phenomena of inebriety. I think that Dr. de Boeck has very ably reconciled contradictory opinions arising from the objections made to Kräpelin having made his experiments with too large doses, and Warren, who, on the contrary, used small quantities of alcohol.

A case of alcoholic paranoia.—This case was reported by Dr. Séaux, and was characterised by the existence of no other cause than alcoholic intoxication. Also by the fact that the insanity was preceded by manifest alcoholic symptoms, which began suddenly and were accompanied by a confusional state; and, above all, there were special characteristics of the mental symptoms—the delusions and the hallucinations of the patient were intimately connected with the idea of conjugal infidelity, which, together with jealousy, is so frequent with alcoholics. Although it may be doubted if this kind of case should be included in the clinical conception of paranoia, Krafft-Ebing has described similar cases under the title of alcoholic paranoia. An insanity of alcoholic origin, beginning at forty-five years of age, characterised by various hallucinations, ushered in by a confusional state, and tending to dementia in less than two years, can hardly be classified as paranoia, even if delusions of persecution be persistent.

Alcoholism from the medico-legal point of view.—Dr. Lentz considers this subject from the point of view of legal responsibility and from the point of view of detention of alcoholics in institutions. He makes a distinction between the habitual drunkard and the alcoholised. In the latter class alcohol has caused pathological manifestations which are variable but characteristic. The habitual drunkard he considers to be neither alcoholised nor intoxicated. He has, of course, a propensity to drink, and may remain an habitual drunkard all his life. He suffers from a moral disorder. Dr. Lentz, of course, admits there are undefined cases existing between the pathological inebriate and the habitual drunkard which are the despair of the physician. In regard

to responsibility, Dr. Lentz considers three classes of drunkards: first, habitual drunkards; second, the alcoholics; and third, the pseudo-alcoholics. There is no question as to the legal responsibility of habitual drunkards who show no trace of intoxication, but Dr. Lentz reminds us that these persons are frequently degenerated, and that they may be considered as pseudo-alcoholised if the alcohol gives rise to abnormal reactions. As regards the second class, they may be divided into two sections: first, with regard to acute intoxication (drunkenness), if irresponsibility is admitted, it can be but partial at first, although it may progressively increase. In these cases there are modifications of perceptions, emotional reactions, and voluntary reflexes. Consciousness and will being more or less dependent on moral dispositions and organic manifestations, and being altered by drunkenness, responsibility must vary in proportion. Dr. Lentz considers that those persons whose drunkenness is characterised by dangerous impulsive acts are irresponsible. With regard to chronic alcoholism marked by progressive decay of the mental faculties, he holds that responsibility is commensurate with the degree of the decay. It is often difficult to appreciate the degree of responsibility, and the examination of the individual and the circumstances must be very searching. Those alcoholic patients suffering from obvious insanity present no difficulty, but in the pseudo-alcoholic state the morbid forms are difficult to recognise. The alcohol is, no doubt, the cause of the disease, but there is also a certain degree of moral degeneration. The diagnosis may be impossible. Dr. Lentz distinguishes various forms—maniacal, somnambulistic, etc.

In considering those cases of alcoholism in which the brain is affected and the treatment is of a therapeutical nature, Dr. Lentz is of opinion that the ordinary asylums of the country are suitable, provided that these patients are separated from the others, because a different moral regimen is necessary. He would provide special asylums only in great centres of population, not for the acute cases who are more suitable for general hospitals, but for the vicious drunkards who are not insane. Dr. Lentz asserts that those special institutions, already erected at great expense, have not as yet produced brilliant results. As drunkards require moral rather than medical attention, he suggests the erection of a special asylum on private initiative. The value of the results being insufficient from a social point of view is another reason against the detention of inebriates in asylums for the insane. The enforced temperance of ordinary prisoners during their detention does not prevent their return to drunkenness when they regain their freedom.

Notwithstanding Dr. Lentz concludes that the State ought to interfere, because it is beyond doubt that alcohol is not only noxious to drunkards, but also to society.

HOLLAND.

By Dr. F. M. COWAN.

Long as the teaching of psychological medicine may have been neglected, there are signs of a tendency at the present period to make up for lost time. The Universities of Leyden and Amsterdam have their chairs, and now it is proposed to create a professorship at Utrecht. It has been sad to see how many physicians looked upon mental diseases as a class which stood entirely outside the pale of medicine. And sadder still to see how in some criminal cases matters were bungled by incompetent medical experts.

A very striking instance may be mentioned in a "cause célèbre." In June, 1898, a retired captain of artillery, V—, shot his wife and a friend of hers in the street. After firing his revolver he took a bottle out of his pocket, and swallowed the contents. Having been arrested, he was taken to the nearest police station, where he told the officers he had swallowed strychnine, and as spasms set in he was removed to the town hospital. After a stay of five days the head physician certified to his insanity and wished to have him sent to an asylum. The tribunal refused the necessary authorisation, and he was conveyed to prison. Two medical experts were appointed, Dr. A. Long and Dr. L. Rùth. These gentlemen drew the following conclusions :

"The accused has symptoms of nervous disease, which place him under the normal level. Disturbances exist in the psychical sphere as a consequence of degeneracy. The accused is only partially responsible for the deed."

Whether a free will does or does not exist is not a problem for a medico-legal expert to solve, nor does the judge require him to give his opinion on that knotty point. What is wanted is a clear and distinct answer to the question, is the plaintiff diseased, or is he not? Whatever the answer may be, the judge has to pass sentence. What makes matters worse is that some physicians seem to be believers in a fraction of a will, and found a medical verdict upon this preposterous hypothesis.

The tribunal appointed two other experts. These first made an attempt to have the culprit removed to an asylum for observation. They urged that a prison was the very worst place for observing a person suspected of insanity. This request was refused, but their second demand, to have an experienced nurse to observe the prisoner, was granted. As this was the first time that such an important measure was taken, viz. that a nurse was appointed to observe and attend upon a doubtful case in jail, it is only fair to remark that this humane and practical step was carried out chiefly by the influence of W. van Neusch, LL.D., the President of the Criminal Chamber.

The new experts collected a large number of facts from witnesses, physicians, and last, but not least, from an extensive diary which the unfortunate man had been keeping for the last two years.

Their conclusion was that V— was insane, but that they hesitated to classify his insanity.

I here wish to observe that V— had suffered from epileptic fits till his fourteenth year, and considering his impulsive and detestable temper it is very likely that he was an insane epileptic.

The report was put into the hands of the first experts, and it was asked what they had to say to it. And then appeared an answer so full of strange assertions and foolish arguments that Carlyle would have styled it an instance of hide-bound stupidity.

It was argued that a diagnosis of "insanity" without specifying the form of disease was no diagnosis at all. This may be called a proper answer for a drill corporal—what is not in the regulations does not exist. The gentlemen seem not to be aware that a faultless classification in mental medicine has not yet been obtained; and that existing classifications have been made by mere mortals and are liable to endless modifications; and that hundreds of forms of insanity are still to be classed.

Next it was said that the culprit had shammed; this pitiable argument was adduced as in their superficial examination they had omitted properly to test the plaintiff's memory, and probably they were entirely ignorant of all that had been written about epilepsy and allied diseases during the last thirty years.

It is a pity that space will not allow a thorough criticism of this medico-legal report, which may be called a model of how such a paper should not be made. If it were not for the highly important interests concerned in the case, it might be called a medical comedy.

Dr. L. Rùth indicated that the patient should be placed in a criminal asylum. However, as such an asylum does not exist in Holland, it is rather difficult to see where he should have been cared for until it was built.

A new asylum has been opened at the small town of Grave. It is meant to make it the nucleus for a colony like Gheel. To begin with, one hundred quiet women were admitted. It is a pity that the experiment was not made with some fifty quiet patients who had been resident at Gheel, and who were accustomed to live in family. If the plan succeeds, as it certainly must, a great advance in the care of the demented may be said to have been made. As population increases, so does the number of those who are unable to fight the battle of life, and who have to be kept from being trampled upon in the struggle. In proportion as their number increases larger demands are made upon the public funds for the building of asylums. Asylums might be largely relieved of the care of the demented and harmless patients. Besides, the Gheel system might be improved, and a closer relation might be maintained between the asylum and the patients sojourning in the town.

Not only physicians, but many leading lawyers are beginning to urge the necessity of an entire revision of our penal code. Punishment should not be a sort of codified revenge, but should be therapeutic in its effects. Society has a right to be protected from the ferocious actions of the insane, but the insane person should be treated as a patient,

and not be plagued or annoyed. However, as Maudsley says, "the gentle advent of truth takes a long time."

Arrangements are being made for the Congress of Criminal Anthropology, which is to meet next year at Amsterdam, and to which leading men in medicine and law from all countries are to be invited.

DENMARK.

By Dr. FRIIS.

In this country during the past year there have been no changes or events specially calling for notice in the institutions for the insane. Psychological literature has also been very scarce, and there has been published but one work, which is, however, of the first order, viz. :

Contributions to the Physiology of Enjoyment as a Basis for a Rational Aesthetic, by C. Lange, Copenhagen. (225 pages.) This work of the well-known Danish specialist in nervous diseases attempts to found conditions and phenomena, which hitherto have been regarded as purely intellectual, completely mental, on the basis of natural science, and to explain them in a complete physiological manner, following the common laws of physiology. It is so full of original thoughts and views, its remarks are so appropriate, and the whole style is so brilliant, that the mere reading is an intellectual pleasure. Of course much of its contents are as yet hypothetical, and much can perhaps also be seen from other points of view ; but the author himself asks that it may only be regarded as an attempt, and that his intention has been rather to give indications than to draw definite conclusions. A complete translation in the principal European languages would be well deserved ; but I shall at present be content to give a short *résumé* of its contents.

This work is, in some degree, a continuation of the same author's book on emotion, as it specially treats of the causes of emotions and sentiments, in so far as they can be elucidated by the mode of action of the means of enjoyment. The book is in two grand divisions—the means of enjoyment in general, and the arts as a special means of enjoyment. The latter part is far the more extensive, and gives the book its essential character.

The author defines enjoyment as the emotion one seeks to obtain ; and as a criterion that a sentiment is an enjoyment to any one is the fact that he seeks it. Our endeavour to obtain enjoyments arises from the want of an emotion or a sentiment, which the enjoyment tends to produce. But as emotions, as shown in his previous work, are vaso-motor phenomena due to constrictions or dilatations of the blood-vessels, it is, of course, those we try to produce which give us pleasurable sensations ; the factors which can cause them are, therefore, means of enjoyment. But as not every emotion is a delight to us, every means which can induce these is not of itself a means of enjoyment ; and the

author therefore studies the different emotions (joy, anger, horror, etc.) with regard to their value as enjoyments. Of the greatest importance are those emotions which are caused by a dilatation of the blood-vessels, and next the joy of those which are caused by a constriction, as, for example, the enjoyment of the feeling of being kept in suspense. Ecstasy is not quite the same as the other emotions, but is the purest and most intense—as it were the abstract enjoyment, undoubtedly the highest of the pleasurable sensations which the human organism can experience. A lower degree of ecstasy is admiration, perhaps the most important of the sensations, because it is so commonplace; its objects are to be found in abundance in the surrounding world, and man is also capable of creating them himself in arts; admiration, therefore, is of great importance to artistic enjoyments, which the author treats of at length in the second division of the book. The cause of the different duration of the different emotions can also be explained physiologically; so can the long protraction of joy be explained as being due to a paralysis of the muscles of the blood-vessels, which many endure; while anger, sorrow, etc., perhaps are owing to spasms, which can but last for a time, and then are followed by weariness.

Only one emotion, disappointment, never seems to show itself as a feeling of enjoyment, and the physiological explanation is perhaps to be sought in its being accompanied by a feeling of atony.

The means of enjoyment are to be divided into the three main groups of (1) those which act by nervous paths, (2) those which act through the chemical constituents of the blood, and (3) those which influence the circulation of the blood mechanically.

In the first group the impulses are transmitted to the vaso-motor cells, either directly, by the nerves of sensation, or indirectly, through the brain, by a "psychical" process; to this belong the sensations arising from alterations of temperature, smelling substances, objects of taste, colours, and sounds. By the first three the enjoyment is owing to single sensations, by the two latter there is required a co-operation of sensations. National differences and racial characteristics are of great importance; the inhabitant of the south is characterised by duller senses, and therefore requires stronger impressions than the inhabitant of the north; the less cultivated than the educated, etc.

The means of enjoyment of the second group as a rule enter the body through the alimentary canal, from which they pass into the blood circulation and influence the vaso-motor centres, *e. g.* coffee, liquors, etc. The feeling we hope to obtain by these is principally joyful.

The third class, the mechanical means, is very simple in its form. It is obtained by strong exercises, especially dances, in which the children of nature, quite instinctively, show their need of enjoyment. The usual aim of the dance is pleasure; but anger can, as is well known, also be aroused by the war-dances, while ecstasy is promoted by religious dances.

Sometimes it may seem as if enjoyments can be aroused without any emotional object, but this is perhaps never the case, since slight states of emotion often may pass unnoticed, even by the individual concerned.

Besides the different means of enjoyments quoted there are, however, two conditions which are of the greatest importance in producing pleasure, namely, *change* and *sympathy*. The need of change arises from two different conditions, since every means of enjoyment by continued use loses its effect, and every enjoyment itself at length becomes tiresome and is succeeded by indifference or even dislike. Both these consequences are, however, temporary, and disappear; but they in no way hinder other impressions from producing enjoyment, which therefore can be continued by changing the means employed. Physiologically, however, they are quite different conditions; the first is owing to the perceptive nervous elements, the latter to the vaso-motor centre. Every protracted sensation by continuance becomes less strong, as the perceptive nervous cells become less impressionable, and therefore the impulse to the centre and the resulting emotion is also lessened. Weariness, on the contrary, is owing to a too continuous vaso-motor excitation, by which the muscular coat of the vessels is exhausted, the vessels are paralysed, and the state of emotion disappears. Exhaustion can be retarded for some time by a stronger irritation, but at last it will surely occur. It is, however, not sufficient to procure a change; it must also be used methodically, and hence the reason that "the rhythmical change" is so important in art, perhaps because in it we have an easy and practicable means of obtaining enjoyments by impressions which without it would not be agreeable or productive of effect. The effect of the change depends on its intensity, *i. e.* the difference in degree between the alternating impressions, and on its rapidity; the nature of the rhythm is also evidently important because of the effect. As strengthening the enjoyment of change and rhythm we have "surprise"—a sudden breach of rhythm—and its resulting effect. In poetry this is "comic art."

The other condition of great importance in the psychology of enjoyments, especially those of the arts, is sympathy, in the original meaning of this word. It is well known that a sympathetic transference of emotions from one individual to another may happen, at least in those of which physiological signs are marked or easily visible. It is, however, but a transference of the pure bodily signs of emotion, for if passion has no visible expression, it has no chance of acting on those around, and a feigned passion is even as contagious as a real one. This fact is from a physiological view very curious and very obscure, but by no means exceptional; it is only a single feature of a psychophysiological phenomenon of wide bearing, the instinctive involuntary impulse every one receives when observing the movement of another to imitate it, or when hearing a sound to repeat it. More intricate is the process when the sympathy is aroused by words spoken or written, as in poetry, for here of course it is necessary that there be left in the memory the image corresponding to the words.

As art, *i. e.* a production of art, the author defines every human work, either a thing or a performance, arising from a conscious effort to produce enjoyment through the ear or eye. Only in this way do we get "spiritual" enjoyment; therefore, *e. g.*, cookery cannot be classed among the arts. The pleasure which it is the object of art to procure

is brought about partly directly by the immediate effect of the sensations on the vaso-motor centre, partly by associations of ideas and reminiscences aroused in us ; but these always imply that the cerebral cells have undergone an alteration, that they have received an impression. These two kinds of artistic enjoyment are from an æsthetic point of view to be kept distinct from each other, to get a clear understanding of the real state of the case. The first kind the author calls the *absolute* artistic enjoyment, being immediate, with equal validity for all, like impressions of smell or taste, and only for these can laws be given, and only these can be debated scientifically. The latter, the *individual*, has only relation to the individual himself, and cannot be inquired into.

Of great importance to artistic enjoyment is *admiration* arising from the feeling or consciousness that some difficulty has been surmounted, and often this feeling alone procures the whole enjoyment. The importance of admiration, therefore, is more prominent in the valuation of art the greater the knowledge of art is. On the contrary, admiration passes away when the work gets common, *i. e.* when the artist has obtained his result too easily, and the thing has been heard or seen before.

Besides admiration, the production of change and sympathy, as previously stated, is the other main factor in evolving artistic enjoyment. There are many instances from the different branches of art—decoration, architecture, sculpture, painting, poetry, and dramatic art,—and from the different ages and schools of the arts in question, which are discussed at length. The author makes out that there is no necessity for taking into consideration other elements than the three named. Change and sympathy are then the proper means of enjoyment, admiration itself is a peculiar kind of enjoyment. These three factors have the power of producing the physiological vaso-motor phenomena of which the feeling of enjoyment is the result, and therefore from the side of physiology there is nothing which should prevent us from accepting them as general means to the production of artistic enjoyment. It is therefore easily intelligible, that men quite instinctively have recourse to these three expedients to artificially satisfy their need of enjoyment, which are always active, when the natural means were insufficient. The results are the productions which, not on account of the homogeneousness of their nature, but owing to their common effect, are comprised under a single appellation and called art. The rational definition of art, therefore, ought to be, that it is the comprehension of those human works which by change, by sympathy, and by producing admiration procure enjoyment—a sober, but perhaps a more intelligible and useful definition than the usual one.

“*Mental Diseases*” is a very good popular book by Dr. C. Geill, written to clear up the ideas of the laity on the causes and real nature of these diseases and their proper treatment. Unhappily, however, it is not to be expected that a single attempt will be sufficient to do what is intended ; so that the prejudices—well known in this country—against asylums and alienists, which have shown themselves in clamour against the latter, should be allayed, and that the progress of the clerical movement, the aim of which may be traced to a desire to withdraw the treatment of

the insane from physicians, may be hindered. For alienists the book contains nothing new.

ASYLUM REPORTS, 1898-9.

English County and Borough Asylums.

Berkshire.—Dr. Murdoch writes :

As bearing on the question of heredity, the following may be cited. Two female patients, each having a family of four, were admitted suffering from a degree of excitement accompanying childbirth, but in whom the primary mental state was congenital defect. Is it to be wondered at that such an increasing tax is put upon the ratepayers for the providing of asylum accommodation when the marriage of such persons is so prevalent ?

Birmingham (Winson Green).—Dr. Whitcombe is of opinion, from facts such as those below, that legislation (beyond the new Inebriate Act) must soon become an urgent question.

In my report last year I stated that the proportion of drink cases during that year (1897) was the greatest that had come under my observation in one year during twenty-eight years of asylum experience, and although in that year the number reached the extraordinary proportion of 24·4 per cent. on the male, and 24·8 per cent. on the female admissions, this year I have to record an increased proportion from this cause in males of 14·5 per cent. upon the previous year, the number admitted being ninety-three, or 38·9 per cent. of the total male admissions.

Derby Borough.—The subjoined extract from Dr. Macphail's report gives point to a fear, which was expressed by some on the institution of training and certification of attendants, that the certificate might be found to be a valuable possession, enabling the holders to more easily obtain private nursing, to the loss of the asylum which trained them. That there is such a tendency is shown by other reports from time to time. But notwithstanding the inconvenience caused, these resignations supply the most valid argument in favour of pensions. Why, it may be asked, should valuable services be lost to the trainers when they could be retained by a proper superannuation scheme ?

There have been a great many changes among the nursing staff. Last year the changes affected the older members, and not, as is usually the case, the new-comers. No fewer than nine holders of the Medico-Psychological Nursing Certificate resigned, three nurses to be married, one attendant to take up other work, and four attendants and one nurse to engage in private nursing.

Dorsetshire.—Dr. Macdonald notes that the relative proportion of cases of mania to those of melancholia are 7 to 1 in males and 6 to 1 in the females admitted in 1898. The Commissioners' quinquennial tables give the proportions for all England and Wales as 48 to 23 for males and 48 to 32 for females. He finds, too, that this very high proportion of mania is not accompanied by the higher recovery rate usually attached to it, as in many cases it was accompanied by confusion and other evidences of supervening dementia. Dr. Macdonald also notes a lower admission rate.

Glamorgan.—This asylum draws its population from an area where strikes are not infrequent, and are severely felt. Their influence on the causation of insanity has been fully noted from time to time, not only by Dr. Pringle, but also by Dr. Yellowlees, his predecessor. The following extract is of interest :

In accordance with my experience of former strikes of colliers and ironworkers, I expected a great decrease in the male admissions of the year, but, strange to say, whilst this has not been the case—the numbers being quite up to the average of recent years—a curious and interesting change in the *causation* of the cases was observable, namely, whilst in 1897 there were 102 males admitted whose insanity was ascribed to alcoholic intemperance, the number last year was only 56, whereas cases due to *inherited* insanity increased from 61 to 71, owing probably to unusual anxiety, worry, and poverty developing the disease in those who had the least resistive power. There was also an increase amongst the males of cases due to domestic trouble and adverse circumstances, but, strange to say, no such changes as the above were found amongst the females.

Isle of Wight.—Dr. Harold Shaw has reason to complain heavily of the provision of those elements in everyday life which test the proper planning and building of a new asylum. The water is short and bad, the drainage has been scamped, and the electric light is unsatisfactory. All these matters are more or less preventable, and add seriously to the worry of a superintendent's life, as well as to the burden on the rate-payers. And yet it is almost impossible to bring any one to account.

Salop.—We note that this county is going to follow the example of Prestwich, and avail itself of Section 26 of the Lunacy Act for twenty-five male patients to be placed in the Forden Union Workhouse.

Stafford (Burntwood).—In order to further provide for the disposal of the asylum sewage, a Garfield coal-filter is being provided. It will be interesting to know how it works.

Dr. Spence notes with satisfaction the loyalty and cheerfulness with which the attendants (the male especially) have accepted the difficulties and discomforts brought about by the heavy building operations carried on throughout the year. These necessitated connecting up the old parts with the new at no less than twenty-five different points, but happily without any accident.

Sunderland (Borough).—The new teaching contained in the extract below was defended by Drs. Elkins and Middlemass at the Annual Meeting this year, as will be found in another part of the JOURNAL. It may be that our former practice is all wrong, but extensive trials in many places will be required to establish the fact.

The asylum was also visited by a number of other persons, the chief object of their interest being the night supervision and distribution of the patients. These were instituted by Dr. Elkins, and have been found to be very successful. Their main features consist in placing only quiet and well-behaved patients in single rooms. Noisy, chattering, and destructive ones sleep in supervised dormitories, and, as a result of this plan, it is found that they are much less noisy, sleep better, and that destruction of clothing and bedding is practically unknown. Wet and dirty habits are also much better corrected, and, altogether, the system is very much to be commended.

Sussex (East).—The county is going to leave the county borough of Brighton in possession of its old asylum at Haywards Heath, and is building for itself a large new asylum near Hailsham. This will not be

ready for some years to come, and in the meantime temporary iron buildings have been erected at Haywards Heath.

Sussex (West).—We have before us the first annual report of the new asylum at Chichester. It is a very full one, and Dr. Kidd has earned the thanks of all future planners and promoters of new asylums by giving a detailed account of its construction, methods of supplying light, air, heat, water, etc. The full plans supplied with the report will be of great service to those who cannot obtain them in other ways.

It is disconcerting to note that though the present accommodation is for 450 (prepared for 600), yet at the commencement of 1899 there were 412 patients belonging to the county. We hear rumours of further building beyond the first limit of 600.

We note that Dr. Kidd has instituted the statistical tables of the Association in all their strictness.

Scottish District Asylums.

Fife and Kinross.—In spite of the large addition to the accommodation by the hospital opened only a year or two ago, want of room is proclaiming itself, and Dr. Turnbull is calling for more beds. The admissions have risen in alarming proportion in the last few years.

Glasgow District.—Last year we noted the inception of the Brabazon scheme. It seems to work well.

To give some variety of employment, and to test the possibility of employing the unemployed above referred to, the Brabazon Society of ladies offered their services in the beginning of 1898, and have since been holding weekly meetings of instruction to an average of nearly fifty patients, with much success. It is not the more intelligent only that derive benefit and have pleasure in the work, but in the duller some dormant or latent intellectual power may be awakened.

Inverness.—No less than 32 per cent. of the admissions were re-admissions, and these account for the great total increase of the year. Of these ten came for the fourth, three for the fifth, one for the sixth, one for the seventh, and two for the eighth time. Of the 179 admissions 15 per cent. had physical signs of tuberculosis.

Since his appointment Dr. Keay has done much in improving the asylum, and we congratulate him on the acknowledgments made by Sir John Sibbald.

It is very satisfactory to find that the male hospital promises to be not only a considerable addition to the capacity of the institution, but that it also constitutes a very important improvement. It is admirably suited to its purpose, and will enable the patients to be much more efficiently treated than has hitherto been possible. When all the improvements and additions that are either in progress, or soon to be undertaken, are completed, the asylum will be altogether changed in character from what it used to be, and it may be confidently expected that it will compare favourably with other district asylums. The alterations that have already been carried out have given a much greater appearance of comfort to the wards.

Holders of the Association certificate are allowed £2 extra wages.

Midlothian and Peebles District.—We regret to find that the Association's statistical tables are not in use at this asylum.

Scottish Royal Asylums.

Aberdeen.—Steps are being taken to cast off the pauper patients of Aberdeen City, it being found difficult to provide for all classes together.

Edinburgh.—Dr. Clouston prophesies that the increase in asylum population will continue for many years to come, though not from positive increase of insanity. For this he looks to increasing realisation of the benefit and convenience of hospitals for the insane, and also, *inter alia*, to increased intolerance in families of the inconveniences of insanity. But these have been going on for years, and one would fancy that the margin between declared and undeclared insanity attributable to such agencies had almost been absorbed by now.

In stating the fact that the death rate at Morningside, which had been 8·8 per cent. on average residence from 1880 to 1889, rose in 1890 to 13·3, and has been 11·9 on the average for the last nine years, Dr. Clouston shows that for the three years 1890–92 the general death rate for Scotland from diseases of the nervous system showed a distinct increase, which was reflected at Morningside by increased general paralysis, brain softening, etc. But Dr. Clouston cannot explain the increase persisting in his death rate since that time, influenza having also become much less fatal. Tuberculosis accounts for some of the increase, but not all. A reorganisation of the drains, etc., has been undertaken at an estimated cost of £2300.

Dr. Clouston in his report acknowledges the support he received as President of the British Medical Psychological Section from the members of the Association and others.

Glasgow.—Dr. Yellowlees supplies a good and probable reason for old people, especially women, finding their way into asylums.

Suitable homes for the aged who are not paupers, and yet are in narrow circumstances, would almost seem to be a want in our social system. The eagerness with which women are now entering business life and undertaking work incompatible with the care of aged relatives has perhaps helped to create this want. If so, it is an unwelcome result of their desire for independence.

Note is made of the shortcomings of the new Inebriates Act, in that it applies only to convicted criminals and not to ordinary drunkards. Dr. Yellowlees considers the chief value of the Act is that it may be the herald of wiser and fuller legislation.

Perth.—Dr. Urquhart refers to the dangers that are accompanying the fashionable drugs which are now so accessible to the public.

The abuse of such substances as antipyrin, which seems to have taken its place in the domestic medicine chest, to the detriment of the race, is almost as formidable as the indiscriminate and continuous unauthorised dosing with sulphonal and cocaine. Valuable as these remedies are when appropriately prescribed, each entails its own special dangers. As soon as an anodyne or a soporific comes into general use, the results are recorded in the statistics of our medical institutions. We have lately reported a death consequent on a relatively small dose of sulphonal, and apparently due to its disorganising effect on the system. This drug was placed before the public as an absolutely safe hypnotic not many years ago, and it is now used with a freedom which is perfectly appalling; yet it has not been ascertained in what cases sulphonal is eminently dangerous, or where an idiosyn-

crazy exists forbidding its administration. We have also had under treatment a patient who fell a victim to that insidious drug cocaine. Consequent on the relief experienced, he was enabled for a time to carry on an extensive business; but, while thus deadening the pain of persistent neuralgia, he was only treating a prominent symptom, without combating the underlying causes of his malady.

Irish District Asylums.

Belfast.—Like the other Irish reports, this contains valedictory addresses to the past Board, and advice to the newly created Committee. The Inspector in his report in most cases acknowledges the laudable way in which the defunct bodies have done their best for the asylums in face of many serious difficulties.

Dr. Graham seems to be able to get a large amount of work out of his staff and patients, a long list of heavy alterations and reconstruction being given. Nearly five sixths of the patients are got to work. The Committee and Inspectors speak warmly of his energy. The proportion of attendants now (after some increase) is 53 for 725 in the main asylum. Of the 289 admissions 6 were general paralytics, all men. In only 14 is intemperance assigned as a cause, while 5 per cent. are put down to religious excitement; the proportion in England being about 1·5 per cent.

Cork.—Dr. Oscar Woods thinks that there is some ground for asserting that insanity is on the increase in the district, the number of *first* admissions having sprung from 228 to 262 in the year. Hereditary influences account for 30 per cent., and intemperance for 16. Dr. Woods maintains that the asylum accommodation will be called for at the same alarming rate unless habitual drunkards are dealt with more firmly and imprudent marriages become less frequent.

For the benefit of the incoming Committee he re-asserts his claim to have the necessary new accommodation take the shape of a hospital for recent and curable cases. So many of the Irish Boards appear to have taken of late a liberal view of asylum management, that we may hope that Dr. Woods will get his way.

No general paralytic existed in the asylum at the end of the year.

Down.—Dr. Nolan, in saying good-bye to his old Committee on their disestablishment, hits the nail on the head.

Perhaps the secret of your success lay in the fact that you realised so well the common interests of the insane and of those upon whom a share of the burden of their maintenance was cast, having found as a result of your long experience that in asylum administration, as in other matters, efficiency is the true economy.

No doubt a good number of asylum managers everywhere think that philanthropy should be tempered by finance, and rightly so. But the two are up to a certain point not antagonistic. The Inspector also writes in his report:

They (the Committee) will hand over next year to their successors, the Asylum Committee of the County Council, an institution in excellent order, of which they may well feel proud. I hope that these successors will take as liberal and as practical an interest in the success of the asylum and the welfare of the patients as they have always shown.

There were no general paralytics at the end of the year.

Ennis.—The Inspector marks this asylum down for much enlargement at the hands of the new Committee, when it is taken over by them. He rightly protests against the numbers being kept down to suit the small asylum by transferring patients to workhouses where they are kept under unsuitable conditions.

On the other hand he states that very great attention is paid to the dietary and preparation of the food in the asylum. One general paralytic was admitted and died during the year, there being none at the end of the year.

Limerick.—No general paralytic was in the asylum at any time in the year.

In respect of the cost per patient for maintenance, which is low, the Government auditor reports :

I do not hesitate to attribute this satisfactory result to the constant and unremitting attention paid by the superintendent and those working under him to every detail connected with the financial affairs of the institution. From the records and vouchers that come under my notice it is evident that the greatest care is taken in the making of contracts; goods supplied under contract are scrutinised so as to ensure that they are equal to standard and not deficient in quantity; contractors' accounts, before being submitted for payment, are carefully checked to the minutest detail; and the superintendent is in immediate privy with every transaction bearing upon the financial administration of the asylum.

The Inspector reports that the food was good, and we find that the recovery rate is an average one.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

GENERAL MEETING.

A GENERAL Meeting was held in the rooms of the Association, 11, Chandos Street, London, W., on Thursday, 9th November, under the presidency of Dr. J. Beveridge Spence.

Present: Drs. J. B. Spence (President), H. Hayes Newington (Treasurer), Fletcher Beach, R. Percy Smith, H. A. Benham (Registrar), G. H. Savage, Sir James Crichton-Browne, T. Clifford Allbutt, T. Seymour Tuke, C. K. Hitchcock, L. A. Weatherly, F. W. Mott, T. Outterson Wood, J. Peeke Richards, W. D. Moore, W. Julius Mickle, F. A. Elkins, James Chambers, J. G. Soutar, R. H. Cole, W. J. Seward, G. Stanley Elliott, W. Rawes, D. G. Thomson, J. W. Stirling Christie, C. Hubert Bond, Arthur N. Davis, T. Telford-Smith, W. H. B. Stoddart, Inglis Taylor, R. H. Steen, R. Langdon-Down, R. N. Paton, W. J. Donaldson, Walter Smith Kay, C. S. Morrison, A. E. Patterson, Alfred Miller, F. Sidney Gramshaw, L. R. Whitwell, W. Handfield Haslett, Peers MacLulich, Charles D. Law, H. T. Aveline, Alfred Turner, Eric France, A. H. Spicer, W. Douglas, S. R. Macphail, T. C. Johnstone, David Bower, Crochley Clapham, and Robert Jones (Hon. General Secretary).

Visitors: Sir William H. Broadbent, Bart., Drs. Henry Head, H. J. Butter, T. Hampson Simpson, A. Warren.

Apologies for non-attendance were received from Drs. A. R. Urquhart, E. W.

White, Evelyn A. W. English, A. R. Turnbull, E. Goodall, F. C. Gayton, D. M. Cassidy, W. R. Watson.

The following candidates were elected members:—Blackwood, Catherine Mabel, L.R.C.P. and S., L.F.P. and S., Assistant Medical Officer, Wadley Asylum, near Sheffield; Donelan, Thomas O'Connor, L.M.R.C.P.T., L. and L.M.R.C.S.T., Assistant Medical Officer, West Riding Asylum, near Leeds; Goldschmidt, Oscar B., M.B., Ch.B., Vict., House Physician, Bethlem Royal Hospital, S.E.; Goodrich, Edith Ellen, M.B., C.M.Glas., Assistant Medical Officer, West Riding Asylum, Menston, near Leeds; MacMillan, Niel Harrismith, M.B.Edin., M.R.C.S.Eng., Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex; Mason, Gerald Bovell, M.R.C.S.Eng., L.R.C.P.Lond., Resident Medical Officer, Ticehurst House, Sussex; Nixon, John Clarke, B.A., R.U.I., M.B., B.Ch., Assistant Medical Officer, West Riding Asylum, Menston, near Leeds; Penfold, William James, M.B., C.M.Edin., Assistant Medical Officer, County Asylum, Morpeth, Northumberland; Rice, David, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Cheddleton Asylum, Leek, Staffordshire; Stilwell, Reginald John, M.R.C.S.Eng., L.R.C.P.Lond., Moorcroft House, Hillingdon, Middlesex.

MICROSCOPICAL DEMONSTRATION BY DRs. E. GOODALL AND PEERS
MACLULICH.

Dr. MACLULICH.—Three of the sections are taken from general paralytics suffering from either mania or dementia. These, and others also, are shown chiefly with the idea of marking the great difference in the wealth of "association" fibres in some and the absence of them in others, but especially paucity or absence of the "tangential band." Most of the sections are taken from the central lobe, because we found it was the least affected. We have also taken sections from the frontal, occipital, and temporal. The one that chiefly shows paucity of these fibres is the frontal; next comes the temporal, then the occipital, and lastly the central. As a rule they show paucity of the various layers which comprise the "association" fibres (and also of the "projection" fibres) in the following order:—
1. "Tangential." 2. "Supra-radiary." 3. The "inter-radiary." 4. The "projection" (which also often shows a wasted and broken appearance, but not in so marked a degree as the others). Some of the sections show numerous varicosed fibres very well. This is chiefly seen in the "tangential" band, is not so marked in the others, and is rarely seen in the "projection" fibres. The sections were all stained by the method of Kultschitzky-Wolters, they having been previously put for seven days' staining in the cold, and then into the incubator for forty-eight hours at 40° C. Finally they were differentiated by Weigert-Paul's method. If put into the incubator to begin with they crack and shrivel, but not so if stained in the cold first. I especially direct your attention to J—, a case of chronic mania, who died æt. 77, in which the "tangential" fibres show up better than in any of the others; also to B—, who had melancholia for about two and a half years, and died from exhaustion æt. 23. Under the microscope this latter specimen shows almost complete absence of "tangential" fibres, and also of the "supra-radiary" and "inter-radiary." There is also a section from a general paralytic, which shows in the uppermost convolution a good wealth of "tangential," "supra-radiary," "inter-radiary," and "projection" fibres, whereas in the other two convolutions there is almost complete absence of these fibres. There is one fresh section from a case of chronic mania, which shows marked sclerosis in the outermost zone; and also a hardened section from the same region showing a very good wealth of "tangential" fibres occupying the same position in which this sclerosis exists. Another fresh section, taken from a general paralytic, shows a very well-marked band of "spider" cells in the outermost zone, and also down amongst the fourth layer of cortical cells. We present these specimens to chiefly demonstrate the great differences existing in the degeneration of the various layers of the "association" fibres (and also of the "projection") irrespective of the form of insanity, age, or other circumstances.

Dr. MOTT.—I cannot quite agree with Dr. MacLulich. Having examined a great number of cases of general paralysis, I regard Crook as being perfectly right when he said that the absence of the tangential fibres was a very important indication of general paralysis. The sections from the case of melancholia shown to-day certainly exhibit complete absence of the tangential fibres. I have seen

cases of general paralysis diagnosed as melancholia, although I do not mean to say that this was so in this instance, because a number of spider cells can be seen, and I have no doubt that the authors have carefully considered, so that they would not fall into such an error. I still am of opinion that of all the mental diseases general paralysis is the one which shows the absence of the tangential fibres more than any other disease. I have used the Marchi method of staining, because I find it the only reliable one for certainly showing the presence or absence of these fibres. At present one of the technical scholars is engaged on this subject, and probably some results will be gained by his work, and perhaps it may show that I may be mistaken in the opinion now expressed.

Dr. MACLULICH.—In the general paralytics examined by us there certainly has been paucity of the "tangential" fibres, but *not* so well marked as in some other forms of insanity. In one convulsion we may see a fair average wealth of fibres, whereas in others these may be absent, or almost so. As far as we have made out there appears to be no uniformity of absence or wealth of fibres in general paralytics.

DISCUSSION ON DR. STODDART'S PAPER "ANÆSTHESIA IN THE INSANE."

Dr. SAVAGE.—I read Dr. Stoddart's paper with a great interest. It is a record of very careful observations and not of conclusions. He has had the same experience as myself. After carefully mapping out the anæsthesiæ to-day, and going to verify them to-morrow, one found that they changed; that the conditions of nervous disorder and mental disorder do not seem in the majority of cases to have any very distinct relationship in regard to areas of anæsthesia. I happen to have had the opportunity of seeing the converse—certain cases in which there has been a great deal of hyperæsthesia with a direct relationship to the delusions. Often these persons had developed ideas of grandeur, as a feeling of greatness of body. Has any observation been recorded in relation to the reverse? Of course there is megalomania, the feeling of exaltation, and micromania, the feeling of littleness. A lady known to me has for several years had the idea of everything being very little. She talks of herself as being a little thing, and of me as being a little thing, and everything about her is regarded as diminutive. I believe this used to be looked upon as a characteristic sign of general paralysis. I do not think that view can now be accepted. There undoubtedly is a very large field for the investigation of varying conditions of sensibility in neurotic patients. I believe it was Sir Samuel Wilks, in his inaugural address to the Neurological Society, who said that we very carefully studied muscular disorders, but not sensory disorders. Of course, a great deal has been done in registering normal sensations and their reactions, but I am afraid that the majority of us who have to do with the insane find it extremely difficult to come to any very definite conclusion as to these relationships in insanity. I think that there should be certain definite groups, or that there should be, at all events, a group with varieties such as that described by Dr. Stoddart.

Dr. HEAD.—First of all Dr. Stoddart speaks of that type of cases in which no sign is given of the perception of painful stimuli. This Dr. Stoddart quite rightly calls "apparent anæsthesia," and he points out that when these persons recover they are able to tell you that they have felt the stimuli at the time. In one case the patient had even developed a definite delusion of persecution from the repeated pin-pricks. That is a type of case which is well known to us all, as he says. The patient, although feeling the stimulus, is unable, owing to stupor, to give any motor expression to the sense of pain. I think that if Dr. Stoddart will apply the following test he will be able to wake up a certain number of those other cases who are not too deeply stuporosed to manifest expression of pain at the time. This class of cases, the later form of stupor, with apparent complete analgesia, is not a very uncommon form in the out-patient department of large hospitals, and I will give you the observation upon a definite case now under treatment. You can apply to the patient, who is a Jewess, the strongest faradic current you can obtain, and she will make no sign whatever of feeling it. You may place an electrode upon one hand and she will not brush it off with the other. Pins, of course, she pays no attention to at all, and you can stick them into her flesh in any part and she does not move. Set her upon a stool, do not send any current through her, but simply flash a nine-inch spark in front of her, and then give her quite a mild

stimulus, and she will immediately show all the signs of pain. The nine-inch spark does not represent a stimulus, except a psychical one, but it awakens her consciousness to such an extent that she will give obvious motor expression of feeling on any mild electrical shock. I therefore quite agree with Dr. Stoddart that this is not an anæsthesia at all; it is only that the patient is in such a state of stupor that she is unable to express her feeling. Dr. Stoddart passes on to his second group of cases, and gives as his first example (on page 702) R. P—, with Figure 1. In none of the group is a clinical history given, except a hint in regard to one mentioned on page 709, that probably she had been anæsthetic for three years. However, it was my good fortune to have R. P— under my care for eight years, and in fact I sent her to Bethlem. I am consequently able to supply a certain number of deficiencies in Dr. Stoddart's account of this patient. He quite rightly says that she was totally anæsthetic, excepting for two spots in the groin in 1896. In 1889 she was also anæsthetic, but not insane. I saw her continually through 1889, and again in 1890. She was then completely anæsthetic and had her fields of vision reduced to extremely small points, she could only see within the extreme centre of the field of vision. During the time of her sanity she had the most typical hysterical fits, with all the phenomena described by Richet. She went on remaining absolutely anæsthetic, occasionally recovering from her contractures, fits, and secondary phenomena, until 1896, when she was noticed to be stuporose, and was sent to Bethlem. There is a very important gap in this case. This patient has been to my knowledge for nearly eight years totally anæsthetic. I have very little doubt that for eight years or more preceding she was also in a similar condition. She had every sign, every stigma of major history—the contractures and the epileptic fits of the type common to this group, together with very marked diminution of the field of vision and anæsthesia; but she was not insane. It is a very unusual type in this country. Then we pass to the case mentioned on page 709. Dr. Stoddart mentions that for three years she has been completely anæsthetic, and that the medical certificate bore one of her statements, that if she put her hand in the candle flame she could not be burnt. It is quite probable that she could not feel, as Dr. Stoddart points out. He gives us no data on which to judge whether this patient was anæsthetic for eight years before she became insane. Turning to the figures themselves, I think that any one who has had any experience of ordinary hysterical anæsthesia would say that most of them conform to that type; so that to sum up my criticism of this paper I should say that, in the absence of clinical history, Dr. Stoddart is in all probability quite right in putting the cases together in one group, of which R. P— is the maximum example; but that, just as in the case of R. P—, this anæsthesia quite probably long preceded the insanity; the insanity was possibly due to the anæsthesia, and not the anæsthesia due to the insanity. This type of anæsthesia is exactly what would come into an ordinary general hospital without insanity, and it is well recognised that these cases when they tend to become completely analgesic and have extremely marked diminution of the field of vision also tend to have an extremely marked diminution of the psychical field and become stuporose.

Dr. MICKLE.—It is probable that the cases reported by Dr. Stoddart are cases in which the anæsthesia is purely of functional origin. The distribution is similar to that which one observes in cases which are usually put down as being hysterical. There is a difficulty in estimating the parts of the body likely to be affected with anæsthesia by process of dissolution, a process which is the reverse of the process of evolution by which the functions are built up. I think that an explanation may be given of the close connection of abdominal states as being those which longer than any others maintain their relations, and that it lies in the connection between the nervous system and the abdominal viscera. I believe that the process of evolution really consists of that which was originally part of the alimentary canal of the lower organisms from which man sprang becoming, in him, the cerebro-spinal system. In the course of time one part of that canal becomes evolved into the cerebro-spinal system. Besides this there may be traced a relationship between the cerebro-spinal system of man and the alimentary canal, in the sympathetic ganglia which line the sides of the spinal column, and which are connected on the one hand with the grey matter of the cord, and on the other with the plexuses in the alimentary canal.

The evolutionary history already referred to seems to show us why the emotions,

the early mental phenomena in the process of evolution, still maintain a large degree of their ancient connection with the abdominal organs. The fact that the distribution of the anæsthesia in the cases described by Dr. Stoddart is the same as that described in hysterical cases, to my mind shows the connection, not between any organic lesion and the anæsthesia he observed, but between the anæsthesia and changes in the personality—an essential condition in the hysterical state which may be associated with these cases.

Dr. STODDART.—Dr. Savage said that we ought not to be too anxious to explain the phenomena which we observe, but I am afraid that is what a young psychologist is very anxious to do; and I think that it is well to raise discussion on these phenomena, because the facts do not help us very much unless we try to learn something from them. The fact that a person is anæsthetic does not teach us anything, and my reason for attempting to explain the phenomena, perhaps in a more complicated way than one is justified in doing, is that we ought to go further if we are to learn. With regard to the association between defective sensation and mental symptoms, I have not had enough cases to say what the association is. The cases are not very frequent. The percentage of all which have come under my observation is something under $3\frac{1}{2}$ per cent., and in that $3\frac{1}{2}$ per cent. many showed quite transitory conditions of anæsthesia. Dr. Head's method of awakening the attention of the patient is very interesting—not by a strong sensory stimulus, but by slight sensory stimuli to all the senses. Similarly, one will perhaps show a patient something that may attract her attention, shake her and talk loudly, and so perhaps extract a word or two. Dr. Head's method would be very well worth trying. He refers to the case in which anæsthesia had *probably* existed for three years. My reason for putting it that way was that the certificates indicated that there was anæsthesia about eighteen months before I saw her; and when I first examined her she had a very extensive anæsthesia, which is shown by Fig. 2 of my paper. That case was very interesting, because I was able to *observe* the anæsthesia until it had absolutely gone. It returned again after a short time, and is now once more in very much the same condition as is represented in the figure. Of course the question of R. P.—being not insane in 1889, and yet having an extensive anæsthesia, is extremely important. I have not looked upon anæsthesia as a cause of insanity, nor have I looked upon insanity as the cause of the anæsthesia. I have regarded the physical basis for both these phenomena as one and the same, of which the anæsthesia and the insanity are co-existent symptoms. I can say, however, that in most of my cases I was able to observe the anæsthesia develop after they became insane. When first examined there would perhaps be no anæsthesia, especially in post-maniacal stupor. During the mania there was no anæsthesia; in fact, I was rather under the impression that there was some hyperæsthesia. As the patient developed the post-maniacal stupor the anæsthesia developed *pari passu*, and generally in the way indicated in my paper. I quite agree with Dr. Mickle that this anæsthesia is functional—that it is not due to organic disease. A large percentage of cases recover. With regard to it being due to hysteria in all cases, I should be inclined to object to that, not admitting dementia to be in any way related to hysteria, except in so far as they are both psychological manifestations. I should be inclined to say that hysteria was, as a rule, due to something of the same nature as many cases of insanity. The association between the earliest evolved part of the body and the nervous system is one which has, of course, attracted a good deal of attention, but further than placing it upon that basis we cannot go. Dr. Mickle has drawn attention to the connection between the viscera and the sympathetic ganglia, and made reference to the ancient association between the alimentary canal and the nervous system. That was not through the sympathetic ganglia, but through what is now only referred to as the neuro-enteric canal, of which a remnant exists possibly in connection with what is called the coccygeal gland. The association between the nervous system and the intestines is old, both in the actual anatomical connections in the foetus, and in the connection of visceral phenomena with nervous phenomena in the insane.

The PRESIDENT called upon Dr. Harry Campbell to read his paper entitled "The Genesis of the Morbid Sense of *Bien-être*."

Drs. MOTT and ROBERT JONES spoke, and Dr. CAMPBELL replied.

The PRESIDENT then called upon Dr. France to read his paper upon "The

Necessity for Isolating Cases of Phthisis among the Insane in Lunatic Asylums." (See page 1.)

The paper entitled "Bodily Disease as a Cause and Complication of Insanity," by G. T. Conford, M.B., was taken as read.

Members afterwards dined together at the Café Royal at 7 p.m.

NORTHERN AND MIDLAND DIVISION.

A meeting of this Division was held at the West Riding Asylum, Menston, near Leeds, on 11th October, 1899.

Members present.—Drs. J. McDowall, Edgerley, and Mackeown (Menston); Kay and Adair (Wadsley); Perceval (Whittingham); Hitchcock (Bootham); Miller (Hatton); Hearder (Wakefield); Mackenzie (York Retreat); Ray (Harrogate); and Crochley Clapham, Hon. Sec.

Visitors.—Drs. Crawford-Watson, Nixon, and Donelan.

Dr. J. McDowall was voted to the chair, and the minutes of the last meeting were read and confirmed.

NURSING IN IRISH WORKHOUSES.

A question on the subject of the nursing of insane in workhouses, submitted by the Council of the Association for the consideration of the Division, was discussed, and the following resolution unanimously carried respecting it:—"That it is advisable that this Association represent to the Local Government Board that in union workhouses in which insane persons are detained nurses properly qualified and trained in mental nursing should be employed."

NEXT MEETING.

The date and place of the next meeting was fixed for the County Asylum, Whittingham, near Preston, Lancashire, on the third Wednesday in April, 1900.

Dr. C. K. HITCHCOCK, of the Bootham Asylum, York, read a paper on "Two Hundred and Six Consecutive Cases of Acute Mania treated without Sedatives." (See page 80.)

Previous to the business part of the meeting, Dr. McDowall and his staff showed the members round the asylum, and subsequently entertained them at dinner.

A cordial vote of thanks was given to Dr. McDowall for his hospitality.

SOUTH-EASTERN DIVISION.

The Autumn Meeting of the South-Eastern Division of the Medico-Psychological Association was held at the Bethlem Royal Hospital, St. George's Road, London, S.E., on Monday afternoon, 16th October. At 3 p.m. the Divisional Committee met, and at 3.30 p.m. the General Meeting again. The following members were present:—Drs. T. O. Wood, H. G. Hill, C. H. Bond, T. S. Tuke, R. Jones, T. B. Hyslop, F. Beach, W. Stoddart, W. J. Mickle, H. M. Taylor, E. Savage, D. Bower, M. Craig, H. Pulford, W. Rawes, A. H. Boyle, J. P. Richards, G. Elliot, R. L. Down, H. F. Winslow, T. Stansfield, H. Kidd, G. Shuttleworth, R. P. Smith. Visitors—Drs. Danford Thomas, Selvatico, and Sacypti.

Dr. Fletcher Beach was voted to the chair, and in opening the proceedings he thanked the South-Eastern Division for its assistance in his election to the Presidential Chair. A letter was read from the secretary, Dr. White, regretting his inability to be present in consequence of illness, and stating that Dr. Outtersson Wood had kindly offered to undertake his duties.

The minutes of the last meeting as reported in the July number of the JOURNAL were taken as read and confirmed.

NURSING IN IRISH WORKHOUSES.

The following resolution of the Council was next considered :—" That the question as to the advisability of the Association representing to the Local Government Board, that in a union workhouse in which insane persons are detained, a nurse properly qualified and trained in mental nursing should be employed, be considered at the divisional meetings in England and Scotland, and a report to be made to the Council." It was proposed by Dr. Beach, and seconded by Dr. Percy Smith, that the Division considered it advisable that properly qualified and trained mental nurses should be employed in union workhouses in which insane persons are detained; this was carried unanimously.

Next meeting.—On the invitation of Dr. White, it was decided that the Spring Meeting of 1900 be held at the City of London Asylum, near Dartford.

Dr. Hyslop then read his paper on " Some Rare Forms of Skin Affections in the Insane." A lengthy discussion followed (see page 60).

A vote of thanks to Dr. Hyslop brought the meeting to a close. In the evening the members dined together at the Café Monico.

SOUTH-WESTERN DIVISION.

The Autumn Meeting was held on Tuesday, 17th October, at Digby's Asylum, Exeter. Dr. Spence, President of the Association, was in the chair, and there were also present Drs. Rutherford, Deas, Sheldon, Turner, Aveline, Davis, Blachford, Forsyth, Pearce, Benham, Liston, MacDonald (Hon. Sec.), Hungerford, Aldridge, Stevens, Wood, and Drs. Davy and Brash as visitors.

The minutes of the last meeting having been read and confirmed, the following were elected as new members :—James Leslie Gordon, M.B., Ch.B., Assistant Medical Officer, Wilts County Asylum; George Heneage Pearce, M.R.C.S., L.S.A., Assistant Medical Officer, Brislington House, Bristol; Charles E. P. Forsyth, M.B., Ch.B., Assistant Medical Officer, Dorchester Asylum; Walter Hood Ligertwood, L.R.C.P. and M.R.C.S., Assistant Medical Officer, Wells Asylum.

Next meeting.—An invitation having been received to hold the Spring Meeting at Bailbrook House, Bath, it was unanimously accepted, and 24th April, 1900, was fixed as the date of meeting.

NURSING IN IRISH WORKHOUSES.

The Secretary explained that the resolution passed at the Council Meeting of the Association held in London in July, 1899, was as follows :—" That the question of the advisability of the Association representing to the Local Government Board, that in a union workhouse in which insane persons are detained a nurse properly qualified and trained in mental nursing should be employed, be considered by the divisional meetings in England and Scotland, and that a report be made to the Council."

After a prolonged discussion, taken part in by the President, Dr. Deas, Dr. Turner, Dr. Benham, Dr. Rutherford, the Hon. Sec., and others, the following resolution, moved by Dr. DEAS and seconded by Dr. TURNER, was adopted :—" That this meeting considers that it should be represented to the Local Government Board that in union workhouses in which insane persons are detained, a nurse properly qualified and trained in mental nursing should be employed in the insane wards."

Dr. Hungerford read a paper entitled " A Few Remarks on Hysteria and its Relation to Insanity " (see page 83).

THE TRUSTEESHIP OF THE LUNATIC.

The CHAIRMAN announced with regret that Dr. Briscoe was too unwell to attend. He hoped, however, it would be merely a pleasure deferred.

On the motion of Dr. MACDONALD, seconded by Dr. ALDRIDGE, a hearty vote of thanks was accorded Dr. Rutherford for his kindness and hospitality.

The members and visitors afterwards dined together at the London Hotel.

SCOTTISH DIVISION.

The Autumn Meeting of the Scottish Division was held in the Laboratory of the Scottish Asylums, 12, Bristo Place, Edinburgh, on Thursday, November 16th, 1899.

Dr. Beveridge Spence, President of the Association, was in the chair, and the other members present were: Drs. Bruce, Campbell Clark, Clouston, Easterbrook, Ireland, Keay, Law, Mitchell, Oswald, Parker, Ford Robertson, G. M. Robertson, Rorie, J. Rutherford, sen., J. Rutherford, jun., Urquhart, Yellowlees, and Turnbull (Secretary).

The minutes of the previous meeting were read and approved.

NURSING IN IRISH WORKHOUSES.

The PRESIDENT, after expressing the pleasure he had in being present at the meeting of the Scottish Division, submitted the remit from the Annual Meeting in regard to qualified nursing for insane patients in union workhouses, and explained the circumstances which had led to it. In connection therewith, Dr. YELLOWLEES proposed, and Dr. CLOUSTON seconded, the following motion:—"That this branch deems it very desirable that the Association should represent to the Local Government Board that in an union workhouse in which insane patients are detained a nurse properly qualified and trained in mental nursing should be employed; and reports to the Council accordingly." Considerable discussion followed, a difference of opinion being shown as to how the amount of necessary qualification should be defined; but ultimately the motion was unanimously adopted as expressing the principle that trained nursing is required. Dr. KEAY then moved, and Dr. G. M. ROBERTSON seconded, that the minimum of training and qualification should be the holding of the certificate of the Medico-Psychological Association by the nurses; but on a vote being taken the motion was negatived by ten to five.

POSITION OF NURSES IN SCOTLAND.

Dr. URQUHART submitted a motion for the appointment of a Divisional Committee to consider the position of the nursing staffs in Scottish asylums in regard to administrative questions. This was seconded by Dr. RORIE. An amendment that the Committee be not appointed unless its objects are specifically defined was brought forward by Dr. G. M. ROBERTSON and seconded by Dr. KEAY, and after discussion was negatived by eight votes to four. The original motion was afterwards put, and carried by seven votes to six; and the following were appointed members of the Committee:—Drs. Campbell Clark, Oswald, Turnbull, and Urquhart, with power to add to their number.

THE PLATINUM METHOD.

Dr. FORD ROBERTSON gave a microscopic demonstration upon "New Facts regarding the Structure of the Central Nervous System revealed by the Platinum Method." In making a few remarks in explanation of the points illustrated by the microscopic specimens, he referred to a paper that he had already published upon the platinum method in the *Scottish Medical and Surgical Journal* of January last. Since that time he had studied a large number of additional preparations, and had obtained some further light upon the nature of the structural features that were revealed. For the benefit of those present who might not have seen his paper he stated that the method consisted essentially in placing blocks of formalin-hardened tissues for from two to six months in a mixture of platinum bichloride (PtCl₄) and formalin. A gradual reduction of the platinum salt took place, and platinum black was deposited in the tissues, not diffusely, but, in the first instance at least, within certain tissue elements. The structural features thus brought out were especially those of the adventitia of the vessels, nerve-cells, and certain cell elements which had hitherto been regarded as belonging to the neuroglia. The connective-tissue fibres of the adventitia of the intra-cerebral vessels were very clearly shown, and were proved to be continued upon the capillaries, which, therefore, had a second coat. This fact had previously been inferred by Bevan Lewis

and others, chiefly from the presence of cellular elements which evidently did not belong to the intima. The fibres were of a highly elastic character. The method further brought out a new fact, namely, that many of these elastic fibres were continued from one vessel to another. Such connecting fibres were exceedingly numerous, especially between the neighbouring capillaries, and evidently served to support the vessels and to help to fix them in position. He was satisfied that the very minute capillaries described by Kronthal and Lapinsky had no existence, and that what these observers had taken to be such were merely those fibres which passed from one capillary to another. Coming next to the nerve-cells, he stated that the method was capable of bringing out the acidophile reticulum and granules of the nucleus, and to a certain extent confirmed the description that had been given of this portion of the cell by Giuseppe Levi. In a few instances the primitive fibrils of the nerve-cell protoplasm had been revealed with remarkable distinctness, and he believed that the method, when further experience of it had taught how its action could be better controlled, would render it possible to trace the exact course of these fibrils in different categories of nerve-cells. The special cell elements to which reference had been made were of great interest. They were most commonly seen as cells with a large nucleus, a small amount of perinuclear protoplasm, and from three to eight delicate, almost thread-like branches, which divided dichotomously, and might extend to a distance equal to about ten times the diameter of the cell body. Some of them, however, were quite devoid of branches, and intermediate forms were also to be observed. These cells occurred throughout the central nervous system. They were exceedingly numerous—from six to twelve often being visible in a single field of the ordinary high-power microscope. In reaction to this method, and morphologically, they were entirely different from the neuroglia cells as these were commonly described. He was of opinion that they were mesoblastic elements, while the true neuroglia cells were essentially epiblastic in origin. He did not wish to discuss the question of the single or double origin of the neuroglia, but he maintained that the evidence of the platinum method did not confirm the views of those who believed that this tissue was developed both from the epiblast and from the mesoblast. It proved that there were really two entirely distinct tissues, which were as different from each other as a leucocyte from a pyramidal nerve-cell. The evidence of the mesoblastic origin of these special cell elements was so strong that he thought he might venture to suggest that they should be termed "mesoglia cells," in contradistinction to "neuroglia cells," the epiblastic origin of which was sufficiently recognised in the "neuro." He stated that there were many other interesting structural features revealed by the method, but he would not deal with them at present.

The PRESIDENT said that Dr. Ford Robertson had demonstrated the very great advantage of having a laboratory such as that they were holding the meeting in that afternoon. The Scottish Division had set a great example to other countries in their work, and he was sure that the success of this laboratory would be great and brilliant. A very important laboratory had been established in connection with the London County Council asylums, and in the Midlands they were trying to induce the committees of asylums to do likewise. He thought that if they could show them the good work done in Edinburgh they would soon get the money. Dr. Miller, of Warwick, had been working very hard on this question, and they had now got so far that they were about to ask for a certain allowance for the purpose of establishing a laboratory in Birmingham or some other central place. He knew that there was a slight opposition to the proposal, but he thought that they were quite able to overcome that opposition, and that they would be able to show much good work, and not the waste of material now taking place in the asylums of the Midland counties.

Dr. CLOUSTON asked if these peculiar cells were specially abundant in any particular situations, and if Dr. Robertson could make any suggestion as to their function.

Dr. FORD ROBERTSON, in reply, said that the cells appeared to be most abundant in the cerebral cortex, or wherever there were nerve-cells. He could not say definitely what their function was, but it seemed to him that these cells to a certain extent corresponded to the endothelial cells of fibrous tissues, and that their function was probably similar, although it was in some way specialised. They certainly could not form fibroblasts, as endothelial cells or connective-tissue corpuscles were

capable of doing. He had obtained satisfactory evidence that the granular corpuscles that were to be observed in the neighbourhood of areas of softening in the central nervous system were derived from these mesoglia cells.

Dr. CLOUSTON said that he was sure they agreed with him in congratulating Dr. Ford Robertson on this brilliant discovery, and that he would trace out the pathology of those cells as he had shown them their histology.

Dr. EASTERBROOK read a paper on "An Attack of Epilepsy (*Status Epilepticus*) followed within six weeks by an Attack of Chorea, occurring in a patient suffering from Acute Puerperal Insanity" (see page 114).

Dr. URQUHART showed, and made observations upon, a number of forms for case-taking, etc., which had been prepared by Dr. Toulouse for use in the Villejuif Asylum.

Dr. YELLOWLEES moved a vote of thanks to Dr. Spence for his conduct in the chair, and conveyed to him the great gratification and honour which the Division felt in having the President with them on that occasion.

PARLIAMENTARY NEWS.

STATE INEBRIATE REFORMATORIES.—October 23rd, 1899.

Mr. PICKERSGILL asked the Secretary of State for the Home Department whether his attention had been called to the observations of the learned Chairman of the County of London Sessions on the 18th inst., in passing sentence on Joanna Driscoll, that there was no State inebriate reformatory in existence to which he could order her to be sent, as contemplated by the Inebriates Act; whether, seeing that a man who had previously been convicted seven times in twelve months was sentenced at the recent Lancaster Quarter Sessions to three years' detention in an inebriates' reformatory, but the Home Office had informed the Governor of Lancaster Castle that there was no reformatory for such inebriates, he would state what course did he propose to take with regard to this prisoner, and whether temporary arrangements had been made for the use of a portion of one of Her Majesty's prisons for a State inebriate reformatory as stated in the report of the Departmental Committee, dated 12th December last, and if not, would he be good enough to state what steps he had taken to give effect to the intention of Parliament?

Sir M. WHITE RIDLEY.—I have seen a newspaper report of the case at the London Quarter Sessions, and I am making inquiry as to the circumstances. I may say that *prima facie* the accused seems to be as well qualified for committal to a certified reformatory—of which there are now several in existence—as to a State reformatory. As regards the case at the Lancaster Quarter Sessions, I am also making inquiry, as the circumstances of the committal are not clear. I may add that there will be at least one certified reformatory ready for the reception of male inebriates in a very short time. I have abandoned the project of adapting a portion of one of Her Majesty's prisons for use as a temporary State reformatory. My reasons for so doing, as well as for hesitating to establish a permanent State reformatory, are given fully in a circular which I issued last January to Her Majesty's judges, and of which I have directed a copy to be sent to the hon. member. I will say here that subsequent experience has justified and confirmed that hesitation.

RECENT MEDICO-LEGAL CASES.

REPORTED BY DR. MERCIER.

[The editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Reg. v. White.

Frederick White, police constable, was indicted for shop-breaking. He was seen on more than one occasion to ransack shops at night, and when his house was

searched a number of purses, bags, and all sorts of things containing money were found. He admitted that a certain number of these were the products of robberies. For the defence it was urged that the prisoner was suffering from kleptomania, and Dr. Mould gave evidence that in his opinion the condition of the prisoner's mind was such as to lead him to commit offences of this kind without being responsible for his actions. The Court accepted this view, and the prisoner was bound over to be of good behaviour for six months.—*Manchester Guardian*, October 24th.

It is very unusual for a plea of kleptomania to be sustained in the case of a person not of good social position, and we must suppose that the evidence in this case was very strong; but unfortunately the meagre report on which we have to depend leaves us very much in the dark as to its character, all that is mentioned as pointing to mental disorder being the fact that the prisoner had not disposed of any of the stolen property, but had hoarded it up in his home.

Reg. v. Harmer.

Philip Henry Harmer was summoned before the Mark Cross Petty Sessions for receiving a lunatic and receiving payment for the maintenance of a lunatic in an unlicensed house. It was proved that the defendant did receive the patient, and that while in the defendant's house the patient manifested various signs of insanity. For the defence it was urged that when the patient was first received he was not insane; that from time to time the defendant questioned the medical attendant of the patient as to whether the patient ought not to be certified, and that the medical attendant was of opinion that he ought not; that as soon as the patient became certifiable he was certified and removed. The case was dismissed.—*Mark Cross Petty Sessions*, November 14th.—*Sussex Daily News*, November 15th.

The following case is kindly communicated by Dr. Savage:

Reg. v. L. H.—

Menière's disease and crime.—L. H.—, builder, was brought before the Sessions October, 1899, at Newington, on appeal against sentence for 'three months' hard labour for indecent exposure of his person on July 30th, 1899.

The man, aged 38, married, a builder, of good character, against whom no accusation had ever been made. He consulted a local doctor a few days before the charge for headache, giddiness, sickness. He was found to be very deaf, with history of old middle ear disease, and the diagnosis of Menière's disease was made. His memory was noticed to be very defective, and he seemed easily to become confused, almost incoherent, in his talk. He was accused of being found on a spare piece of land with his trousers undone, and his penis exposed and in his left hand, he is said to have soon been surrounded by children whom he incited to sexual offences. A woman coming, he asked *her* to come; then she threw something at him, he took no notice, she went and fetched a policeman, and then the prisoner asked the policeman if he would come. He did not seem in the least ashamed or affected by the presence of the policeman, and the latter had really to help him to dress and put his penis away. His manner was odd, he was rather like a man under the influence of alcohol, and it may be here said that evidence was forthcoming that he had had only two-pennyworth of whisky during the day, and this was afternoon. He staggered and was dazed. He was seen by Dr. Savage a few days after, who found him with great defect of recent memory, with great deafness, and with some changes in optic discs with marked defect of vision. He was seen by Dr. Savage some weeks later, and was then in the same state with further evidence of loss of memory and temporary loss of power, if not consciousness. He did not in any way endeavour to excuse himself, he only said he had no recollection of the time, and that from time to time he found there were gaps in his recollection. The general history of the man was that his deafness had slowly increased, his headaches and his defect of vision likewise had got worse; he had not been able to follow his occupation as a builder and decorator, but having some small property of his own to look after, this employed his time. The general plea was that the case was one in which with disease of the middle ear some extension of disease of the membrane affecting the cortical surface is going on, that a form of minor epilepsy has been established, and that during a period of automatism he had performed the indecent acts. I think the case worth recording from its relationship both to Menière's disease and epilepsy; and, though unable to give any

explanation, I am able to state that I have seen at least four instances in which men with disease allied to Menière's disease, if not complete examples of the disease affecting the middle ear, have been guilty of sexual faults. The Court decided to remand the prisoner for three months, during which time provision for his safety in the way of a nurse or attendant was to be provided. This being done the conviction to be quashed.

ASYLUM NEWS.

Killarney District Asylum.—*Poisoning by Water-parsnip* (*Enanthe crocata*).—Dr. Griffin reports that a male patient was seized by what appeared to have been an epileptic fit on 13th October. Another seizure was followed by vomiting, insensibility, and great prostration. Clonic fits supervened to the number of six, attaining their greatest intensity in the lower limbs, the upper limbs, and the face successively. He died before apomorphia had time to act, and the stomach-tube could not be used owing to the convulsions. Death was due to asphyxia, the heart having continued to beat for a few seconds after respiration ceased. Another patient was similarly affected, but an emetic relieved his stomach, and he was not insensible, although delirious. He had got a root from the patient who died, while working in a garden, and ate a little of it. The plant grows in great abundance in the south of Ireland, and is used as a poultice for boils, etc.

Adelaide Asylums.—We rejoice to learn that Dr. Clelland has been empowered by the Government to appoint a resident medical assistant at the Parkside Asylum. With Dr. Napier in residence at the Adelaide Asylum, the staff will now be stronger than it has been before. Our former reference to this matter will be found in the last number of the JOURNAL.

Aberdeen New District Asylum.—Aberdeen Parish Council, as the New District Lunacy Board, has agreed to purchase the properties of Rainnieshill and Kingseat, in the parish of Newmachar, as a site for the proposed new asylum—the former at a price somewhat under £30,000, the other about £7000.

RETREATS UNDER THE INEBRIATES ACTS.

The nineteenth report of the Inspector of Retreats under the Inebriates Acts of 1879 and 1888 has been issued as a Parliamentary paper. It states that the satisfactory sanitary condition of all the fourteen establishments had been maintained, and the health of the inmates had been very good on the whole. Only one death had occurred. The licences of all the retreats existing in 1897 were renewed by the justices, and two new establishments were opened at Wandsworth and Stretford for the reception of female patients. Compared with the year 1897, the number of admissions has slightly decreased. The Acts of 1879 and 1888, although defective on some points, had worked smoothly on the whole during the year. Sections 13 to 20 of the Inebriates Act of 1898, which amend the previous Acts in relation to retreats in several important particulars, had given universal satisfaction to the licensees of the existing retreats.

DIFFICULTIES UNDER THE INEBRIATES ACTS.

At Lancaster, the Chairman of Quarter Sessions, in speaking of a case of habitual drunkenness, said that, while the man should be sent to a retreat, he would have to be detained in gaol pending the instructions of the Secretary of State.

The Joint-Committee of the County and Non-county Boroughs have, however, prepared a report suggesting a Board to be formed, like the Asylums Board, under Act of Parliament. Pending this Act, the Committee suggest that the County

Council should purchase a site or sites, and proceed with the erection of buildings. One for fifty men, and another for a like number of women, would seem sufficient to begin with.

On the other hand, a conference of the county and borough authorities of Perth, Forfar, and Fife resulted in a declaration that, as matters stand, it was not expedient to proceed to establish any certified inebriate reformatory for the counties named. At Aberdeen, again, it was decided that police boroughs had no power to contribute towards these reformatories, and the Secretary of State for Scotland intimated that he had caused a draft of amendment to the rating provisions of the Act of 1898 to be prepared, to await a favourable opportunity.

STATE INEBRIATE REFORMATORY FOR SCOTLAND.

We understand that the Secretary for Scotland has issued instructions to the Prison Commissioners to proceed with the alterations necessary for utilising some of the buildings attached to the prison at Perth as a State reformatory for inebriates under the Inebriates Act, 1898.

STATISTICS OF SIX THOUSAND CASES OF INSANITY ADMITTED INTO DUNDEE ROYAL ASYLUM FROM 1ST APRIL, 1890, TO 2ND NOVEMBER, 1898. BY JAMES RORIE, M.D.

TABLE I.—*Analysis of 6000 Cases of Insanity admitted into Dundee Royal Asylum from the opening of the Institution to 2nd November, 1898.*

	INDIVIDUALS.			CASES.		
	Males.	Females.	Total.	Males.	Females.	Total.
Admitted once	1807	1994	3801	1807	1994	3801
" twice	262	370	632	524	740	1264
" 3 times	76	89	165	228	267	495
" 4 "	23	26	49	92	104	196
" 5 "	6	11	17	30	55	85
" 6 "	2	4	6	12	24	36
" 7 "	3	5	8	21	35	56
" 8 "	—	1	1	—	8	8
" 9 "	—	—	—	—	—	—
" 10 "	1	—	1	10	—	10
" 11 "	2	—	2	22	—	22
" 12 "	1	—	1	12	—	12
" 15 "	—	1	1	—	15	15
	2183	2501	4684	2758	3242	6000
First admissions				Males.	Females.	Total.
Relapsed cases				2183	2501	4684
				575	741	1316
				2758	3242	6000

TABLE II.—Analysis of 6000 Cases admitted into Dundee Royal Asylum from 1820 to 1898, subdivided into following periods:—1. From opening of Asylum, 1820, to passing of Poor Law Act, 1845. 2. From passing of Poor Law Act to that of Lunacy Act, 1857. 3. From passing of Lunacy Act to opening of Lunatic Wards in Dundee Poor-houses, 1864. 4. From opening of Lunatic Wards to transference of Patients to New Asylum, 1882. 5. From opening of New Asylum to 2nd November, 1898.

	FORMS OF MENTAL ILLNESS ON ADMISSION.					SAME REDUCED TO PERCENTAGES.						
	1820-1846	1846-1858	1858-1865	1865-1882	1882-1898	Total 6000 cases	1820-1846	1846-1858	1858-1865	1865-1882	1882-1898	Total 6000 cases
Amentia	20	7	1	35	54	117	1.76	1.23	0.42	2.31	2.13	1.95
Mania	585	167	83	509	797	2141	51.27	29.40	35.32	33.54	31.40	35.68
Dementia	118	168	118	285	541	1180	10.34	29.58	28.94	18.78	21.31	19.67
Melancholia	255	126	38	246	471	1136	22.35	22.19	16.17	16.20	18.56	18.93
Monomania	129	85	35	391	588	1228	11.31	14.96	14.89	25.75	23.17	20.46
Moral insanity	11	8	2	8	1	30	0.96	1.41	0.86	0.52	0.04	0.50
General paralysis	23	7	8	44	86	168	2.01	1.23	3.40	2.90	3.39	2.80
	1141	568	235	1518	2538	6000						

TABLE III.—Analysis of 6000 cases admitted into Dundee Royal Asylum from 1820 to 1898, showing Months of Admission.

Months.	SHOWING MONTHS OF ADMISSION.					SAME REDUCED TO PERCENTAGES.						
	1820-1846	1846-1858	1858-1865	1865-1882	1882-1898	Total 6000 cases	1820-1846	1846-1858	1858-1865	1865-1882	1882-1898	Total 6000 cases
January	78	39	20	124	181	442	6.866	6.866	8.511	8.170	7.131	7.366
February	89	58	16	135	187	485	7.800	10.211	6.809	8.893	7.368	8.083
March	106	57	18	114	195	490	0.290	10.935	7.660	7.510	7.683	8.166
April	117	44	23	144	198	526	10.254	7.746	9.787	9.486	7.802	8.766
May	102	48	20	178	246	594	8.940	8.451	8.511	11.726	9.693	9.900
June	94	54	12	136	248	544	8.239	9.597	5.106	8.959	9.772	9.066
July	100	61	23	144	226	554	8.764	10.739	9.787	9.486	8.905	9.233
August	95	39	15	110	249	508	8.326	6.866	6.383	7.246	9.811	8.466
September	101	49	17	105	213	485	8.852	8.627	7.234	6.917	8.392	8.083
October	89	42	23	90	187	431	7.800	7.394	9.787	5.959	7.468	7.183
November	81	44	23	110	195	453	7.099	7.748	9.787	7.246	7.683	7.550
December	89	33	25	128	213	488	7.800	5.810	10.638	8.432	8.392	8.133
	1141	568	235	1518	2538	6000						

TABLE IV.—Same relative to Social State.

	SOCIAL STATE.					REDUCED TO PERCENTAGES.						
	1830-1846	1846-1858	1858-1865	1865-1882	1882-1898	Total 6000 cases	1830-1846	1846-1858	1858-1865	1865-1882	1882-1898	Total 6000 cases
Married	440	214	87	585	1050	2376	38.57	37.68	37.02	38.54	41.37	39.6
Single.	614	280	127	761	1149	2940	53.81	50.88	54.05	50.13	45.27	49.0
Widowed	87	65	21	172	339	684	7.62	11.44	8.93	11.33	13.36	11.4
	1141	568	235	1518	2238	6000						

TABLE V.—Analysis of 6000 Cases of Insanity admitted into Dundee Royal Lunatic Asylum from 1820 to 1898.

Ages.	AGES ON ADMISSION.					Total 6000 cases	SAME REDUCED TO PERCENTAGES.					Total 6000 cases
	1830-1846	1846-1858	1858-1865	1865-1882	1882-1898		1830-1846	1846-1858	1858-1865	1865-1882	1882-1898	
5 to 10 years	1	—	—	—	—	1	0.088	—	—	—	—	0.017
10 to 15 "	4	4	1	2	5	16	0.357	0.704	0.426	0.132	0.197	0.267
15 to 20 "	45	32	13	70	100	260	3.944	5.634	5.532	4.611	3.940	4.333
20 to 25 "	133	64	23	165	205	590	11.656	11.268	9.787	10.870	8.077	9.833
25 to 30 "	139	72	30	206	253	700	12.182	13.676	13.766	13.571	9.968	11.666
30 to 35 "	142	63	36	198	302	741	12.445	11.092	15.312	13.043	11.900	12.350
35 to 40 "	147	70	38	174	346	775	12.885	12.324	16.170	11.462	13.633	12.917
40 to 45 "	170	58	25	191	315	765	15.425	10.211	10.638	12.584	13.411	12.750
45 to 50 "	123	66	20	148	280	637	10.780	11.620	8.511	9.750	11.032	10.617
50 to 55 "	82	57	16	115	240	510	7.187	10.033	6.869	7.576	9.456	8.500
55 to 60 "	51	38	7	89	174	359	4.470	6.690	2.979	5.863	6.856	5.983
60 to 65 "	65	18	11	77	139	310	5.697	3.169	4.681	5.072	5.477	5.167
65 to 70 "	22	15	10	37	94	178	1.928	2.642	4.255	2.437	3.704	2.967
70 to 75 "	9	10	3	29	51	102	0.788	1.761	1.277	1.911	2.009	1.700
75 to 80 "	1	1	2	10	23	37	0.088	0.176	0.851	0.659	0.906	0.617
80 to 85 "	1	—	—	7	9	17	0.088	—	—	—	—	0.283
85 to 90 "	—	—	—	—	2	2	—	—	—	—	0.079	0.033
	1141	568	235	1518	2538	6000						

DISINFECTION.

From time to time in asylum practice it is found necessary to disinfect apartments, and as knowledge of disease increases the more attention is paid to the various chemical substances offered for that purpose. Perhaps the most popular and efficient is formalin, which has also been found very serviceable in the pathological department. Steam at low pressure has been declared effective for articles of clothing, etc., and can readily be applied at most institutions. We shall be glad to have communications in regard to this practical and important subject.

THE EMPLOYMENT OF THE INSANE.

The *Lancet* of 28th October refers to work done at the Wernersville State Asylum, Pennsylvania, where chronic patients considered fit to labour are received from the other State institutions. The results of five years' experience of agricultural labour are given as follows:—(a) Of the patients 6 per cent. can perform work equal to paid labour, 30 per cent. can perform labour equal to one half of paid labour, and 50 per cent. are equal to one fourth of the value of paid labour. The balance of 14 per cent. are non-working, and this includes those who are ill or are found on trial not to be able to work. (b) The estimated value of the gross amount of work done during the current year, on a basis of 400 men, is \$29,000. The estimated cost of food per head is 20 cents per diem, or \$1.40 per week. (c) The health and welfare of the patients are medically attended to, and the medical reports regarding the health and mortality are found to be entirely satisfactory. Indoor work, *e. g.* brush-making, is now being introduced as an extension of the original industrial scheme, and it is believed that this also can be pursued with profit. These results are representative of our experience in asylums of this country where an adequate area of agricultural ground has been secured. It is somewhat surprising that the *Lancet* should go on to recommend that the example of Wernersville should be followed by other institutions in Britain and America. Old-established asylums such as Wakefield and Utica are veritable hives of industry; it is years since machinery was introduced in the shoemaking department at the former, and the old men were encouraged to make and repair stockings; while the useful trades at Utica are representative of the greatest possible variety, and would be still more efficient but for the interference of trades unions. Of course every asylum ought to have a farm proportionate to its size. It is late in the day to advocate that primitive measure.

CORRESPONDENCE.

SYPHILIS AND GENERAL PARALYSIS OF THE INSANE.

From W. GILMORE ELLIS, M.D., Medical Superintendent, Government Lunatic Asylum, Singapore.

At the last Annual Meeting of the British Medical Association, Dr. Campbell, of Rainhill, opening a discussion on syphilis and general paralysis in the psychological section, says: "The third argument against the syphilitic origin of General Paralysis is that among certain races where syphilis is rife General Paralysis is said to be uncommon. Christian, of Charenton, is responsible for such a statement concerning the Arabs of Algeria, but I believe it requires substantiation."

In the Straits Settlements syphilis is most prevalent, more especially so since the unfortunate repeal of the Contagious Diseases Acts by order of the home government. With our teeming population of Chinese, about 120,000 in Singapore alone, out of a total population of 184,554 at the 1891 census, with a percentage of seven males to one female, to whom prostitution is but little if any disgrace, what else can be expected?

During over eleven years' service in this colony 2524 lunatics have passed through my hands. Of these 241 either gave histories of, or had undoubted signs of, past or present syphilis, and doubtless many others had suffered from the disease.

Of the above 2524 patients, 45 were Europeans, 21 Eurasians, and the remainder Asiatics (principally Chinese, Malay, and Southern Indians).

But one case of general paralysis has ever been noted in this asylum, a Danish sailor who died here in 1891.

There have been two cases suspiciously like general paralysis in Chinese, but the sequence of events were not such as is seen in that disease. The cases were eventually diagnosed as syphilis, and on post-mortem examination there was found in one a syphilitic deposit over the left frontal convolutions, and in the other patches of necrosed bone of the vault with adherent and inflamed patches of dura mater and pia-arachnoid membrane.

It has seemed to me that our natives cannot be expected to be the subjects of general paralysis with their simple life, few or no worries, and the fact that there is no struggle for existence amongst them. In a country where there is no cold, but little indulgence amongst natives in alcoholic excess, where food and lodgings are cheap, and the least possible clothing required, a disease originating in anxiety, mental worries, and great excesses, is little likely to develop, notwithstanding the fact that the (?) preliminary disease be present.

November 16th, 1899.

SELF-INDICATING LOCKS.

From Dr. DONALDSON.

In answer to your inquiry, I have to state that the self-indicating locks in use here are a great success. The lock has the following advantages:—1. Indicates at a glance on entering a dormitory if the door of single room is locked. 2. Is noiseless. This advantage is great for night inspection of single rooms by night attendant. 3. If a patient is in bed in a single room the bolt can be locked *in*, so that it is impossible for another patient to turn handle, and thus seclude patient in bed. 4. If a single room be not in use by day the bolt can be locked *out*, thus preventing patients opening the door and getting into the single room. 5. When necessary for a night attendant to go into a single room to attend to a patient the bolt can be locked *in*, thus precluding the possibility of a patient in a dormitory locking attendant in a single room. The makers are C. Smith and Sons, Limited, Birmingham.

CANEHILL ASYLUM ;

December 4th, 1899.

COMPLIMENTARY.

PRESENTATION TO DR. ALEXANDER ROBERTSON.

One of the senior members of our Association, Dr. Alexander Robertson, lately retired from the staff of visiting physicians to the Glasgow Royal Infirmary, and was met by a representative group of past and present house physicians and nurses in the infirmary, Dr. John Ritchie in the chair. In the course of his remarks Dr. Ritchie expressed the great satisfaction which they had derived from their very intimate association with Dr. Robertson, who had taught them much that had been of the very greatest value in their respective professions. Dr. Robertson's pupils were to be found in all parts of the country. Many of them were, or had been, specially engaged in that department of medical study which he had made his own. One at least had a world-wide reputation, several were in consulting practice, and some of his nurses were in charge of important institutions. To them all the Glasgow Royal Infirmary would be no longer the same when Dr. Robertson left its wards, where he had been so long in active service, where as student, resident, or physician he had spent so many years of usefulness. Dr. Ritchie begged his acceptance, with their warmest wishes, of a silver salver as an indication of the sentiments of esteem and friendship which they cherished towards him as a teacher and a friend. Dr. Robertson, in returning thanks, referred

to his long connection with the town's hospital and to his fifteen years' service in the Royal Infirmary. We join with Dr. Ritchie in his hope that recollection of Dr. Robertson will remain fresh and inspiring for many years to come.

PRESENTATION TO DR. C. B. BURR.

Dr. Burr, of the Oak Grove Sanatorium, Michigan, was entertained by a surprise party lately to commemorate the twenty-first anniversary of his connection with hospital work. Dr. E. A. Christian, of Pontiac, in a happy speech presented him with a loving-cup from his former professional associates. Dr. Burr's friends on this side will unite in their best wishes on this auspicious occasion.

PORTRAIT OF THE LATE DR. PAUL.

We are glad to draw attention to a presentation lately made to the Association. Mrs. Casberd-Boteler has given a framed engraving of a portrait of her father, our friend and treasurer, the late Dr. Paul, which has been hung in the room of the Association at Chandos Street. Due acknowledgment of this interesting souvenir will be made at the next general meeting.

OBITUARY.

REGINALD SOUTHEY, M.D.Oxon., F.R.C.P.Lond., late Commissioner in Lunacy.

Dr. Reginald Southey, whose death occurred rather suddenly on November 8th, at his country residence, Beltingham, Sutton Valence, had been in failing health for some time. As a member of the College Club he dined with some of his old friends only nine days before his death, and no one then present could have suspected the end to be so near.

Reginald Southey was born in 1835, being the youngest son of Henry Herbert Southey, M.D., D.C.L., F.R.S., F.R.C.P., and nephew of Robert Southey the poet. He received his early education at Westminster School, and in 1852 proceeded to Christ Church, Oxford. From here he graduated as B.A., with a first class in the Honour School of Natural Science in the year 1857. He pursued his medical education at St. Bartholomew's Hospital, reading with the late Sir William Savory and Mr. Henry Power, and in the year 1860 he passed the examination for the membership of the Royal College of Physicians of London. In this year, too, he was elected Radcliffe Travelling Fellow. In the following year (1861) he took his M.B. at Oxford, and immediately, in accordance with the conditions attached to his Fellowship, went abroad to continue his medical studies, working for a year in the hospitals of Berlin, Prague, and Vienna. In 1862 he travelled to South America, visiting Rio de Janeiro, Monte Video, and Buenos Ayres, passing the winter of 1863 in Madeira. In 1864 he was elected physician to the City of London Hospital for Diseases of the Chest, Victoria Park, and also physician to the Royal General Dispensary in the City, posts which he held until the following year (1865), when he was elected an assistant physician to St. Bartholomew's Hospital. In 1866 he took his M.D. degree at Oxford, and was in addition elected a Fellow of the Royal College of Physicians of London, being appointed Goulstonian Lecturer for 1867. For this set of lectures he chose as his subject the Nature and Affinities of Tubercle. In 1870, after unusually rapid promotion, he was elected as full physician to and teacher of clinical medicine at St. Bartholomew's Hospital, where he also delivered an annual course of lectures upon Public Health and Medical Jurisprudence in the Medical School. The latter lectureship he held for a period of fourteen years. He had the honour of being placed upon the Council of the Royal College of Physicians of London in the years 1878 and 1879, and from 1877 until 1883 he was physician to the Hospital for Incurable Children at Cheyne Walk, continuing on the Committee until the year 1888. He delivered the Lumleian Lectures in 1881 on Bright's disease, and in connection with this subject we may remind our readers that he was the inventor of Southey's tubes for

slow drainage of anasarous limbs. Dr. Southey was a vigorous writer. Amongst his medical works may be mentioned the article on "Personal Health" in *Quain's Dictionary of Medicine*. He contributed numerous and important papers to the St. Bartholomew's Hospital, Clinical, Pathological, and Royal Medical and Chirurgical Societies, and also translated the articles on the "Structural Diseases of the Kidney," and the "General Symptoms of Renal Disorders," as well as that on "Diffuse Diseases of the Kidneys" in vol. xv of von Ziemssen's *Cyclopadia of the Practice of Medicine*. He was frequently consulted in cases of questionable sanity, and in reference to the evidence of lunacy in criminals, and in 1883 he resigned his various offices at St. Bartholomew's Hospital on his appointment as Commissioner in Lunacy in succession to Dr. Nairne. He continued to discharge the onerous and yearly increasing duties of that office for fifteen years, when failing health caused him to resign the Commissionership in 1898.

During all those years it is not too much to say that he steadily acquired and retained the good opinion and kindly regard of all with whom he was brought in contact.

A conscientious worker himself, he readily recognised and acknowledged conscientious work in others, but while striving towards a high ideal he did not fail to realise the special difficulties of that department of it in which mental physicians were engaged. He never lost the keen medical spirit which actuated all his working life.

It is needless to add that his relations with his colleagues on the Commission were of the pleasantest kind. His efficient and unstinted co-operation while strength remained commanded their respect, and his genial and kindly nature secured their affectionate regard.

Dr. Southey was an admirable specimen of the scholarly Oxford physician. He was a good French and German linguist and well read in the literature of both countries, an excellent clinical teacher, and a man of great ability; but he never sought fame or advertisement, going on his path through life unpretendingly, and doing what he had to do with faith and earnestness.

NOTICES BY THE REGISTRAR.

Examination for the Nursing Certificate.

One hundred and thirty-one candidates applied for admission to the November examination for this certificate. Of this number 106 were successful, 17 failed to satisfy the examiners, and 8 withdrew.

The following is a list of the successful candidates:

City Asylum, Exeter.—Males: William Richard Tucker, John Thomas Head. Female: Matilda Milford.

City Asylum, Bristol.—Males: Robert Daws, Samuel Richer. Females: Harriet French, Isabel Blanche Hardy, Annie Louisa Raggatt, Hilda Toogood.

Borough Asylum, Rowditch, Derby.—Males: James Crooks, George Newbold. Females: Gertrude Kelly, Ada Robinson, Harriet Singleton, Ethel Taylor.

The Warneford Asylum, Oxford.—Females: Alice Maude Goody, Beatrice Alice Hallett.

Kent County Asylum, Maidstone.—Males: Roden Basil Hill, George Henry Jeine, Herbert Ruler, Walter Tompkins. Females: Maria Annie Kate Earl, Theresa Fennell, Isabella Hilton, Frances Nolan, Annie Poile Funnell.

James Murray's Royal Asylum, Perth.—Females: Louisa Chambers, Mary Mackintosh, Nellie Robertson.

County Asylum, Mickleover, Derby.—Males: John Hutchinson, Thomas H. Sanders. Females: Mary Campbell, Florence Curtis, Ethel Dunstan, Florence Gordon, Florett Matilda Hitchenor, Ida Lightfoot, Minnie Florence Williams.

The Retreat, York.—Female: Charlotte Elizabeth Thomasson.

North Riding Asylum, Clifton, York.—Males: John Edmund Clifford Biggs, Thomas Benson, Hezekiah Kennett. Females: Elizabeth Musgrove, Annie Silversides.

Borough Asylum, Sunderland.—*Males*: Septimus Noble, John Petrie. *Females*: Edith Burdon, Elizabeth Butchers, Julia Robinson, Annie Edith Reid.

West Riding Asylum, Wakefield.—*Male*: George William Dixon. *Females*: Dora Graham Braithwaite, Isabella Henderson Field, Elizabeth Ann Goldthorp, Geneva Watkins.

County Asylum, Lancaster.—*Females*: Dagmar Wilkes, Elizabeth Atkinson, Jeanne R. Macgregor, Isabella Rothery, Sarah Jane Robinson, Margaret Robson, Agnes Mary Swaby.

County Asylum, Melton, Suffolk.—*Males*: Walter Edward Benham, Ralph Tracey, Arthur Edward Warneck.

County Asylum, Newport, Isle of Wight.—*Males*: Albert Edward Prosser, William Walter. *Female*: Emily Bell.

District Asylum, Londonderry.—*Male*: William Glenn. *Females*: Sarah Alexander, Margaret Sweeney.

St. Patrick's Hospital, Dublin.—*Females*: Lizzie Brien, Kate Byrne, Mary Anne Simpson.

Woodilee Asylum, Lensie, Glasgow.—*Males*: John Bracken, Robert Donaldson. *Females*: Agnes Hendrie, Minnie T. MacLaren.

County Asylum, Morpeth, Northumberland.—*Males*: George Henry Emerson, George A. Frazer, Ernest Gibson, Percival James Todd, Francis Watson.

County Asylum, Thorpe, Norwich, Norfolk.—*Males*: Charles Creswell, Martin William Davies, William H. Grant, John James Hope, Harry Smith. *Female*: Kate Hornegold.

Bethlem Royal Hospital, London.—*Females*: Elenor Bailey, Minnie Honeybone, Alice Reddaway, Charlotte Emily Scott, Annie Simpson, Matilda Wheeler, Mary Annie Walters.

Highfield Asylum, Drumcondra, Dublin.—*Female*: Sarah Dowling.

Holloway Sanatorium, Virginia Water, Surrey.—*Males*: William Henry Collis, William Lawrence, Herbert Youel Simmons, Thomas Townsend, Frank Varney. *Females*: Ada Elizabeth Apedaile, Mary Elizabeth Bush, Adelaide Fidler, Lily May Livermore.

The following is a list of the questions which appeared on the paper:

1. Describe the act of swallowing and the digestion of food in the mouth and stomach.
2. Name the principal arteries of the arm. State their positions.
3. What is the normal temperature of the human body? What is the proper temperature of the air in a sick room? What is the temperature of the water in a warm bath?
4. What would you notice regarding the passing of urine and regarding its characters?
5. In a case of suicidal wound of the throat, with alarming hæmorrhage, what immediate treatment would you adopt?
6. Describe how you would treat a patient who is apparently suffering from poisoning by coal gas?
7. Mention the various kinds of enemas, and give examples.
8. What do you understand by delusions of persecution? Describe a case known to you.
9. Mention the differences between home and institution treatment.
10. What precautions should be observed in the case of patients suffering from pulmonary phthisis with the view of preventing the spread of the disease in an asylum?

The Council decided that a special examination should be held for the South African candidates, the results of which have not yet been received.

The next examination will be held on Monday, May 7th, 1900, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association not later than Monday, April 9th, 1900, as that will be the last day upon which, under the rules, applications can be received.

Note.

As the names of some of the persons to whom the Nursing Certificate has been granted have been removed from the Register, employers are requested to refer to the Registrar, in order to ascertain if a particular name is still on the roll of the Association. In all inquiries the number of the certificate should be given.

Examination for the Professional Certificate.

The following gentlemen were successful at the examination for the Certificate in Psychological Medicine held on December 14th, 1899:

Examined at *Bethlem Hospital*.—Dr. David Fleck.

Examined at the *Royal Asylum, Edinburgh*.—Dr. W. M. A. Smith.

Examined at the *Royal Asylum, Aberdeen*.—Mr. Eric W. Thomson, M.A.

The following is a list of the questions which appeared on the paper :

1. What mental disorders may appear during the period of adolescence ? What differences are noticed in the two sexes in the insanity of this epoch, and what is the prognosis ? 2. Describe the chief features of the various forms of mental disorder associated with epilepsy, and explain their psychological connection with the neurosis. 3. What do you understand by partial insanity ? Discuss the use of the terms monomania, paranoia, systematised insanity. 4. What are the usual mental and physical causes of refusal of food in insanity ? Describe the methods of forcible feeding usually adopted. Suggest a suitable dietary for a patient who persistently refuses food. 5. How does mania usually affect the senses of sight and hearing ? 6. Discuss and compare the morbid anatomy of cases of dementia paralytica, dementia epileptica, dementia alcoholica.

The next examination for the Certificate in Psychological Medicine will be held in July, 1900.

GASKELL PRIZE.

The examination for the Gaskell Prize will take place at Bethlem Hospital, London, in the same month.

Due notice of the exact dates will appear in the medical papers.

For further particulars respecting the various examinations of the Association, apply to the Registrar, Dr. Benham, Bristol City Asylum, Fishponds.

THE PRIZE DISSERTATION.

Although the subjects for the essay in competition for the Bronze Medal and Prize of the Association are not limited to the following, in accordance with custom the President suggests—

1. Developmental general paralysis.
2. The surgical treatment of epilepsy and epileptiform seizures.
3. The effect of influenza in the production of states of mental unsoundness.

The Dissertation for the Association Medal and Prize of Ten Guineas must be delivered to the Registrar, Dr. Benham, City of Bristol Asylum, before May 30th, 1900, from whom all particulars may be obtained.

By the rules of the Association the Medal and Prize are awarded to the author (if the Dissertation be of sufficient merit) being an Assistant Medical Officer of any Lunatic Asylum (public or private), or of any Lunatic Hospital in the United Kingdom. The author need not necessarily be a member of the Medico-Psychological Association.

CRAIG COLONY PRIZE FOR ORIGINAL RESEARCH IN EPILEPSY.

Last year Dr. Frederick Peterson, President of the Board of Managers of the Craig Colony for Epileptics, offered a prize of 100 dols. for the best original contribution to the pathology and treatment of epilepsy.

The seven papers received were submitted to three members (Drs. Bailey, Jacoby, and Van Giesen) of the New York Neurological Society, who gave to the board of managers of the Craig Colony the following report :

The Committee on the Craig Colony Prize for Original Work in Epilepsy has decided that no award should be made this year. Some of the essays submitted failed to comply with the conditions of the competition ; others were more limited in scope than a successful essay should be. Three deserve special mention—"The

Pathology of Epilepsy," by "CONH₂ OH,NH₂;" "Status Epilepticus," by "Aura;" and "The Pathology of Epilepsy," by "On and Ever Onward."

The prize of 1899 not having been awarded in accordance with the report of the committee, Dr. Peterson now offers a prize of 200 dols. for the year 1900 under similar conditions. This sum will be awarded to the author of the best unpublished contribution to the pathology and treatment of epilepsy. Originality is the main condition.

The prize is open to universal competition, but all manuscripts must be submitted in English. Each essay must be accompanied by a sealed envelope containing the name and address of the author, and bearing upon the outside a motto or device, which is to be inscribed upon the essay.

All papers will be submitted to a similar committee, consisting of three members of the New York Neurological Society, and the award will be made upon its recommendation at the annual meeting of the board of managers of the Craig Colony, 9th October, 1900.

Manuscripts should be sent to Dr. Frederick Peterson, 4, West Fiftieth Street, New York City, on or before September 1st, 1900. The successful essay becomes the property of the Craig Colony, and will be published in its medical report.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

General Meeting.—The next General Meeting will be held on February 15th (the third Thursday), 1900, at the West Sussex County Asylum, Chichester, by courteous permission of Dr. Kidd.

South-Eastern Division.—The Spring Meeting will be held on Wednesday, April 25th, 1900, at the City of London Asylum, Dartford.

Irish Division.—The Spring Meeting will be held early in April, 1900, at the Royal College of Physicians, Dublin.

South-Western Division.—The Spring Meeting will be held at Bailbrook House, Bath, on Tuesday, April 24th, 1900.

Northern and Midland Division.—The next meeting will be held on Wednesday, April 18th, 1900, at Whittingham Asylum, Lancashire.

Scottish Division.—The Spring Meeting will be held in Glasgow on March 8th (the second Thursday), 1900.

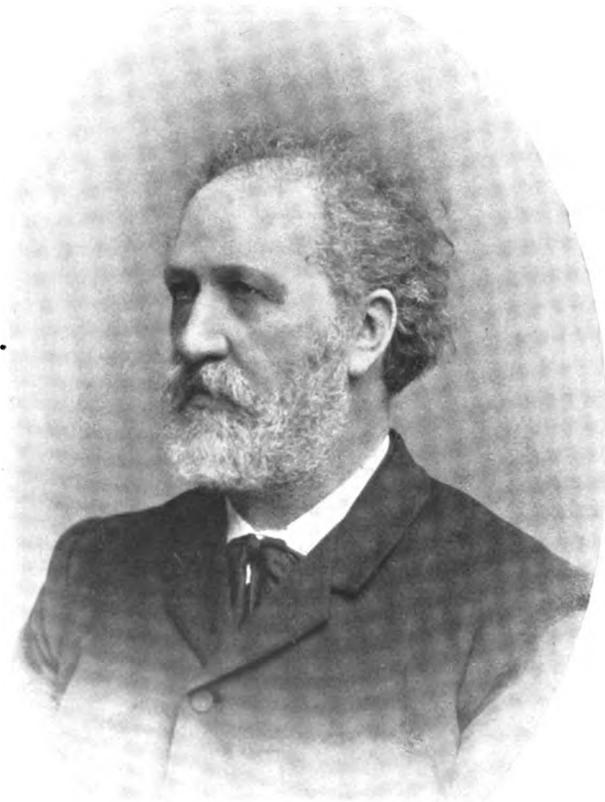
APPOINTMENTS.

Dr. William StJ. Skeen has been appointed Medical Superintendent to the Durham County Asylum, *vice* Dr. R. Smith, retired on pension.

Dr. John Baker has been appointed Deputy Superintendent to the State Asylum, Broadmoor, *vice* Dr. J. B. Isaac, retired on pension.

Mr. H. A. L. Willis, M.R.C.S., has been appointed Junior Assistant Medical Officer to the Govan District Asylum, Hawkhead, Paisley.

LUDWIG MEYER.



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L Meyer
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THE JOURNAL OF MENTAL SCIENCE

[*Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.*]

No. 193 [NEW SERIES
No. 157.]

APRIL, 1900.

VOL. XLVI.

Part I.—Original Articles.

*Isolation and Open-air Treatment of the Phthisical
Insane, with Notes on Seventy-four Cases treated.*
By DAVID BLAIR, M.D., County Asylum, Lancaster.

WHILE this subject is being discussed in the *Journal of Mental Science*, a short account of an attempt to carry it out may be of some interest.

About four years ago an isolation hospital for infectious diseases was completed at the Lancaster Asylum. But infectious diseases—as ordinarily understood—proved for a time so rare that the new building threatened to be always tenantless. Dr. Cassidy, the medical superintendent, thereupon resolved to utilise it for the isolation and treatment of consumptives, and for the past few years it has been reserved for the reception and treatment of these alone.

Structure and Situation.—The hospital is situated on the southern confines of the estate. It lies low, is well sheltered from the north, east, and west, but has a free exposure towards the south.

The main building consists of an eastern and a western wing similar in all respects, and connected by the corridor. Each wing contains twelve beds. Opening from the corridor towards the south between the wings are a kitchen, two nurses' bedrooms, and a dormitory for three patient workers. From each end of the corridor towards the north separate slop-rooms, lavatories, and water-closets open for the use of each wing.

A married attendant with his wife live in a detached two-
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storied house, which is connected by a covered way with the main building. Here all the cooking for the hospital is done by the attendant's wife. A third edifice contains a steam steriliser for the disinfection of clothes and a room for their reception. The male attendant's chief duty at the hospital is to disinfect the clothes.

Such are the integral parts of the hospital, which is entirely cut off from every other part of the building; and as fifteen hundred, or three fourths, of the patients of this asylum are females, it has been reserved for them alone.

Practical Suggestions.—The existence of means for isolation of consumptives soon made the necessity for early and accurate diagnosis specially evident. Such early diagnosis is not always easy. The tubercle bacillus cannot be found in many cases, and while the tuberculin test has been occasionally resorted to with satisfactory results in the differentiation of typhoid diarrhoea from tubercular, and in the elucidation of phthisis in ancient demented, in whom the disease runs a latent course, and in whom its symptoms are masked by co-existing bronchitis or emphysema; yet in recoverable mental cases it has not commended itself as a justifiable means of diagnosis. In the absence of physical signs, which are often masked by the mental symptoms, the weighing machine and thermometer have been our chief guides to isolation. Many cases have thus been isolated who have only been suspected of the disease, and we believe this course has been a right one. No case has ever acquired phthisis in the hospital; but our short experience has shown us that any isolation hospital which does not provide special accommodation for suspects will be much less valuable to the institution.

Still further, in order to efficiently serve an institution for the insane, an isolation hospital must be a miniature asylum. Phthisis attacks all classes of the insane, the acutely suicidal and wildly maniacal as surely as the harmless imbecile. Single and padded rooms are essential; their absence has proved one of the greatest wants in our consumptive hospital. More than once have we seen a phthisical, noisy, and homicidal epileptic, the very woman who, more than any other, scatters her excreta broadcast, turned from the hospital because there was no single room. At times we have observed that one single room to every eight beds would not be too many.

The experiments of Spillman and Haushalter have demonstrated without doubt the dissemination of the bacilli by flies. In summer these insects swarm in our hospital and feed upon the sputum. They are a terrible plague to the more helpless sufferers. Many appliances for their suppression have been tried in vain. Perhaps frequent fumigation by formalin by means of the alformant lamp is as good as any. The patient is best protected by a mosquito curtain fitting tightly round her bed.

Cats are perhaps more frequent disseminators of bacilli than is generally believed. One cat living about this hospital died of well-marked phthisis, while another, which was known to eat sputum and to be ailing, was shot. Its left lung was consolidated, while groups of little white nodules were obvious in the intestinal peritoneum under the serous coat. Cats not only eat sputum, but carry it about on their fur. They ought never to be allowed in a consumptive hospital for the insane.

Disinfection.—Every reasonable effort is made to suppress the bacillus. Disinfectants are freely employed in the washing of utensils and of the bodies of the patients. Owing to the danger of patients drinking what is in the chamber-pot and sputum mug, it is impossible to have carbolic or microbine in them while they are in use, but a thin layer of turpentine is employed with safety. Many are induced to use a rag to spit on, which is afterwards burned; while every drop of urine, fæces, or sputum which gets upon the floor is carefully wiped by a rag soaked in carbolic. The floors are made of blocks of pitch pine, and are cleaned and polished with beeswax and turpentine.

Treatment.—As to the treatment, the open-air method is adopted; no special system is followed to the letter. The general principles aimed at are recognised and carried out as thoroughly as circumstances will allow. These general principles are—(1) as much exposure to fresh air as possible; (2) an abundant dietary limited only by the assimilative powers of the patient; (3) in certain cases exercise regulated according to the patient's strength; (4) careful medical supervision of every detail of the patient's life. Some of the windows of the dormitories are kept open all the year round, and the patients even in winter are allowed to sit outside in shelters protecting them from the wind. Their seats are

always kept in the sun, and they are carefully moved round with it from east to south, and from south to west. They rarely complain of cold. In cases where the digestion is good the following dietary is given :

At 6.30 a.m. bread, milk, and porridge.

At 8 a.m. tea, bread and butter, toast, and bacon.

At 10.30 a.m. mutton broth, beef-tea, or milk.

At 12, noon, fish meat and potatoes, and milk pudding.

At 4 p.m. tea with bread and butter.

At 7 p.m. bread and milk and porridge.

(All the milk used in the asylum is sterilised.)

Unless contra-indicated every patient gets cod-liver oil in some form. They are encouraged to take as much as possible, to eat a small biscuit with it, and to take it only between meals.

For suitable cases daily walking exercises are prescribed, and in some cases, which could not be got to take exercise, artificial respiration has been performed for five minutes several times a day, but with doubtful results.

As few drugs as possible are employed. In cases of weak heart cardiac tonics are given and perpetual rest for a time insisted on. Anything which upsets the digestion is immediately discarded, for if the digestion is bad so is the prognosis. No case is hopeful which does not increase in weight. Paraldehyde is the only hypnotic employed.

Mental Condition of those treated.—To demonstrate the results of treatment we have selected seventy-four consecutive cases in whom the disease was well marked. Their ages ranged from twenty to sixty-two, and only three had acquired phthisis before admission to the asylum. In twenty-five cases there was no hereditary predisposition either to phthisis or insanity ; in twenty-seven no history could be got ; in five there was a hereditary predisposition to both phthisis and insanity ; in six to phthisis alone ; and in thirteen to insanity alone.

Twenty-one of the seventy-four cases, or nearly 28 per cent., were epileptics, while epileptics only constitute about 9 per cent. of the insane in the asylum ; twenty-seven, or 36.5 per cent., were melancholiacs, but melancholia exists in 40 per cent. of the total insanity ; seventeen were maniacs, and mania exists in 30 per cent. of the total insane.

Results.—The largest number of patients, relatively, have been epileptics, and they have been found the least amenable to treatment. Of the others, all were in a more or less advanced stage of the disease; in fact some only came to the hospital to die. But in twenty-three the disease was effectually checked and their condition much improved. Two, in addition to the marked improvement in their lungs and general health, recovered from their insanity and were discharged.

Practically all the suspects improve so much in general health as to justify their return to the general wards.

But the benefit to the institution has not been limited to the remedial measures applied to those about to fall into decline and the actually diseased. Some margin of good has doubtless resulted from the mere isolation, for since its introduction the death rate from phthisis in the asylum has been reduced by nearly a half.

For reasons already indicated perfect isolation of all convalescents has never yet been possible here, although it soon will be. Yet allowing for this, as well as some margin for the possibility of mere coincidence in the diminished death rate, we think that the results indicate that isolation and hygienic treatment of phthisis are to some extent effectual, and as applicable to the insane in asylums as to any other class in the community.

The Feelings. By HARRY CAMPBELL, M.D.Lond.

I. PSYCHOLOGICAL.

IT is convenient to regard the mental part of man, or his *ego*, as being made up of feeling, will, and thought. Feeling I place first, because it takes precedence in evolution, and because it may be said to constitute the foundation of mind.

There is little need to define these three terms. By *thought* we understand the formulation of ideas; and the end of every mental process being action, the determining of the action we speak of as being performed by the *will*. Of neither of these do I propose to treat here, but of the *feelings*—a subject of

wide interest to the physician. I shall first seek to show how large a part of the mental personality is made up of them, and then inquire into the bodily conditions which underlie them; and here let me observe that I shall treat the subject from the strictly practical point of view, and shall refrain altogether from psychological subtleties.

What, then, are the feelings? They embrace the sensations and the emotions.⁽¹⁾ When the skin is pricked, when light falls upon the eye, or when a piece of sugar is sucked, so many *sensations* are felt; when a person flies into a rage or is stricken with fear, he experiences an *emotion*. Some contend that such elementary emotions are primitive unanalysable states of mind, but it is more probable that they, and indeed all the emotions, are compounded of sensations—that they are, in fact, so many chords of sensations. It is well known (hence, indeed, the origin of the term “emotion”) that every emotion tends to be accompanied by a commotion of the body, *e. g.* cardiac disturbance, dilatation or contraction of arteries, a pouring out or drying up of secretions, spasm or paralysis of muscles. Now these various bodily changes, peculiar for each emotion, are necessarily accompanied by sensations felt in the parts commoted, and there can be little doubt that these sensations enter into the feeling which constitutes the emotion. I shall assume (with Lange and James) that they constitute the *whole* of the feeling, and that if all these sensations were struck out, as would happen in the case of total anæsthesia of the body, nothing would remain of the emotion. It is true that the feeling we term an emotion may seem to have very little sensory element in it which can be definitely felt in the body; and it is for this reason that *emotions* are sometimes spoken of as feelings of the mind, in contradistinction to the *sensations* which are definitely felt in the body. Thus we speak of grief as being a mental pain, and of joy as a mental pleasure, in contradistinction to such a pain as that caused by indigestion, or such a pleasure as the relish of food, which are said to be physical or bodily. Nevertheless it is probable that all emotions, whether simple, as in the case of anger and grief, or complex, as in the emotion of love and the æsthetic emotions, are made up of simple bodily sensations—more particularly of the sensations pertaining to the parts of the body emotionally agitated. Space does not allow me to give my full reasons for adopting this view.

This conclusion has important practical bearings. It is a matter of common observation that vigorous health, with the pleasurable bodily sensations which go along with it, predisposes to pleasant emotions; while, on the contrary, disturbed health with its accompanying unpleasant bodily sensations is prone to beget unpleasant emotions. At the end of a fagging day, when a man feels tired and exhausted, when, in short, his general bodily sensations are unpleasant, he is wont to get irritable, *i. e.* to experience a certain measure of the painful emotion of anger, but by the time he has been refreshed by food and feels rested and comfortable, he is disposed to more pleasurable emotions. Now this is just what our conclusion would lead us to suspect. If the emotions are compounded of bodily sensations, then pleasant bodily sensations, providing as they do the ingredients of pleasant emotions, will predispose to these, while painful bodily sensations, furnishing the materials of painful emotions, will tend to call forth these. Indeed I would go further, and contend that when the entire body is permeated, so to say, with unpleasant sensations, it is impossible to experience a pleasurable emotion, and contrariwise. This must be the case if our premises are correct. I say *permeated*, for when a pleasurable or a painful sensation involves only a limited part of the body, as when one sucks a sweet, or cuts one's finger, such sensation is quite consistent with the concurrence of emotions of the opposite order.

It may be thought that this principle, though in the main true, does not admit of universal application. Thus a person possessed by a feeling of exuberant well-being might, on hearing bad news, suddenly be plunged into painful emotion. Let us not forget, however, that a depressing emotion of this kind tends to destroy for the time being the pleasurable bodily sensations; but directly the latter reassert themselves the painful emotion tends to fade away. Similarly a person pervaded with a profound sense of *malaise* may by good news, cheery conversation, or stirring music, be temporarily roused into a pleasing emotional state, which for a time mitigates or removes the painful bodily feeling; but in proportion as the latter revives, in that proportion does the pleasing emotion tend to grow faint and disappear.

Individuals differ greatly in regard to the Nature and Range of their Feelings.

Individuals differ greatly in the nature and range of their feelings. It is because of these differences that men differ in temperament and disposition. Individuality depends essentially upon the feelings. If all men felt exactly the same, differing only in thinking power, each man would seem to be mentally very like all others.

These differences in feeling are shown alike in respect of the simplest sensations and of the most highly elaborated emotions. How profoundly, for instance, do individuals differ in their taste sensations! What is agreeable to one may be disgusting to another, and it is probable that the range or scale of taste sensations differs much in different individuals. And the same applies to other sensations, visual, auditory, sexual, and so forth; just as some have an exquisitely delicate colour-sense, while others are colour-blind; and just as some have a keen sense for appreciating musical sounds, while others are practically music-deaf; so some may have powerful erotic feelings, while others are altogether devoid of them.

As further illustrating how individuals differ in regard to their sensations, I may refer to those groups of sensations which go to make up the feeling of physical well-being and ill-being. These feelings have a special interest for the physician, whose chief life-work is to bring about the one and drive away the other. This is, indeed, the final end of all human effort. If all of us were imbued with an exuberant sense of well-being, this would indeed be a happy world.

There are different kinds of well-feeling—that is to say, we do not always feel well in exactly the same way; and there are still more numerous varieties of unwell-feeling, or *malaise*.⁽³⁾ We may feel ill in many different ways. Let us, however, for convenience regard well-feeling on the one hand, and *malaise* on the other, as being always the same in nature and differing only in degree. We may then construct a scale representing the various degrees of well-feeling and *malaise*. In the centre we place the indifferent feelings, passing thence upwards through ever-increasing heights of well-feeling, and downwards through ever-increasing depths of *malaise*.

Now, neglecting temporary variations, we may say that every individual has his own particular note of feeling in this scale. The habitual note of some is one of exuberant well-being ; of others—quite a large number—a feeling of indifference ; of others, again, a feeling of *malaise*.

The sense of exuberant well-being is most characteristically met with in young people ; after adult life is reached it tends to get less and less, being only exceptionally found in the aged. That such a deterioration in the realm of feeling does actually occur we gather from the testimony of individuals themselves, and also from their conduct. The sense of exuberant well-being always expresses itself by muscular activity, just as the sense of *malaise* conduces to quiescence ; and it is certain that the steady decline of muscular activity which takes place with advancing years is marked by a parallel descent in the gamut of feeling. All animals are most active during their growing years, when they indulge in activity for mere activity's sake, and it is then that they feel most exuberantly well. Very few, even during their physical prime, much less as they approach or actually enter upon the period of decay, experience that intense joy of living which belongs to the young. How soon it departs depends upon various circumstances. It probably goes sooner in the civilised than the uncivilised ; in the sedentary town-dweller than in the country-dweller leading an active outdoor life ; in the poor than in the well-provided. In the poor of large towns it departs very soon, and it may safely be asserted that the second and third generations of very poor town-bred people never feel exuberantly well, if, indeed, they can be said to feel well at all ; their habitual note of feeling is very low down in the scale. It disappears in women before men. A large number of women lose it soon after they have reached womanhood, seldom feeling more than moderately well from this time till after fifty, which is past the age for exuberant well-feeling.

It is this atrophied sense of well-being, and not merely the disappointment of abandoned hopes and unrealised ideals, that makes a person in later life exclaim with the poet—

“ But yet I know, where'er I go,
There has passed a glory from the earth.”

When a person gets *blasé*, it is not so much that he is surfeited with pleasure, as that his keen sense of well-being has

been blunted. It is surely impossible to feel acutely well and *blasé* at one and the same time.

The pessimists of this world are those whose habitual note is one of *malaise*; feeling bad themselves, they take a gloomy view of things in general; while the sanguine and the hopeful are those who feel acutely well, and who look upon the world in the light of their own feelings. A sense of exuberant well-feeling is, indeed, incompatible with painful emotions or painful thoughts. It is largely on this account that children cannot remain sad for any length of time, or harbour gloomy thoughts.

“A simple child,
That lightly draws its breath,
And feels its life in every limb—
What should it know of death?”

Some few—and they are chiefly, perhaps, men—retain to extreme old age an acute sense of well-feeling and the pleasurable emotions that go along with it. They are still capable, as they walk by the sea-shore or gaze upon a sunset, of that same emotional thrill which stirred them in the first flush of youth; they believe that this *is* a beautiful world, that life *is* worth living, even to the very end. This is normal. Those who scarcely ever rise to the height of well-feeling, but remain habitually in the depths of *malaise*, are abnormal. Life to many of these is not worth living; nay, it may be a painful thralldom from which they seek escape by self-destruction.

It need scarcely be said that those who seldom feel downright well are greatly handicapped in their life's work; they are apt to lack assurance and initiative, though we find not a few notable exceptions. It is a remarkable fact that people get accustomed to not feeling well.

Coming to the region of the emotions we find the same differences obtaining. Observe, for instance, how great they are in regard to the religious and æsthetic emotions. Some have no religious feeling; they cannot sit out a service, actually chafing under conditions which produce in others a deep calm or an ecstasy of happiness. And among those possessing the religious temperament, what differences! Whether a man is a Ritualist, Low Churchman, or a Salvationist, depends fundamentally upon his feelings. Watch a group of Salvationists and a group of Low Churchmen conducting an open-air service, and you will best realise how profoundly they differ in their feelings;

and these differences, as I shall argue later, depend chiefly upon differences in metabolism and blood-composition.

But it is perhaps in regard to the æsthetic emotions that the differences in feeling capacity among men are most marked. Very few realise the extent of these differences. Contrast in this respect the great seer, to whom the meanest flower that blows gives thoughts that often lie too deep for tears, with the "wild rude carl," to whom a primrose by the river brim is a yellow primrose and nothing more. To a large number of people, indeed, the beauty of nature and the great realm of art are as a sealed book. The ordinary person can no more enter into the feelings of the poet or the painter in his moments of inspiration, than can a man born blind form an idea of colour or of light. We, as a nation, seem to lack the sense of colour and of form, or how could we come to build or to tolerate those dreary miles of drab streets which make our large towns so often the "abomination of desolation" to the sensitive eye? There are, on the other hand, unhappy individuals so constituted that to dwell in a mean street at the East End of London, or even in one of the gimcrack "villas" of its more prosperous suburbs, would sap their mental vigour and crush all gaiety from their spirits. The minds of such can no more thrive in an atmosphere of ugliness than can their bodies keep healthy in poisoned air. I have known a child who was sent up from a pretty country village to a particularly unlovely part of the city brought perilously near to melancholia. Burne-Jones was intensely sensitive to the weather. He could do no work on an "ugly" day and many who are not greatly susceptible to æsthetic impressions show this peculiarity.

The Diversity in Feeling Capacity viewed Sociologically.

One of the results of the diversity of feeling capacity of different individuals is that it prevents them from properly understanding one another. To understand a person you must be capable of yourself feeling his feelings, *i. e.* you must be able to *feel with*, to sympathise with, him. Half, nay nine tenths, of the misunderstandings and frictions in our social life depend upon these differences in feeling capacity. "How can two" (even) "walk together except they be agreed!" When two people feel very differently they can never know one another,

they have no common basis to go upon ; neither can properly enter into the mental world of the other ; they remain, in spite it may be of making a large part of the life-journey together in the most intimate relations, as husband and wife perhaps, or as parent and child, strangers to the end.

It is manifest that those who have the widest range of feelings, and therefore the widest sympathies, have also the deepest insight into human nature. A man with a limited feeling capacity, be his intellect never so great, must be out of touch with mankind at large, must ever remain isolated among his fellows, shut out from any real communication with them. Hence it is that the genius of a Shakespeare lies quite as much in the extraordinary scope and variety of his feelings as in the magnitude and subtlety of his intellect. Without such breadth of feeling not only would he lack the real poetic touch, but his characters would move like so many puppets, not with the true human impulse.

Let, then, the physician try to realise how his patients feel, and so get into some sort of touch with them. Indeed, unless he does, he will often fail in his diagnosis and still more in his treatment. I am not advocating any maudlin sympathy ; quite the contrary ; sympathy, like the gold of the decorator, should be used with great delicacy—never “laid on thick,” if I may be permitted the expression ; but it is necessary to be alive to the danger the physician runs of becoming a mere learned man who regards his patients as so many “cases,” interesting or otherwise, instead of so many instances of concrete suffering depending on him for help.

The Influence of the Feelings on the Thoughts.

I have said that mental individuality depends essentially upon the feelings, and this statement will be the more readily accepted when we reflect that the feelings not only constitute a large part of the *ego*, but also (a) control thought and (b) influence conduct.

(a) When a person has some special task in hand, a business occupation it may be, or the thinking out of some problem, the current of the thought is mainly determined by the task before him, though even then the thoughts themselves are liable to be coloured by the feelings. When, however, they are not thus

kept in definite channels, but are left to pursue, so to speak, their own course, we shall find that they are very largely determined by the feelings of the moment.⁽³⁾ The hungry man thinks of his next meal, the erotic man has erotic thoughts, the vindictive man revolves schemes of revenge, the man inflated with ambition lays plans for the conquest of the world. How different the trend of thought in the artist and the Philistine! Observe, too, how a highly complex dream may be engendered by, and centre round, some bodily sensation. Witness, again, how the thoughts are influenced by the feeling of well-being and *malaise*; when a man feels strong and well, when his whole frame is pervaded by a buoyant feeling and pleasing emotions arise, the thoughts turn on pleasing subjects; but when he feels weak, exhausted, and mentally depressed, he thinks gloomy thoughts. These differences are strikingly shown in insanity. The melancholic not only suffers from sadness, which is an emotional state, but likewise from a number of unpleasant bodily sensations; indeed, I believe the sadness is the outcome of these, and is incompatible with a feeling of health and strength in every fibre of the body. These unpleasant bodily sensations are for the most part massive, subdued (*i. e.* not intense), and vague, by which I mean that it is difficult to describe them or refer them to definite regions of the body. This vague, massive, subdued sensorial pain begets emotional pain, whereupon the mind is set thinking on painful subjects, which, as might be expected, refer mainly, if not wholly, to himself. He dwells upon his own wretchedness, his incompetence, his unworthiness; his feelings suggesting these thoughts. By-and-by, as the intellect becomes disorganised, the gloom is intensified, and the thoughts partake of the nature of true delusions; he is not merely incompetent, but wicked; he has committed a sin so awful that it can never be forgiven; he is being pursued by some avenging power and is doomed to punishment eternal. How different is the case with the general paralytic in the "happy" phase of the disease. Here there is a feeling of bodily health and strength which engenders a pleasing emotionality—happiness. These pleasant feelings beget unwonted self-assurance; his ideas turn on his own importance; he believes himself capable of undertaking all sorts of difficult things, and his thoughts run in the direction of great schemes. These, later, when the intellect gets disorganised,

take the shape of grandiose delusions, and while his melancholic brother is prostrate with the thought of his own unworthiness, and racked with the fear of eternal torment, he on his part is glorifying in the belief that he is the lord of the heavens and the earth. And in this case, again, there can be no doubt that the current of the thoughts is determined by the feelings.

The Influence of the Feelings on Conduct.

(*b*) That the feelings profoundly influence conduct scarcely needs insistence. The hungry man seeks food, the thirsty man drink, and the enormous motive power of the sexual instinct is self-evident. Feelings, indeed, constitute the springs of conscious action. We are *impelled* by them to certain actions, feelings which possess this impelling power being termed *impulses*. Often this element of feeling in voluntary action is slight, so slight, indeed, as to be unrecognisable, as in an action undertaken as the result of a purely intellectual process. Actions of this kind, though in them the element of feeling is still operative, would not in ordinary language be said to be impelled by feeling, and we speak of them as being determined by the *head* in contradistinction to those which are dictated by the *heart*. But although the head is a much more trustworthy guide than the heart, and although one might expect it to be the more potent factor in determining conduct, yet, as a matter of fact, the decision of the intellect stands little chance against a powerful impulse running counter to it. History shows that men and nations are governed far more by their hearts than by their heads, and that men seldom practise what they preach: they preach what they *think*; they practise what they *feel*. Hence the frequent inconsistency between a man's public and private life, as in the case of Schopenhauer, who in actual life was very far removed from the pessimist, misogynist, and ascetic he represents himself to be in his writings.

The law which governs all conscious actions is this: *every sentient creature seeks to obtain agreeable feelings and to avoid the disagreeable*; so that it may be said that all the conscious actions of the individual are made with a view to securing pleasure and avoiding pain. This principle in the main works for the good, but not altogether, since some pleasures are injurious while some pains may be beneficial. The exceptions

to the general rule are of all animals greatest in the human, who has so widely diverged from the stereotyped ways of the instinct-led brutes.

Inasmuch as men are led to seek after the agreeable and to avoid painful feelings, and inasmuch, too, as they differ very much in regard to their feelings, it follows that they will differ much in regard to their conduct. A child seeks a sweetstuff shop, the drunkard haunts the public-house, the man in whom beautiful things produce pleasurable feelings surrounds himself with them, as far as he can, and he may take to collecting pictures, engravings, old china, furniture, or indulge some similar hobby. Others there are who, possessing the gift of public speaking, find a great pleasure in exercising it, and these seek a career as barristers, politicians, or preachers. It is needless to multiply instances. My purpose is merely to show how feeling governs conduct, how persons are always striving to secure for themselves feelings which are agreeable and to avoid those which are disagreeable, and how, since individuals differ so widely in their feelings, they are impelled in different and often opposite directions, some finding pleasure in what would cause others actual pain.

It is an interesting study to observe this principle at work among mankind; to note how differently individuals are impelled, and yet with what undeviating regularity the rule operates. Turn where we may we see the incessant struggle after the pleasurable and the avoidance of the painful. We observe it alike in the child who feeds at its mother's breast and nestles up to her for warmth, and in the old man who sits by the fire-side painfully solicitous of his creature comforts; and we shall find him guided by the same principle up to the end, and even a few hours before his death the slave of his feelings, still seeking after the pleasurable, still avoiding the painful.

Doubtless many of our impulses, tendencies, desires, have to be struggled against, because they are either hurtful, ignominious, or futile, and the restraining power varies in different individuals; but be it great or small—that is, be the character noble or ignoble,—it is certain that the bias of a man's life is, ever has been, and probably ever will be, determined by his feelings. He looks in the direction they indicate, even if he does not always move forward along that enticing path. Happy he who may do so with impunity. (4)

Summary.—1. The feelings embrace the sensations and the emotions.

2. The sensations are the feelings which are definitely referred to the body.

3. The emotions, while in reality made up of sensations, in particular of certain sensations felt in the parts of the body commoted during the emotions, are not definitely referable to the body, for which reason they are sometimes spoken of as "feelings of the mind."

4. Emotions being compounded of (bodily) sensations, when these latter are pleasurable they are apt to call up pleasurable emotions; while painful bodily sensations tend to call forth painful emotions.

5. Individuals differ greatly in their feeling capacity, both in respect of simple sensations and emotions.

6. This difference in feeling capacity (*a*) determines the differences in disposition observed among mankind; (*b*) prevents people from properly understanding one another, and is thus responsible for much social friction and misunderstanding.

7. Those with a limited range of feeling are limited in their sympathies and have but small insight into human nature; and contrariwise.

8. It is important to the physician to get into some sort of touch with the feelings of his patient, or he may fail to get a proper grip of his case and miss a valuable clue to treatment.

9. Just as the sensations tend to call up emotions in harmony with them, so the feelings in general (*i. e.* sensations and emotions) tend to excite ideas which chime in with them; pleasant feelings cause pleasant thoughts, painful feelings painful thoughts. Hence the bodily sensations greatly influence the thoughts.

10. The feelings influence conduct; conscious life is, viewed from an elevation, a constant effort to obtain pleasurable feelings and to avoid disagreeable feelings.

11. From all of which it is manifest that the feelings constitute a very large part of the mental individuality or *ego*.

In the next section I shall treat of the genesis, or coming into being of the feelings, and I shall endeavour to show how closely they depend upon the composition of the blood, and upon the metabolism of the organism at large.

II. PSYCHO-PHYSIOLOGICAL.

The Genesis of the Sensations.

I now propose to consider the genesis of the sensations, *i. e.* the bodily conditions which underlie them. Wherever sensory end-organs exist, there sensations may be felt, and this means throughout the entire body. They are not present in cartilage, and they are either absent from, or very defectively supplied to, the brain and spinal cord; but we may for all practical purposes say that sensations are felt throughout the whole body.

Sensations are provoked by stimuli acting on these *sensory end-organs*. These latter constitute the keyboard of the sensorial instrument; the cerebral cortex may be compared to the pipes, while the stimuli represent the players. The players are constantly at work, and during conscious life a voluminous, many-toned chord of sensorial music is continually being struck.

The stimuli consist of various agents, *e. g.* of ether waves in the case of the retinae, of sound vibrations in the case of the auditory expanses, of massive contact, heat and cold, in the case of the cutaneous end-organs; and in the case of the less specialised sensations which may be felt throughout the body, including the skin, the stimuli are in the main chemical, and reside in the fluids bathing the nerve-elements.

Now in considering the chords of sensations which an individual experiences at any one moment, let us disregard the more intellectual ones—those of sight, hearing, tactile sensibility of the fingers, and even the sensations of taste and smell⁽⁵⁾—and we have remaining a chord of comparatively unspecialised organic sensations. This chord is equivalent to what has been termed, and what I shall refer to in this essay as, *cœnæsthesia*; by the Germans it is termed *das Körperliche Gefühl*. Though the cutaneous sensations which result from massive contact and from modifications of temperature doubtless enter largely into it, it is in the main a chord struck by chemical stimuli; that is to say, to produce it, the end-organs, with a few exceptions which need not be gone into, are played upon by chemical stimuli and little else; moreover, a considerable portion of that large volume of sensations derived from

the skin is due, not to the operation of external agencies, but to the chemical state of the blood circulating in the skin ; witness the itching that may result from taking shell-fish, and the numbness and tingling that occur in alcoholic neuritis.

I shall hope to make it plain as I proceed what I mean by "chemical stimuli ;" for the present it will suffice to say that I understand by them non-nutrient substances, or, as we may for convenience term them, drug-substances, circulating in the blood : and I shall provisionally assume that the chord of cœnæsthesia is essentially struck by such chemical stimuli ; in other words, that the mere nutritional interchange between nerve-matter and environing plasma does not constitute a stimulus. This may sound a daring proposition, but I advance it provisionally, if only for the purpose of directing attention to the important part taken by chemical stimuli in the genesis of cœnæsthesia.

Another doubtful point needs mention here. To what extent can chemical stimuli act upon the sensory *nerve-fibres* and the *sensory cortex*, so as to evoke sensations? We know that drugs have a selective power, that urari acts upon the motor end-plates and strychnine upon the motor ganglia, and doubtless the drugs acting upon the sensory nerve elements have a similar selective power ; but I have not yet had time to go deeper into this subject, and can, therefore, only reason *a priori*. I think, however, we may safely conclude, seeing that end-organs are specially adapted to receive stimuli, that the sensory instrument is struck mainly through them ; but though I should expect the sensory fibres to be much less responsive to chemical stimuli, I should at the same time look for a definite response to some of them, whereas in regard to the cortex I should expect it to be wholly, or almost wholly, irresponsive. I can well imagine that the sensory cortex may be so affected by chemical substances circulating in the plasma as to modify its mode of response to impulses reaching it through nerve-fibres, but I should be inclined to doubt whether it could be induced to yield a sensation by direct chemical irritation of its ganglia ; in order to get a psychological change it is necessary to have a very special and subtle form of physical change, and it is doubtful whether a direct chemical stimulus can bring this about.

That we may realise the important part played by the

sensory end-organs in the genesis of cœnæsthesia, let us imagine them to be all rendered anæsthetic. I think we shall all agree that under such circumstances cœnæsthesia could only exist in a very rudimentary form, if, indeed, it could exist at all. I am not aware of any drug that can anæsthetise the sensory end-organs without acting upon any other part of the nervous system, but if an individual were brought under the influence of such a drug we may safely conclude that he would have little, if any, sense of bodily existence.

The Different Kinds of Cœnæsthesia.

I proceed now to consider the different kinds of cœnæsthesia. When we reflect upon the enormous number of notes which go to form this voluminous chord of sensation, and in how many different ways those notes may be struck by the many stimuli present in the blood, we shall see at once that there must be countless varieties of it. I shall refer only to two, and these broadly contrasted :—(1) That in which there is a lively feeling of well-being and buoyancy ; (2) that in which there is a well-marked feeling of *malaise* and depression.

1. The sense of exuberant well-being is happily portrayed by Romeo, when he says :

" My bosom's lord sits lightly on his throne,
And all this day an unaccustomed spirit
Lifts me above the ground with merry thoughts."

In such a case the end-organs all over the body are stimulated in a way favourable to the induction of a pleasurable cœnæsthesia—a harmonious chord is struck, and the individual is pervaded by a feeling of health and strength. Now we have seen that the bodily sensations control the emotions, and we should therefore expect a pleasurable cœnæsthesia to call up a pleasurable emotional state. Accordingly we find that with a feeling of bodily well-being there is a pleasurable emotionality—"an unaccustomed spirit" as Romeo puts it. Gradually more specialised emotions appear ; thus the sense of bodily strength begets a feeling of self-assurance. These emotions carry with them their own thoughts, all of which are in a happy vein ; they are, in Romeo's words, "merry thoughts."

This sense of exuberant well-being and joyousness has its characteristic physical accompaniments. The respiratory move-

ments and the circulation are stimulated, and there is a tendency to spontaneous muscular movements—in short, a heightening of the bodily activities generally.

See, then, what widespread results follow upon a pleasurable cœnæsthesia, itself the result of chemical stimuli operating upon the sensory end-organs.

I have already drawn attention to the influence of the bodily sensations upon the emotions and thoughts. Here let me insist upon the predominant influence upon thought and emotion of that vast sensorial chord which we denominate the cœnæsthesia. The sense of exuberant well-being fosters a belief in self, and constitutes, I take it, the fundamental psychic characteristic of the megalomaniac, whether as met with in everyday life or in the asylum. It is this which determines the characteristic emotions and the large delusions which are wont to appear when the intellect becomes disorganised. True, a strong character may, in spite of physical *malaise*, retain his self-assurance in regard to his mental capabilities, such as his ability to carry through a difficult scheme; but this is strength of will rather than self-assurance, and the very reverse of morbid, being the outcome of an honest, healthy belief in self; and I believe I am right in saying that the exaggerated belief in self generally, such as we see most pronounced in the general paralytic, only occurs when the individual is pervaded by a strong sense of *bien être*. No sense of *bien être*, no megalomania.

2. Let us now consider the opposite variety of cœnæsthesia. We will suppose that, not a harmonious chord but, a discord is struck, producing a painful cœnæsthesia—a sense of *malaise*. This will call up a painful emotional state, such as gloom associated with self-distrust; in consequence the thoughts will tend in an unhappy direction, so that when the intellect becomes disorganised the unfortunate victim has delusions of persecution.

The depression in the emotional sphere will have its corresponding physical expression; circulation and respiration are diminished, and there is a lowering of the vital activities generally.

Here again we see how greatly the cœnæsthesia affects the psychic and physical being, and how the psychic side of us is influenced by chemical stimuli circulating in the blood.

The influence of the cœnæsthesia on the emotions and the trend of the thoughts cannot be too strongly insisted on. Painful emotions and unhappy thoughts are incompatible with a pleasurable cœnæsthesia, while pleasurable emotions and happy thoughts are incompatible with a painful cœnæsthesia.

Chemical Stimuli.

I come now to speak of the chemical stimuli which I have assumed to play so large a part in the genesis of the cœnæsthesia. We must not think of the blood plasma as consisting merely of water holding in solution food-stuffs (albumins, fats, and saccharides), salines and deleterious waste products. The blood, as I have recently contended elsewhere, contains also a number of drug-like substances, substances which do not yield energy and which take little or no direct part in nutrition, but which are capable, after the manner of drugs artificially administered, of modifying function. These substances we may group, according to their origin, into four classes.

1. The internal secretions. These do not yield energy, and although they doubtless influence nutrition, yet they do this much in the same way as drugs artificially administered. Their essential purpose is to influence function. The adrenal secretion is strikingly drug-like in its action, being the most powerful vaso-motor constrictor known. The thyroid secretion again acts much like a drug. When the artificial extract is given there occur symptoms like those of Graves's disease, the patient becoming very nervous and suffering from palpitation, tremor, and flushes. When, however, the supply of the thyroid substance to the blood is deficient, we have the dulness and hebetude of myxœdema, in other words, the lymphatic temperament. In short, the activity of the thyroid gland largely determines whether a person is nervous and excitable on the one hand, or stolid and lymphatic on the other. The cœnæsthesia is very different in these two opposite conditions. How far this is to be attributed to the structural or nutritional state of the nervous system resulting from defect or excess of the thyroid secretion, and how far to the possible action of the thyroid secretion as a chemical stimulus to the sensory end-organs, I do not attempt to say. I think it probable, however, that the secretion may act as such a stimulus.

2. Besides nutritive substances proper, food contains a number of substances which have a direct influence on function. Among others, for instance, it contains stimulants, of which there is a specially large quantity in meat. These are absorbed into the blood and act like drugs; many of them, no doubt, upon the sensory end-organs. The modification of cœnæsthesia produced by a meal of meat is, I believe, in large measure due to the action upon the nervous system of stimulating substances contained in the meat. It is well known that meat has an intoxicating effect.

3. A large number of drug-substances are produced in the alimentary canal during the process of digestion. The most notable are the ptomaines, alkaloid substances allied to the vegetable alkaloids, such as strychnine and morphine. Many of these when absorbed in unduly large quantities into the blood are toxic, and profoundly influence cœnæsthesia, a result which we may, I think, safely conclude is due at least in part to their action on the sensory end-organs.

Now it is generally assumed that these alkaloids and allied bodies are wholly toxic in their action, or, if not toxic, at least indifferent. We must remember, however, that the physiological effects of an alkaloid depend upon the dose that is administered. Strychnine and morphine, though in large doses deadly poisons, are in minute quantities highly valuable remedies, and I see no reason why many of the alkaloids formed in the alimentary canal may not, when absorbed into the blood in small quantities, play the part of nerve-tonics and stimulants; nor does it seem improbable that other drug-substances, similarly absorbed, may even in large quantities exercise a beneficial effect. In short, I suggest that just as some drug-substances absorbed from the stomach and intestines in certain quantities produce a painful cœnæsthesia, so these same substances in different quantities, and other substances similarly absorbed, may tend to produce a pleasurable cœnæsthesia. That they are all necessarily injurious or indifferent in their action seems to me unlikely.

4. Finally, it is probable that similar drug-substances produced by the metabolism of the tissues have likewise a beneficial influence on function. I cannot think that they are all either toxic or merely innocuous. Many of them have certainly a depressing action on nerve-function, but others have probably

a stimulating and tonic effect. Uric acid, for instance, is said when swallowed to act as a stimulant.

I claim, then, that the blood normally contains a number of drug-substances, and that these play a necessary part in the bodily functions, among other things acting as chemical stimuli to the sensory end-organs, and being thus largely responsible for the cœnæsthesia.

Classification of Chemical Stimuli according to their Influence on the Cœnæsthesia.

It would be impossible to make an elaborate classification of chemical stimuli according to their influence on cœnæsthesia, and it will be sufficient for our purpose to class them into (1) the depressants, those which produce a painful cœnæsthesia, of which the most characteristic form is a sense of ill-being or *malaise*, with mental depression; and (2) the stimulants and tonics, those which produce a pleasurable cœnæsthesia, a feeling of well-being (*bien être*), with mental exhilaration.

Supposing the nervous system to be normal, and the tissue plasma also to be normal, save in the complete absence of chemical stimuli, there is (so we may provisionally assume) neither a feeling of *bien être*, or *malaise*, but simply one of indifference. The same thing happens if the stimulants and depressants exactly neutralise one another. When, however, the stimulants preponderate there is a sense of *bien être*, while a preponderance of the depressants leads to a sense of *malaise*.

Now, no one will, I presume, demur to the statement that the blood may contain depressant substances, capable of causing painful cœnæsthesia and mental depression. It is sufficient to refer to the symptoms which may attend disordered digestion, notably disturbances in the functions of the liver, and to the influence of blue pill and black draught in removing those symptoms. But what evidence, it may be asked, have we that the blood contains stimulants independently of those we expressly take as such?

Well, there is first the unmistakable fact that the food we eat contains an abundance of stimulants; then there is the fact that some of the compounds normally manufactured in the body can be proved experimentally to have a stimulant action; and finally, we have certain phenomena of disease which we can hardly doubt

are caused by stimulant substances produced in the disease. It is well known that certain nerve-storms are often heralded by a period of exceptional well-being : instance the familiar case of megrim. Now this has been attributed to the absence from the blood of some substance (or substances) having a depressant action, but the explanation appears to me highly improbable. That such absence might conduce to a feeling of average, or as we may say normal, well-being, I can well believe, but that it should bring about a supernormal condition, an actual exaltation, I altogether refuse to admit. I think it much more likely that the feeling of well-being in these cases is caused by some stimulant substance circulating in the blood, the subsequent phenomena of the actual attack being attributable to a "reaction," such as may follow a night's debauch, or a dose of opium ; or else to the accumulation of the stimulant to an extent rendering it no longer depressant ; or still more likely to both of these causes.

The phenomena of general paralysis of the insane, again, lends support to the view that an auto-intoxication is taking place. Sir Samuel Wilks was, I believe, the first to point out the analogy between alcoholic intoxication and the symptoms of general paralysis, an analogy so striking that, once observed, the inference can scarcely be avoided, that the exuberant sense of well-being sometimes observed in this disease, with the accompanying megalomania, is the result, as in alcoholic intoxication, of some stimulating poison or poisons circulating in the blood. Dr. Mott has isolated certain poisons in cases of general paralysis, and I should not be surprised if it were discovered that some of them have an action very similar to that of alcohol. On this view the exuberant general paralytic is in a state of chronic intoxication, and his mental condition may be compared to that of a person in the earlier stages of alcoholic intoxication.

The Relative Part played by Nervous Structure and Chemical Stimuli in determining the Nature of Cœnæsthesia.

One other question I shall touch upon, and then I have done. It is this : Do the differences in cœnæsthesia and its attendant emotions (*i. e.* temperament, mood) in (1) different individuals, and (2) the same individual at different times,

depend upon differences in nervous structure, or differences in respect of chemical stimuli—upon differences in the instrument or in the players?

(1) Does one individual habitually feel exuberantly well and in high spirits, and another habitually inert and depressed, because the mind instrument is in the one case so constructed that it readily yields pleasant sensations and emotions, plays as it were merry tunes, and in the other is adapted rather for the expression of miserable feelings—for the minor harmonies; or is it because the instrument is differently played upon in the two cases, the blood being surcharged with stimulants in the one, and depressants in the other? According to the one view we should say a man's temperament depends chiefly upon the structure of the mind instrument; while according to the other view it would be mainly determined by his blood composition, *i. e.* by the metabolic peculiarities of his tissues. In the latter case the happy and the unhappy man would exchange temperaments if they could exchange bloods.

I do not think the question so absurd as it perhaps at first sight appears; for while it is certain that differences in sensorial organisation must largely influence temperament—witness the varying response among different individuals in regard to such an agent as alcohol, which by no means always produces its characteristic exhilarating effect—yet we must remember that any given instrument may be made to yield an infinite variety of music according to the nature of the stimuli acting upon it. A perfect instrument in the hands of an unskilled player may awaken only to discords, while the hands of a master will evoke most eloquent music, even out of an old harpsichord; and so it is with the mind instrument. When one reflects upon the widely divergent effects on it of such stimuli as haschisch, alcohol, and the toxins formed in the alimentary canal, and when one considers that a brain in an advanced stage of degeneration may by certain stimuli be made to yield up a feeling of well-being and the pleasurable emotions and thoughts belonging to it, there is no escaping the conclusion that a man's habitual temperament may be determined far more by blood constitution, or what comes to the same thing, by metabolic idiosyncrasy, than has hitherto been supposed.

In this connection I would again refer to general paralysis of the insane. One may see a victim of this disease so weak

that he cannot lift his hand, actually unable to swallow, with his brain in the last stage of degeneration, and his intellect correspondingly disorganised, yet exuberantly happy and full of assurance as to his importance and his powers. Are we to suppose that this exaltation in the realm of feeling is an expression of cerebral degeneration, that the *summum bonum*, the goal of human effort,—happiness—the best music the mind instrument can sound, is the result of degraded function, as we shall have to do if we attribute it to structural alteration in the mind instrument? Shall we not rather liken the mind organ of our general paralytic to an old and broken instrument from which some music can still be got by the touch of the master hand. Surely yes, and I suggest that touch comes from some chemical stimulus; and if chemical stimuli can do so much, is not one justified in thinking that blood composition may be largely responsible for temperament?

2. Whatever may be thought about the cause of the different temperaments in different individuals, few will dispute that the varying moods of different individuals, from day to day and from hour to hour, are largely dependent upon the composition of the blood in respect of chemical stimuli. Such differences can scarcely be attributed to passing structural variations. True, the mind instrument may temporarily alter in its most intimate structure—in what may be termed its undiscoverable structure, *i. e.* in the arrangement of its atoms and molecules, just as it is said that musical instruments “play” much better some days than others (though I much suspect that the difference lies chiefly with the players); but I doubt if such structural changes are greatly responsible for temporary changes in the *coenæsthesia*. I feel persuaded that the frequent alterations from a feeling of *bien être* to one of *malaise*—from good spirits to bad spirits, and the reverse—are largely agencies due to the action of various chemicals upon the supersensitive mind-organ. The sense of well-being often experienced after a sound night's rest, and the opposite feeling of *malaise* which may come on after a harassing day's work, are essentially due, I would say, to modifications in the blood composition. Our moments of depression result, in the main, from the action of depressants, our spells of exuberant well-being, of exhilaration, self-assurance, ambition,—when all the world seems fair and no obstacle too great to surmount, no goal too difficult to win—are really the

effects of mild auto-intoxication. So, too, it may be with the inspired hours of the genius. Is it chimerical to suggest that in those supreme moments there pass into the blood substances which stimulate the brain to its highest achievements?

Summary.—1. The sensorial nerve instrument—that part of the nervous system which has to do with sensation—may be compared to such an instrument as an organ. The sensory cortex is represented by the pipes, the sensory end-organs by the keyboard. When the organ keyboard is played upon, music results; when the sensory keyboard is played upon, sensation results.

2. When certain notes in the sensory keyboard are struck (*e.g.* in the retina, auditory expanse), intellectual sensations are induced (*e.g.* of sight and hearing); when the remaining notes are struck, there result comparatively unspecialised, non-intellectual sensations. These collectively constitute a voluminous sensorial chord which we designate the *cœnæsthesia*, or sense of bodily existence.

3. There are many varieties of *cœnæsthesia*, but they may be broadly divided into (*a*) the sense of well-being, and (*b*) *malaise*.

4. In Section I it was pointed out how the sensations influence the emotions, and how both influence thought and conduct. When, therefore, *cœnæsthesia* is pleasant, *i.e.* when there is a sense of well-being, a pleasant emotionality and happy thoughts arise; but when *cœnæsthesia* is painful, *i.e.* when there is *malaise*, painful emotions and unhappy thoughts come into being.

5. The agencies which, playing upon the sensory keyboard, produce *cœnæsthesia*, consist for the most part of chemical stimuli circulating in the fluids of the body.

6. These stimuli may be broadly classed into the stimulant and tonic on the one hand, and the depressant on the other. When the former predominate *cœnæsthesia* is pleasurable; when the latter are in excess it is painful.

7. From all which it follows that *cœnæsthesia* does not merely depend upon the constitution of the sensory instrument, but upon the way that instrument is played, *i.e.* upon the quantity and nature of the chemical stimuli present in the body fluids; and seeing that this factor is determined by the metabo-

lism of the body at large, it follows that such metabolism is largely responsible for the cœnæsthesia.

8. Inasmuch as the cœnæsthesia influences emotions, conduct, thought, it follows that the *ego* which is a trinity of feeling, will, and thought, is largely determined by the metabolism of the body at large.

(¹) It is convenient to make the feelings embrace both the sensations and the emotions, although all psychologists do not do so.—(²) Owing to the equivocal meaning attaching to the term "ill-feeling"—which naturally suggests itself as the opposite of "well-feeling"—I am obliged to substitute the term "malaise," by which I mean to express a widely diffused feeling of unwell-ness, no matter whether this occurs in connection with well-marked disease or not.—(³) Some, indeed, appear to think that all associations take place through the feelings. See Ribot, *The Psychology of the Emotions*, p. 173.—(⁴) This restraining power itself constitutes an impulse, and is of the nature of a feeling.—(⁵) I say nothing of "muscular sense."

On Epileptic Speech. By A. CAMPBELL CLARK, M.D.,
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THE speech faculty of the epileptic has hitherto received very little attention, though passing references to it have been made from time to time by several writers, viz. Kussmaul, Ross, Wylie, and others. Wylie has stated the well-known fact that temporary aphasia appears sometimes as the "aura," sometimes as an immediate consequence of a fit. Kussmaul confirms this, and Ross writes, "In some cases the warning of an epileptic attack consists of a sudden inability to speak, and it is very probable that word-deafness and word-blindness are by no means uncommon auræ." While saying so much, Ross admits what is certainly true, that motor aphasia is the more readily noticed, and, as obscuring the question of aphasic auræ, he admits the mental confusion attending the onset of unconsciousness, a factor of some importance. Bradylalia (slow speech) and echolalia (echo speech) have also been noticed by observers at home and abroad. They are, however, so frequently observed in developmental speech, and in other nervous and mental diseases, that too much may be made of their significance.

The relation of emotion to speech is well illustrated in Bastian's work on *Aphasia* (p. 5), where there is described the case of a boy, the son of a leading barrister, who had been subject to "fits" at intervals during his early childhood. The first occurred at the age of nine months. They ceased at the age of two years, and the child appeared to be all right, intellectually and otherwise, except that he could not talk. Before he was six years old, when an accident happened to one of his favourite toys, he exclaimed "What a pity," although he had never previously spoken a word. In the case of children of backward speech this has frequently been observed, and such must have come under the notice of not a few family physicians. The point is that the tardy mechanism which may have been making abortive attempts at speech for some time previously, succeeds at last owing to an accession of vocal energy. This accession of vocal energy is due to emotional excitement acting upon the respiratory centre, and exciting a deeper respiratory movement, which during expiration gives the larynx the necessary blast of air at the precise moment when the emissive energy of motor speech is discharged.

The innervation of the vocal speech mechanism requires to be allowed for, if we could adequately comprehend the physiology of the production of words and sentences, but this I pass by, merely observing that it is a factor of considerable importance in our study of epileptic speech. This innervation will be regarded here also in relation to emotional states, for the epileptic is a creature of moods and tenses in the highest degree, and his speech is thereby affected. It has been stated that aphasia is the condition which some observers have noted as the most usual speech affection of the epileptic; but aphasia is now a term of very comprehensive meaning, and the modern conception of the term holds within its limits certain varieties which we do not find associated with epilepsy. Moreover, dysphasia is a term which includes more of the speech affections of the epileptic than does aphasia. The distinctions which will be recognised here are—

- (a) *Aphemia*—inability to speak, depending on affection of the co-ordinating centre for the muscles producing articulate sound.
- (b) *Annesia*—loss of the memory of words.
- (c) *Agraphia*—inability to write.

In the examination of the cases to be immediately referred to, the outlook for word-deafness and word-blindness was negative in its results, but I do not dispute Ross's proposition, though when one considers the mental equation before and after seizures, his statement must be regarded as a difficult one to prove. The clinical study of the following cases was conducted while their intelligence was unclouded by the shadow of a seizure or its after stupor. They are men and women who have been insane for varying periods, some two or three years, others fifteen to twenty years. Naturally, we look for mental deterioration in the older cases, just as we see it in chronic mania or dementia, but in the latter the speech deterioration is mental rather than motor, the emissive or co-ordinating faculty is not impaired to anything like the same degree as in epilepsy. In the early stages of epilepsy—apart from insanity altogether—the speech affections are less marked, though early evidence of them may in some cases be manifest, especially bradylyalia.

In considering the matter systematically the following points were kept in view:—(1) the mental state, distinguishing the emotional and the intellectual; (2) the receptive or subjective function of speech; (3) the expressive or objective function; (4) the vocal mechanism and its innervation; (5) the oral mechanism and its innervation; (6) variations in the individual. The patients were each interviewed on two separate occasions.

CASE 1.—M. B.—, æt. 47, insane eight years, education poor, memory for past and recent events impaired. She is capricious, easily roused, emotional instability is very marked, and her speech, which in her placid moods is low, slow, stuttering, and slurred, when her temper is roused becomes suddenly loud, fierce, denunciatory, and free from stuttering, with staccato pauses. Then her attitude is tragic, her arms are raised with threatening gesture, her face is flushed, her chest heaves, and her voice is loud and resonant.

To every patient the first question was, Have you ever noticed any trouble with your speech? Some resented the idea; most of them at first denied the imputation. Epileptics usually deny that they have had a fit, and are very intolerant of the suggestion that anything is the matter. With this explanation in view, the answers will speak for themselves. Letters, syllables, or words are spaced according to their cohesion to each other or want of cohesion. *Question*: Have

you ever noticed any trouble with your speech? The answer comes in a jerky, spluttering stream of broken talk. Sometimes she stops short with a sudden "catch in her breath." Her reply to the question was as follows:—"Quite so—I de be—," then, as if to excuse her faulty speech, "Thir's yin o' my teeth kin' o' slack." Here she does not stop, but dribbles away in slow monotone, "doon to mel—ans—field—so will—be coming on—for—my—age just now,—my faither—would be coming to, so—came for him and my mother going together forty-four."

While speaking in this strain, it was noticed that the apparent incoherence was due to amnesia. She had a difficulty in getting hold of the right word, and, like a person who stutters and introduces irrelevant sentences to get out of a difficulty, she introduces words to excuse herself, and often makes confusion worse confounded.

The amnesia is not marked except when a proposition is made to her, or when a question is asked which requires the construction of sentences. If shown a key, watch, or knife she names them correctly enough, but always cautiously, as if conscious that she might trip in with the wrong word, thus:—"Well—I would call it—a key," or, "Well, I would say it is ca'd the knife—thing," or "It's a watch—if I would say it." She repeats the 23rd Psalm (metric version) correctly, and with very little trouble; but here the mental effort is less and the words do not need to be made up in sentences; these are ready made for her. When she is excited the voice is raised, and the words come more trippingly, though irregularly, the rhythm reminding one of the pulse beats of an irregular heart. At such times the end of the sentence is cut short from failure of breath owing to faulty vocal innervation. To sum up this case, there is (1) amnesia—her vocabulary is very limited, and she very frequently puts in the wrong word. (2) Defect of articulation, stuttering, and explosive speech. The mouth in quiet speech, which is her usual when not excited, is almost closed, the action of the jaws being feeble; this may be said also of the lips and tongue, which are by no means mobile, and which with the supra-oral muscles are tremulous. (3) Deficient phonation; the respiration is shallow, and this may account for it, as, when she gets excited and the chest heaves the voice is much louder and articulation is more distinct.

(4) There is marked bradylalia. Echolalia is sometimes present. There is considerable gesticulation when excited.

CASE 2.—W. J.—, æt. 30. Has taken fits since the age of 18, the exciting cause of the first being the passage of a tape-worm. His expression is quiet and sad, but he is intelligent, and by no means devoid of humour. He is when free from fits quite reliable, and quite capable of giving intelligent answers to questions.

To the question, "Have you ever noticed any trouble with your speech?" he replied, "I've felt pretty far back in speech this time back: the language that comes from me is rather short of grammatical—feels as if there was a weight keeping back the words." All this is said very slowly and with apparent deliberation. "Do you feel a difficulty in getting the right word?" "It takes a long time to compose it," meaning the sentences. If excited, *i. e.* if there is any emotional disturbance, his reply is not quite so intelligible, as when the same question was repeated some days later, he thus replied, "For a long time——education also to bring me up to satisfaction, so as that I wanted to keep myself as I intended at first." His voice breaks, there being vocal tremor, especially when he is emotionally roused. Before and after fits he is quite conscious of the fact that speech is more difficult. He observed, "Half an hour after when I come out of a fit, if any one spoke to me couldn't answer them." When asked if he was ever altogether speechless, he answered, "Well, I can't consider for that;" then a pause, as if for breath, then the echo, "altogether speechless." There is no agraphia, no word-blindness or word-deafness, and he has no recollection of either of the two latter occurring as an "aura." His invariable "aura" is a sensation in the left arm and side.

Inspiration, even when asked to take a deep breath, is rather shallow, but during emotional stress his respiration is more active, and his voice is louder. We may therefore say that here there is (1) partial amnesia, (2) diminished phonation, (3) weak articulation, with tremors, and that according to his emotional state these vary. The labio-dental movements are certainly rather inert. In this case there is very little gesture; but that is exceptional, and even this man when excited buttonholes one in a confidential way, rather usual with epileptics in their quiet moods.

CASE 3.—P. H.—, æt. 31. Insane five years. Ascribes first fit at the age of 15 to a fright. Had taken to smoking before then. The degeneration in this case is marked; he has shown considerable nervous failure in the last three years. It was noticed on admission that his speech was slow, thick, and indistinct, with an appearance as if he was swallowing some obstacle after speaking each word. In his stuporose states swallowing is difficult, and he is very liable to choke. His vocabulary is very limited. Like not a few epileptics, he has stereotyped phrases which he invariably employs in certain given circumstances. His consciousness of amnesia has led him to adopt them rather than struggle to compose fresh sentences. Thus every morning and evening at the medical visit he receives the superintendent and others with these words, holding out at the same time his right hand for a shake, "How—do—you do—Dr.—Clark—and Dr.—Kerr—and Mr.—Campbell—and Nurse—Thomson—and—my respects—and—I'm quite well."

He frequently repeats the words of questions put to him, as if to give him time to jog his memory and stimulate recollection. Instinctively he seems to feel that echolalia by its sensory stimulation of the auditory centre may rouse recollection. Bradyphasia here is very marked, but much less noticeable under emotional excitement. When asked if he had any difficulty of speech, he replied, "Sometimes—I am—very well at it (*i. e.* getting the right word) some days I am—not very sure—of myself—and I stop—but if—word is ready—and if—difficulty is in mouth—big—words—I can't say." There is not merely amnesia, but aphemia. Even when he knows what he wants to say there is a difficulty owing to obstruction in the speech mechanism. He explains this by speech and action—"There is" (as he puts his hand to his throat) "a difficulty as if stopped in the throat."

He explains further that crabbedness (rise of temper) sometimes makes him use the wrong words, and here again emotional disturbance shows its effect not merely on the speech mechanism but on memory itself.

There is slowness in answering, when questioned as to the names of objects, his explanation being that he is afraid of saying the wrong word. Feeling his ankle, which has been sprained, and is still swollen and stiff, he says, "It's more

stronger,—it's more stronger" (echolalia). He seems to feel that pantomime helps him along, and probably this is why epileptics are often demonstrative and gesticulate so much.

As regards oral and vocal speech, there is the same lack of innervation, the same drawling, stuttering speech already described, and the voice is low and respiration shallow. Not only is there interruption of the speech current, but there is inco-ordination of the laryngeal (vocal) and oral mechanism. There is frequent tremor of the lips when speaking.

CASE 4.—R. N—, æt. 60. Insane twenty-two years. Epileptic for forty years, due to injury in a mine (wound on temple) and probably fright. A hypochondriac, but a most violent patient at times. There is less to notice about his speech than in some more recent cases. There is no agraphia, word-blindness or word-deafness, but there is amnesia, and his speech is sometimes slow, hesitating, and tremulous. He is very emotional, and this affects his voice. Asked if he ever noticed anything wrong with his speech, he replied, "Ne—ver noticed anything wrong with my speech" (echolalia), but later admitted when "ag—it—kin—a—tation" (in a state of agitation). He is very earnest and demonstrative with his hands, which fly all over his body when telling his story of the pit accident. Attention is at once drawn to the feebleness of the labio-dental movement in speaking.

His vocabulary is very limited and his sentences inappropriate to his purpose, his words clumsy in their application, not incisive or explicit. This voluminous, almost meaningless, speech is very characteristic. Talks in a monotonous, very confidential tone of voice, also characteristic of many epileptics. The following is an extract from a letter written to "Mr. the Governor Inspector of Scotland:" "When I write to the Governor Inspector in 1881 and the answer that I got back on Christmas morning was my dead letter that I was to come out through death into life under her Magast serves and now the time that I have been in I would like you to judge my case in a medium way according to the rules of the Scriptures, and the rules of the laws," etc.

CASE 5.—A. F—, æt. 24, of dark strumous type, with bad family history of strumous character. She is weak-minded and childish, and has had no education.

Her imbecile condition is rather a hindrance to our obtain-

ing a correct conception of the mental side of her speech faculty, for she is weak of understanding, illiterate, and incapable of any subjective study of memory or recollection. Her utterance is slow, thick, and, except when excited, anergic and muttering in character. Certain conjunctions of syllables she is unable to bring out, such as "br" in February; she says "Fetherwary." Her memory is weak. She says she is four months here, whereas she has been four years. Echolalia is at times very marked, *e.g.* she repeats in reply to questions, "a' thegither, I wish—I wish—my airm—was better a' thegither;—I wish—I was a wee better—a' thegither;—I wish I hadna been here—a' thegither." Addressing the nurse, she says, "My granny stays at Kilmarnock—she's a puir auld woman—my granny—a puir auld woman—I cam—tae stay here—tae bide—afore ma puir auld mither deed—ay, ma puir mither deed—I used—tae wash—ma puir mither's hearth stane—Is your puir mither no deed?" A negative reply. "When are ye—gaun tae see her—wull ye—tell your puir mither—that A. F— was speerin'—for her—wull ye—tell her that puir Agnes—has got a sair airm?" There is bradylalia noticeable as well as echolalia, a limited, very limited, vocabulary, shallow respiration, and feebleness in the oral mechanism. The strain of the foregoing speech indicates, what is more noticeable in the tone of the voice, the emotional character of the patient. The simple statement, "Is this Monday?—then yesterday—would be—the Sabbath day;" the last words uttered with reverence, shows her religious emotionalism; it cannot be called in her case intellectualism.

Imperfect as this case is from the clinical student's point of view, because of her weak intellect, it is in some degree a contribution to the subject of undoubted value.

CASE 6.—R. B. L.—, *æt.* 22. Insane at age of eighteen. Is rather dull intellectually, religious emotionalism marked, and religious delusions scarcely absent at any time. He takes few seizures of *grand mal* or *petit mal* types. They are more frequently mental and automatic in character, and he has no recollection of them afterwards. The hypochondriacal element is here very prominent. He has a dazed, far-away expression, with a tinge of sadness in it, an expression as being "not of this world."

Asked regarding his speech, and what difficulties he noticed,

he replied in halting speech and evidently with some mental confusion, "When—I have come—the right way—to a speech—I know very well how to speak to any person." He can repeat verses of psalms and hymns with fair promptitude, but intellectual operations are slow, and he puts in wrong words, so that the meaning is confused. Innervation of vocal and oral mechanisms is fairly good, the speech defect being more mental and amnesic than motor. There is very little muscular tremor, no agraphia, word-blindness, or word-deafness. Asked if he ever took a fit, he replied, "I would count the darkness for the fit," meaning that his sight failing was the first sign, and then he added, "I knew myself—I would do better every day if—I was within the fresh air." His memory is best when talking of religious matters, the text or heads of last Sunday's sermon, etc. He is demonstrative in his speech, points with his hand all the time, says "praised" for praying, "meals meat" for meal of meat.

CASE 7.—E. F. D— has been subject to fits for years, exact period unknown. She has had several severe illnesses during the last few years, *e.g.* an attack of coma with high temperature for several days at one time, and acute bed sore at another. She has been much reduced in strength. The majority of her fits come on at night, and if she has a night fit she is usually excited till she has two more. She is amnesic. As I look at her she holds out her right hand, which is trembling, and says, "I—don't—don't," and then there is a long pause, and when I fill in what I think is the rest of her sentence by saying, "you don't feel power in your right hand," she promptly replies, "No, I don't." When I remark, "You seem to have a difficulty in remembering words," she replies, "Weel—I just be—no—kind—o'—," a long pause as if paralysed, and then the end of the sentence is uttered, "the rale thing just." Questioned "Do you sometimes say the wrong word—the word you don't mean to say?" she answers promptly, "I do." There is no word-deafness, and if she could read there might probably be evidence that there is no word-blindness, though her sight is affected after fits. There is at times distinct echolalia. To the question, "How old were you when you took the first fit?" she replied, "My—my—mither—mith—no—that—I ken o'—I dinna ken o'—I had—to—go—to—work—I had to go to work when I was ten years old

—I had—to—I had—to—I had to work that's—just—the—truth. She doesn't know what she's—talkin'—about—ma mither said—ma mither said—ma mither said—there was ane—o'—thae—kin o'—catch—thae fits—and—." As here indicated, bradylalia is well marked. Asked her age, she answered, 'I'm older than thirty years of age now.' Speaking immediately after of her husband's pay, she said, "He had mair than thirty years," meaning thirty shillings a week. Her memory generally is impaired. She cannot tell at what hour she gets breakfast, dinner, or tea. When excited, amnesia and aphemia are less noticeable. She is only slightly demonstrative when speaking, except when excited. She talks in her quiet moods in a confidential manner, hesitating very much at times, and in a low voice, the lips and jaws parting slightly and the respiration being very quiet and feeble. Tremors of all the facial muscles are noticed, and still more so tremors of the hands, especially the right. She puts her fingers to her lips when trying to speak, as if conscious of muscular inertia, and from a desire to help her utterance. The speech defects in this case, memorial as well as motor, are more marked probably than in any of those previously quoted, though M. B— and P. H— are both very bad. These three are amnesic and dysphasic in a marked degree.

CASE 8.—D. R—, æt. 25, a miner. Has taken fits at varying intervals from the age of eighteen. When asked if he has noticed any difficulty with his speech, he replies, "There is something away from my speaks—and my—memory." There is no agraphia; he understands what is said to him. He reads correctly, but in a somewhat sing-song tone, raising his voice at the end of every sentence, and pronouncing his words in rather a snappish manner. There are no tremors. When shown a sheet of foolscap, and asked to give it a name, answers, "Well—it's—a"—pause—"you can't say it's a book—but—it's a pretty tidy book it—would—do—a grocer," meaning doubtless that it would do for wrapping-paper. When shown an envelope, he replies, "That is a tidy—envelope;" shown a watch, answers, "Well—it—will—be—an English—lever." Here there is again the redundancy already noticed, to cover amnesic difficulties, and bradylalia is quite noticeable. There is undoubtedly motor difficulty in this case also.

CASE 9.—B. C.— This patient is an old asylum resident, and was regarded as an epileptic twenty-five years ago. She has of late years been much less subject to fits, and has not had one for nearly a year. She is bright, active, and fairly intelligent, considering her long residence in an asylum. She can give a fairly correct account of her own case. When asked, "Have you ever any difficulty with your speech?" she answered, "Not this long time. I had when I used to take fits—it was next morning—I couldna speak right. The attendants knew from my speech in the morning when I had taken fits. I couldna get the *full* word out. I knew what I was going to say, but I couldna get the *full* word out." Here there was dysphasia, but no amnesia.

Many more cases might be cited in detail, all confirming those which have just been described, and before summing up I will merely give brief statements regarding a few.

CASE 10.—A male patient illustrates redundancy of speech, as if conscious of amnesic defect, by answering the question, "What's this?" (book) thus—"A sort of library book."

CASE 11.—A male patient illustrates various defects of articulate speech. He has noticed after fits that his speech wanted strength. The emissive energy is spent before the sentence is finished, and it dies away in inaudible words. There is aphonia therefore. The muscular energy is feeble, and the respiratory movements restricted. In his own words he adds, "I have many many times noticed a difficulty in finding words to express myself." There is, therefore, amnesia also.

CASE 12.—A male patient has thick, hesitating, drawing speech.

CASE 13.—A male patient says he is an elegant speller, and is confused because he has not used the right word, which should be "excellent."

CASE 14.—A female patient says she and her brother were both stutterers when they were young. Her sentences are broken, and there is a circumlocution in describing events and circumstances. Her memory for words fails at times, especially after fits, and when trying to speak she feels as if her tongue weré paralysed.

CASE 15.—A male patient describes his speech defect thus: "I feel a little now—not able to come to the point—have the

word ready—but I can't get it out—tongue would not come forward at the proper moment." After fits he is always at a loss for words.

CONCLUSION.

To sum up, I think it will be generally accepted that a considerable range of speech disturbance is to be found in epilepsy, that there is much resemblance in the cases, and yet individual diversities, and that when the normal mental habit is resumed after one of those periodic outbursts of motor mental excitement which characterise epileptic insanity, the power of speech is diminished. It is established (1) that before and after fits amnesia and dysphasia are marked, (2) that when there is emotional excitement these conditions are altered according to the degree of the emotional excitement, (3) that when the ordinary mental habit is resumed, and nervous tension has disappeared, the patient suffers from reaction, which tells on his speech faculty by reducing the energy of the memorial and motor centres.

The Patients' Consciousness of Speech Defect.—Although, as already observed, they incline at first to denial, they usually admit it when their own stumblings find them out. Their facial expression is quite sufficient to demonstrate that they are anxious and disturbed when their speech is being tested, and there is manifest effort, in the halting yet deliberate speech, which reveals that the patient is anxious not to make mistakes. This is seen also in the careful answers to such question as, "What is this?" (a key, *e. g.*), answers characterised by apologetic introductions, or qualified by unnecessary adjectives. The tremors are often worse, and the break in the voice worse, when consciousness of a difficulty renders the patient emotional.

Emotions as affecting Speech.—This is true of most people, but emotional speech is rarely excited in ordinary circumstances, just because emotions are not so acute and are more under control. Just as we may have hysterical aphonia the result of emotional disturbance, so there may be in the epileptic respiratory spasm from a like cause. Undoubtedly the emotional element must be taken into account in considering the different speech abilities of the epileptic at different times. While this

applies to human speech generally, it applies in a marked degree to the epileptic. The pantomime of the epileptic is sometimes vivid, frequently profuse and redundant, like his speech, and indicates the emotional nature of the man.

Amnesia.—It will not be considered beyond a few words how much this is due merely to the defect of recollection, but it may be said in passing, that, as the amnesic state is at times more marked than at others, the *retentum* may be in memory, though not always forthcoming. It depends on special sensations, and the particular emotional state, happiness, anger, rage, etc., and on the degree, whether the faculty of recollection is stimulated or inhibited. I have already pointed out that the range of vocabulary is more or less limited with most epileptics, and this is probably due to failure of memory (loss of retention) apart from failure of reproduction (recollection).

Aphemia and Dysphasia.—Extreme aphemia is rarely observed, and then only for a time, usually before and after fits. Dysphasia best describes the articulate speech of the epileptic. Here we have to take account of the vocal mechanism, taking along with it the respiratory mechanism. It may be taken, speaking generally, that there is usually a reduction of emissive energy of all these mechanisms from faulty innervation, and that there is want of synchronous co-ordination. Hence we may have feeble, stuttering, or staccato speech, and weak or spasmodic glosso-labio-dental movements. We have also sensations of “a catch in the breath,” loss of phonation, or reduction of it, as seen in the growing weakness of voice at the end of a sentence. This points to nervous spasm or reduced innervation of the vocal and respiratory mechanisms. Tremors of the facial muscles, of the labial in particular, and tremor of voice indicate unstable innervation.

I need only mention in a few words *Bradylalia*, which has been abundantly demonstrated, and *Echolalia*, which is less common, but sufficiently frequent to call for notice here. *Agraphia* has not been noticed, but those patients who could write were asked to sign their names, and there was found a tremor, sometimes continuous, but mostly interrupted, in their writing, suggestive of alcoholism.

Systematic Case-taking. By A. H. NEWTH, M.D., Haywards Heath.

THE analysis and arrangement in a statistical form of the various entries made in the case-books of the different asylums would form a valuable synopsis of clinical, therapeutical, and pathological significance. But the labour involved would be something enormous, and might dishearten the most enthusiastic statistician; even the work of arranging and tabulating the entries in the case-books of one of the large asylums would be very great.

If, however, it were possible to frame some simple, uniform method of case-taking and persuade the superintendents of all the asylums to use it, which possibly might be the most difficult of all tasks, then some definite and valuable statistical facts might be obtained.

Keeping up the case-books simply for the satisfaction of the Commissioners, as a check on any charge of *malpraxis* or neglect, for reference in case of inquiries, or as an evidence of work done in the asylum is one thing; doing it from a scientific point of view for the advancement of the study of insanity is quite another thing. Yet it may be well to consider whether there may not be a possibility of combining these two objects, and so making the entries that they will be of use both legally and scientifically, at the same time saving both labour and time in keeping the case-books.

There are few superintendents, or at any rate assistant medical officers, who have to do the work, who do not consider the trouble of case-taking, if not a perfect nuisance, at least as occupying much valuable time which otherwise might be more usefully employed. In fact many of them will cordially endorse the remark made by one of the Commissioners when inspecting the case-books of one of the large asylums—“What nonsense!” The idea of two Commissioners in a few hours going into the details of an asylum, examining all the patients, and carefully scrutinising the elaborate entries relating to several thousand patients in the case-books is too absurd; they cannot do it satisfactorily. With a simple method of

case-taking, so that the state of each patient on admission, the progress of the case, the treatment adopted, and the result could easily be referred to, or even seen, as it were, at a glance, their labour and difficulties would be considerably reduced.

There is a decided lack of uniformity as regards clinical and therapeutical observations in the different asylums. The study of insanity and the proper treatment to be carried out cannot be made exact or satisfactory if it only depends, as it does now, on the labours of a few earnest men working in isolated grooves. There must be a collaboration of the observations of a large number, and this can only be achieved by an uniform, systematic method of case-taking. The vexed question of a proper scientific nosology, a correct classification of disease, and the most satisfactory treatment, might in some measure be arrived at by a combined system of medical book-keeping. Most of the scientific work done in asylums is pathological; but, though pathology is most important, it has no significance without clinical histories of the cases.

Dr. Clouston, in a very interesting paper read at a meeting of the Association in November, 1869, strongly urged the advisability of adopting a systematic plan of treating cases, so as to arrive at some accuracy in the treatment of insanity. This plan, I believe, was never attempted to be carried out, though it had in it the germ of what ought to be done if asylums are to be not merely institutions for the care, but hospitals for the cure, of the insane.

Possibly nothing has been done because, as Dr. Clouston suggests, the various medical officers "have had no time to do this; that their book-keeping and building, their multifarious superintendence of servants and stewards, their distraction of mind from theatricals and water-closets, is such that they cannot devote attention enough to carry out such a scheme of treating their patients." This is very true, and he considers it would be well if they were to neglect some of these things and give the patients themselves a fairer share of their time and mind. "Surely," he says, "we have been long enough organising and beautifying our *asylums*. It is the *patients'* turn for an innings now." In conclusion he adds, "surely it is no mean ambition that we should all try and raise our department of medicine up to the level of its other branches in scientific progress. And if we could succeed in placing the treatment of

insanity ahead of all other branches of our art, resting it on a sure basis of carefully observed fact and irrefutable generalisation, this would be a noble reward for much hard work and self-denying drudgery."

The majority of asylums, no doubt, have an elaborate system of medical case-taking, with entries notifying the almost daily state of each patient. The case-books of the Royal Asylum, Perth, are models of completeness in this respect, so arranged that though the particulars as to the history and mental and bodily condition, with the progress of each case, and also the pathological appearances after death, are most minutely recorded, they are made with as little trouble as possible. This is done by having all the possible particulars printed for each case, and then all that is necessary in making record of the cases is to score out some parts and enter a few words at other parts. Dr. Urquhart also has for his own private use check cards giving a synopsis of each patient, the particulars of which are culled from the case-books. These cards enable him to easily arrange the patients under different states, and are most useful.

But the very completeness of detail in case-taking is a bar to comparative study of cases. It makes the difficulty of searching through the mass of material and obtaining facts for classification or for comparison so much greater than if the system of case-taking were simpler, although possibly not so complete. Now, supposing the cases were so entered in the case-books that, as it were, a bird's-eye view could be obtained as to the particular state of each patient; this, I think, would be a great step towards a scientific investigation of insanity.

It is with some diffidence that I venture to offer the following plan for a systematic method of case-taking, which is far from being complete or perfect. But I offer it with the hope that it may be suggestive, and I trust that others who have better opportunities of framing a more useful one may be able to formulate a plan which will meet the requirements of the majority, and enable them to inaugurate a thoroughly satisfactory system of case-taking which will be applicable to every asylum, so that the entries may be on an uniform plan and so comparable one with another. I venture to think that if some such plan as this were adopted, it would relieve the assistant medical officers of much onerous work, which only those who have actually to do it can appreciate. I know from experience

how terribly trying the labour was of keeping the case-books ; in fact at one time I suffered from an attack of scrivener's palsy (which was only relieved by the use of the continuous galvanic current), and also had a ganglion form at the extensor tendons of the wrist. It is very possible that others who have to perform this disagreeable duty of keeping the case-books will agree with me that it would be a great boon to them if there could be a simpler and easier method of case-taking.

My suggestion is to have the case-books of foolscap size, ruled according to the accompanying scheme on one sheet, or two pages ; this would afford space for the entries of the particulars of thirty patients. The two next pages would be blank for special particulars of the cases—such, for instance, as peculiar delusions, more definite treatment, etc.,—attention being called to these entries by a number in the appropriate column or by an asterisk.

This plan necessitates the use of ciphers or letters, and the objection might be urged against this that they would not be easily remembered or understood. But this objection could be easily overcome by making these ciphers as simple as possible ; and with a little practice anyone would soon be able to read them as well as, if not better than, if the entries were made in full.

That the plan is a feasible one I have proved, having some years ago collected a large number of cases in this way.

Judging, however, from the number of valuable suggestions which have been from time to time offered in the JOURNAL for the advancement of the study of insanity, but which have never been acted upon, it is to be feared that this scheme, or even some such, will never be carried out.

Superintendents of asylums as a rule are too conservative in their ways, and prefer to jog along the same old worn-out grooves which have been followed for so many years. Many will say that they prepare the statistical tables of the Association, which are all-sufficient. It is a question whether these tables are of much value ; at any rate no one seems to use them for any real practical purpose. They are printed in the asylum reports at considerable expense and trouble, and these reports are distributed to the other asylums, where they are glanced at, thrown into the waste-paper basket, or shut up in some obscure cupboard, eventually to be taken out at some

future time to serve the only useful purpose of which they are worthy, namely, to light the fire.

MALES.

COL.		COL.		
1.	Registered No.	27.	Reference No.	
2.	Initials.	28.	Page in case-book.	
3.	Age.	29.	} Mental state {	
4.	Condition of life.	30.		Speech.
5.	Date of admission.	31.		Sensation.
6.	Occupation.	32.		Reflexes.
7.	Religion.	33.		Consciousness.
8.	Duration of disease.	34.		Excited.
9.	No. of attacks.	35.		Depressed.
10.	Suicidal.	36.	Stupor.	
11.	Homicidal.	37.	} Memory {	
12.	Epileptic.	38.		Coherence.
13.	Hereditary.	39.	} Delusions {	
14.	Relations insane.	40.		For recent.
15.	Intemperate.	41.		For past.
16.	Habits of life.	42.		Senses.
17.	Assigned cause.	43.	Morals.	
18.	Expression.	44.	Emotions.	
19.	Complexion.	45.	Intellect.	
20.	Pupils.	46.	Stated disease.	
21.	Pulse.	47.	Treatment.	
22.	Temperature.	48.	Employed.	
23.	Bodily condition.	49.	Amusements.	
24.	} Weight {	50.	Relapses.	
25.		On admission.	51.	Discharge.
26.	On discharge.		Date.	
	Skin.		Cause of death.	
			Reference No.	

Abbreviations—to be placed on first page in Case-book or on a separate sheet :

RELIGION.—A. Church of England. S. Church of Scotland. B. Baptist. C. Calvinist. D. Dissenter. I. Independent. J. Jew. N. None. P. Protestant. R. Roman Catholic. W. Wesleyan. X. Unknown.

RELATIONS.—F. Father. M. Mother. S. Sister. B. Brother. A. Aunt. U. Uncle. Gm. or Gf. Grandmother or grandfather. Ap. Paternal aunt, etc.

INTEMPERATE.—I. S. Sober. M. Moderate drinker. T. Teetotaler.

HABITS.—A. Active. L. Lively. M. Mischievous. Q. Quiet. S. Studious. D. Dirty. B. Bestial.

HEALTH.—G. Good. F. Fair. I. Indifferent. B. Bad. W. Weak. P. Phthisical. S. Syphilitic. R. Rheumatic. D. Dying.

EXPRESSION.—V. Vacant. D. Dull. B. Bright. F. Foolish. M. Melancholic.

COMPLEXION.—R. Ruddy. P. Pale. C. Congested.

PUPILS.—E. = Equal. V. Unequal (a thick stroke to left or right indicates which is the larger). C. Contracted. D. Dilated. I. Insensible.

MIND.—E. Excited. C. Childish. D. Deluded. L. Low spirits. M. Morose. R. Rational. S. Suspicious. V. Vacant. I. Inhibition + or -.

MEMORY.—B. Bad. F. Fair. G. Good. D. Defective. I. Indifferent. L. Lost.

DELUSIONS.

SENSES.—A. Auditory. F. Feeling. O. Ocular. N. Smelling. T. Tasting.

EMOTIONS.—E. Erotic.

ÆSTHETIC.—R. Religion. G. Grandeur.

MORAL.—M. Monetary. D. Domestic.

INTELLECTUAL=I.

PULSE.—R. Regular. I. Intermittent. D. Dicrotic. F. Feeble. B. Bounding.

For further notes see overleaf. An asterisk in any column would mean refer to notes or a number.

The Relation of Alcoholism to Suicide in England, with Special Reference to Recent Statistics. By W. C. SULLIVAN, M.D., Deputy Medical Officer, H.M. Prison, Pentonville.

IN the following paper it is proposed to study the influence which alcoholism exerts upon suicide in this country, so far as that influence can be traced in recent statistics of the movement of these social phenomena. Our discussion will aim more particularly at determining the *rôle* which alcoholism may have played in the late increase of suicide in England, and at establishing the distinctive characters which constitute the type of alcoholic suicide.

Before, however, entering on the proper matter of our inquiry, it will be desirable to refer briefly to the views of some of the chief authorities who have dealt with the question of the alcoholic influence in suicide. It is premised, of course, that these introductory remarks have no pretension to be a complete summary of the extensive literature of the subject—an essay far beyond the limits of this paper.

Introductory.—In the classic work in which he fixed the clinical outlines of alcoholism, Magnus Huss⁽¹⁾ indicated among the characteristic symptoms of the disease its special proneness to the development of suicidal tendencies. "I venture to assert," he says, "that the suicidal impulse is a more frequent accompaniment of the melancholia of drunkards than of melancholia from other causes; and, further, that amongst the uneducated classes suicide frequently follows on the disordered emotional tone, which, sooner or later, results from the abuse of alcoholic liquors." All subsequent clinical observation, whether directed primarily to suicide or to alcoholism, has confirmed the accuracy of this statement.

Naturally, the community being but the aggregate of its

individual members, it is self-evident that if alcoholism be prevalent in adequate extension, a similar relationship of phenomena should be in some measure traceable on the larger scale of statistics. Inquiries to test this inference have been numerous, but the results reached by observers have not exhibited the unanimity of clinical experience.

On the one hand, some authorities have maintained that there exists an exact correspondence between the geographical distribution of the two phenomena, and also between their variations in different periods in the same country. This position in its most extreme form was notably defended by J. L. Casper.⁽³⁾

The majority of observers, however, have adopted a more moderate view, and, regarding alcoholism as only one amongst several causes of suicide, have contended that the two phenomena, though not exhibiting in their variations in time and place an absolute parallelism, yet show an approximate correspondence sufficient to justify the inference of their relationship. This is essentially the opinion held, for instance, by Lunier,⁽³⁾ Morselli,⁽⁴⁾ Baer,⁽⁵⁾ Westcott,⁽⁶⁾ Ferri,⁽⁷⁾ Grotjahn,⁽⁸⁾ though some of these authors differ considerably in their estimate of the degree and significance of the correspondence.

Lunier, whose views are in the main adopted by Morselli, found in the different departments of France that a high average consumption of alcohol was invariably accompanied by a similarly high rate of suicide. The general validity of this observation is, however, open to doubt. Baer, whose authority on the question is unique, has demonstrated the absence of a similar correspondence in Prussia, and cites also as a counter argument the case of Sweden, where decrease in alcoholism has failed to arrest the upward movement of suicide. His opinion leans to a more moderate valuation of the alcoholic influence, though still counting it as the most important of the individual factors of suicide.

Grotjahn, who envisages alcoholism mainly as a direct result of the condition of the proletariat under the capitalistic régime, while admitting a certain coincidence in the regional and periodic distribution of the two phenomena, regards their relationship as that of co-effects of a common cause.

While all these authors agree in assigning to alcoholism some part in the causation of suicide, there are others who

dissent altogether from this point of view, and who question whether this agency has any effect at all considerable enough to influence the statistical movement of suicide. This position has been advocated by Colojanni⁽⁹⁾ in Italy, by Durkheim⁽¹⁰⁾ in France, and to a certain extent by Strahan⁽¹¹⁾ in England.

Durkheim in particular has elaborated this thesis ; regarding suicide as a phenomenon exclusively dependent on the state of the collective consciousness of the social group in which it occurs, he denies to more elementary factors, such as insanity or alcoholism, any extensive influence. In support of this view as regards alcoholism he has endeavoured to show that, contrary to the opinion of Lunier, the geographical distribution of suicide in French departments presents only a very imperfect correspondence with that of the various standards of alcoholism—the *per capita* consumption of alcoholic liquors, the frequency of arrests for drunkenness, the amount of alcoholic insanity.

This mode of argument is, however, open to the reply which Ferri effectually addressed to the similar contention of Colojanni, viz. that it would prove merely that alcoholism was not the sole cause of suicide, it would not prove that it was not among its causes. Further, the fallaciousness of the method is glaringly visible in the very maps on which Durkheim relies ; thus the chart showing the departmental consumption of alcohol exhibits, as he himself admits, a certain correspondence with the chart of suicide, insufficient, however, in his opinion, to support the idea of causal relationship ; yet, as a glance at his maps will show, this correspondence is actually closer than that observable between this same chart of alcoholic consumption, and the chart representing the distribution of alcoholic insanity.

On the whole it may be asserted that the balance of evidence and argument leans to the observers who have taken the intermediate position, and who look upon alcoholism as one of several causes of suicide, its absolute and relative importance differing in different places and at different epochs. This is the point of view which we shall adopt in our inquiry, our attention being practically limited to the relation of the two phenomena in England and at the present time.

Recent Movement of Alcoholism.—We have first to inquire

what has been the tendency of movement in alcoholism in this country of recent years.

This is a point, the determination of which is beset by very considerable difficulty, due more particularly to the absence of any adequate measure of alcoholism. From our standpoint that word must be taken to mean the *ensemble* of the morbid results of alcoholic excess, and therefore the selection of any one of these results as a standard necessarily involves a risk of fallacy.

How real this risk is will appear at once from the comparison of a few of these possible standards. Thus in the mortality returns of the Registrar-General we find that the number of deaths attributed to intemperance, which amounted to 35 per million in 1867, has risen steadily in successive periods, and in 1897 stood at 76 per million, an increase in thirty years of over 100 per cent. The record of coroners' verdicts of "death from excessive drinking" shows a similar increase. On the other hand the number of convictions for drunkenness has in the same period undergone considerable decrease relative to the growth of population.

Now it is obvious that, as a measure of alcoholism, the Registrar-General's returns have for us a greater validity than the statistics of drunkenness; apart from the intrinsic sources of fallacy in these latter, due to the exclusive consideration of the acute intoxication, there are clearly abundant elements in local and general variations of public opinion, police efficiency, prison accommodation, and the like, which influence the official recognition of drunkenness. This might even conceivably be so to such a degree as to make a high rate of drunkenness indicative rather of keen public spirit than of abnormal intemperance in a community. We may, therefore, conclude that the mortality from alcoholism is a better guide than the frequency of arrests for drunkenness.

We may also regard the question from another point of view; instead of seeking our measure of excess in its results, we may seek it in its cause; we may estimate the movement of alcoholism by the variations in the amount of alcohol consumed. The following table, taken from the appendix to Mr. Whittaker's admirable Memorandum, published with the report of the Licensing Commission, gives the average *per capita* consumption of beer and spirits in the United Kingdom for the years 1842-98. The figures are summarised in five-year periods.

*Consumption of Spirits and Beer per Head of the Population
from 1842 to 1898.*

	SPIRITS.		BEER.
1842-46 . . . .	.89 galls.	...	20'0 galls.
1847-51	1'00 "	...	21'0 "
1852-56	1'06 "	...	22'1 "
1857-61 . . . .	.96 "	...	23'8 "
1862-66 . . . .	.92 "	...	27'1 "
1867-71 . . . .	.99 "	...	28'9 "
1872-76	1'22 "	...	33'3 "
1877-81	1'11 "	...	29'4 "
1882-86 . . . .	.99 "	...	27'3 "
1887-91 . . . .	.97 "	...	28'7 "
1892-96	1'00 "	...	29'9 "
1897	1'03 "	...	31'4 "
1898	1'05 "	...	32'0 "

Thus it will be noted that in the case of both these forms of alcoholic liquor the *per capita* consumption has of late shown an upward tendency so marked as to bring the figures for recent years almost up to the level reached in the early seventies, when, coincident with the feverish industrialism of the period and the enormous multiplication of licences, English drinking habits attained their highest point.

Now on the score of accuracy we may take it that these statistics have distinct superiority, owing to the *rôle* of liquor taxation in the national revenue; but we have to observe that, as a measure of excess, they are open to certain fallacies. In the first place, their reference to alcoholism is governed by the question of the distribution of the liquor consumed.

As Mr. Whittaker points out, the immensely increased consumption of tea—in 1897 four and a half times per head what it was in 1842—and the growth in the numbers of total abstainers in the country, are two considerations which suggest strongly that the alcohol-consuming section of the population is at present relatively smaller than some years back, and that, therefore, a moderately increased rate *per capita* of the whole population may really involve a largely augmented consumption by actual drinkers. And we have also to bear in mind that the power of resistance to the drug is a varying quantity, and probably tends to diminish in a population where a high degree of alcoholism has prevailed for a long time.

When due weight is given to these considerations, it will appear probable that the relatively slight upward tendency shown by our figures represents really a large increase of

alcoholism. And this impression is confirmed by the steady progression of the mortality from intemperance, to which we have already referred.

Accordingly, without attempting to express the fact numerically, we may take it as established on the available statistical evidence that alcoholism has decidedly increased in this country of late years.

Recent Movement of Suicide.—The next point with which we have to deal is the recent movement of suicide.

The returns of the Registrar-General show that in England there has been a steady increase in the suicide rate during the last three decennial periods. Thus the proportion per million inhabitants, which in the decennium 1861–70 stood at 65, rose in the following decade to 70, and in the decade 1881–90 amounted to 77, representing an increase of over 18 per cent. on the figures for the first-named period.

The validity of these statistics has, however, as we are all aware, been recently called in question. Sir John Sibbald, arguing from the remarkable constancy of the rate of suicide by hanging—the mode of death relation of which to self-destruction is least doubtful—has contended that the apparent increase in the total suicide rate is merely a result of faulty registration, whereby cases which in former years would have been reckoned as accidents, are now included under the rubric of suicide. This consideration would apply especially to cases of drowning and poison, the forms in which the alleged increase has been most marked.

Against this ingenious theory, however, we have to set the fact that in another category of suicidal manifestations, viz. attempts to commit suicide, there has been a similar and even more decided increase. Thus in the period 1867–71 the number of cases of attempted suicide amounted to 35·5 per million inhabitants; in each succeeding quinquennial period it stood higher, and in the period 1892–96 it rose to 57·9 per million, an increase of over 78 per cent. on the first-cited figures.

Now statistics of suicidal attempts are not open to the same risk of erroneous registration. They are, no doubt, liable to other fallacies; it is obvious, for instance, that their detection will be easier in dense populations; and it may be that there is now greater readiness than formerly to report and prosecute in these cases. Such possible qualifying influences, however, would

only apply to the earlier years, and could not explain the steady progression in the last decade. We may, therefore, affirm with some confidence that the increase in the frequency of these cases represents a real growth of suicidal tendency ; and though, as we shall see later on, there are decided reasons for thinking that the causation of suicidal attempts is by no means entirely identical with those of the majority of actual suicides, nevertheless these two phenomena have sufficient factors in common to render it improbable that a large increase in the one should not be accompanied by some increase in the other. Hence we may consider that the concurrence of the evidence derived from these two sources goes far to confirm the validity of both.

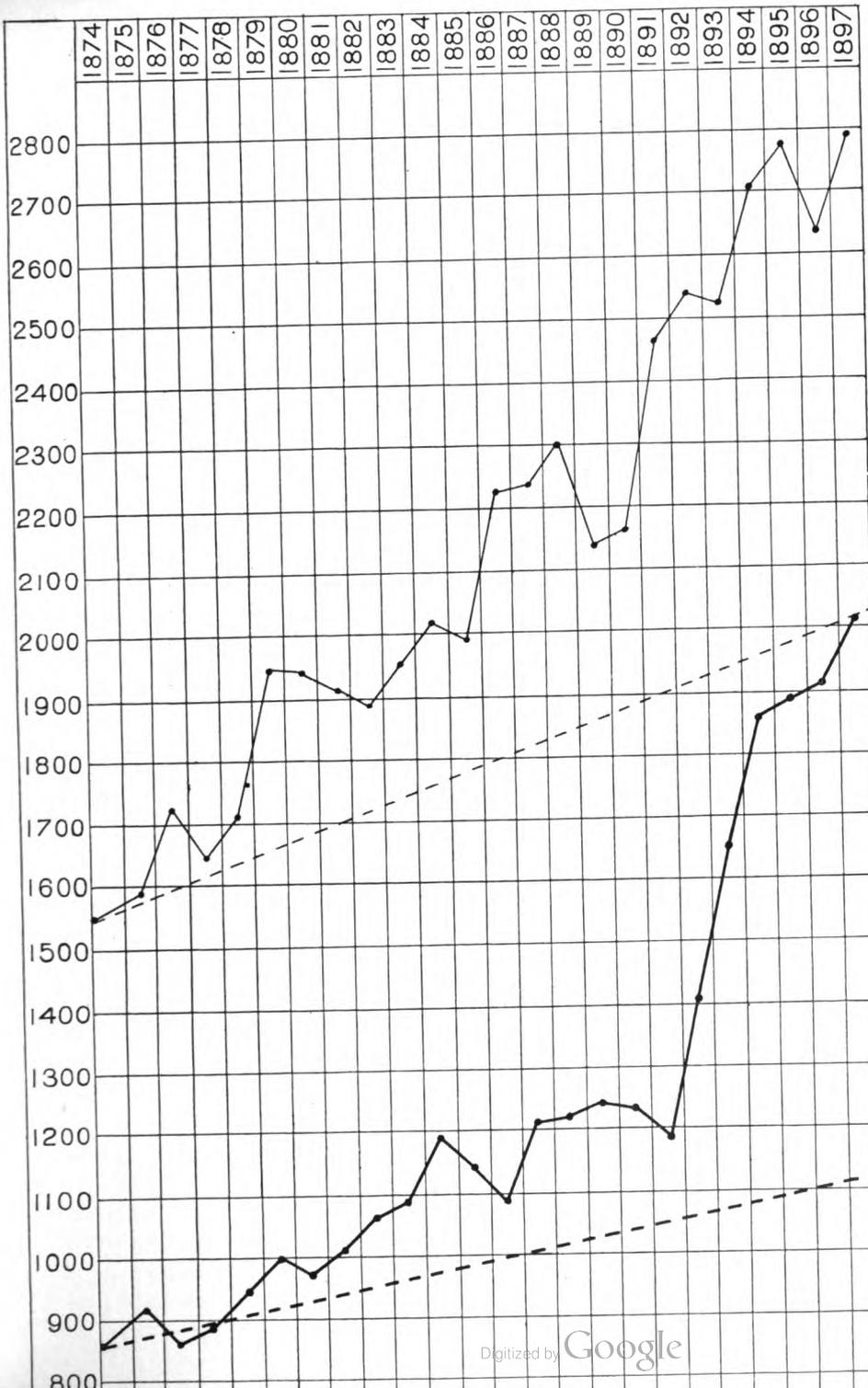
The extent of that concurrence, and the importance of the recent increase of suicide, is shown in the appended diagram, taken from the Criminal Statistics for 1893 and brought up to date ; it presents the movement of actual suicide and of suicidal attempts from 1874 to 1897, and the estimated movement of population in the same period.

Two points are clearly brought out in this diagram, viz. firstly, that suicidal tendencies have grown in a degree entirely out of proportion to the increase in population ; secondly, that their growth has been much more considerable in the category of suicidal attempts than in that of actual suicides.

Comparison of Actual and Attempted Suicide.—In the absence of any evidence to the contrary, it would appear natural to ascribe the increase in these two forms of suicidal manifestation mainly to the operation of the same cause, a cause, therefore, which plays an overwhelming part in the genesis of abortive attempts, but which is much less importantly related to the production of actual suicide.

The first step towards the detection of this cause will be to inquire whether suicidal attempts present any peculiar features when compared with the mass of actual suicides. This is the point which we propose to deal with in this section.

In the study of suicide in different civilised countries it is of common knowledge that, besides those climatic, racial, and political influences which are special to each nation, there exist other factors whose operation is traceable as a constant force of definite direction in every community. Broadly speaking we may say that of these universal factors the most important are age, sex, season, and religious cult. It is in regard of these



SUICIDAL ATTEMPTS, SUICIDES, AND PROSECUTIONS FOR
DRUNKENNESS IN THE COUNTIES OF ENGLAND.

The figures represent the average proportion of cases of each category per 100,000 of the estimated population during the years 1891-5; and the counties are arranged in the order of the decreasing frequency of suicidal attempts.

	<i>Suic. attempts.</i>	<i>Suicides.</i>	<i>Drunkenness.</i>
Metropolitan District	12'80	10'50	657
Warwick	8'01	10'07	491
Southampton	7'64	8'40	294
Worcester	6'63	8'38	735
Northumberland	6'24	9'92	1802
Northampton	6'07	12'09	311
Lancashire	5'90	9'10	970
Nottingham	5'69	10'68	521
Lincoln	4'76	10'21	487
Leicester	4'58	10'56	324
Somerset	4'51	8'71	221
Gloucester	4'24	7'65	337
Berkshire	4'23	7'96	285
Sussex	4'17	11'24	268
Kent	4'15	10'88	297
Cheshire	3'96	7'96	609
Dorset	3'90	8'84	227
Devon	3'66	9'46	316
Oxford	3'66	8'37	133
Hereford	3'62	7'42	443
York	3'52	8'59	505
Stafford	3'36	8'17	685
Derby	3'34	8'68	521
Buckingham	3'24	8'64	231
Shropshire	3'21	9'48	758
Monmouth	2'48	6'28	654
Hertford	2'22	6'77	248
Wiltshire	2'18	5'51	132
Suffolk	1'99	11'50	145
Durham	1'98	7'15	1302
Norfolk	1'96	8'54	172
Westmoreland	1'81	9'99	293
Cumberland	1'80	7'80	704
Surrey	1'68	11'01	283
Bedford	1'62	8'10	219
Huntingdon	1'45	10'16	132
Cambridge	1'29	8'29	111
Essex	1'14	9'49	224
Rutland	'96	7'74	137
Cornwall	'93	4'90	204
[Wales	2'2	5'17	798]

factors, which operate within the limits of the social group, that we may best compare the two categories of suicidal manifestation. Unfortunately the information furnished in this country concerning both actual and attempted suicide is so extremely meagre that the comparison of the two phenomena, even in these few points, is not free from difficulty.

We shall first consider them in relation to sexual incidence. In actual suicides in England the average proportion of females is 25 per cent. ; in suicidal attempts the proportion, calculated on the accessible figures for the years 1893-97, is 27·1 per cent. That is to say, the sexual incidence in suicidal attempts differs but slightly from that in actual suicide ; hence we may infer that in this respect the factors entering into the causation of the two phenomena either are identical, or, if different, operate in such similar direction and extent as to produce practically identical effects.

We obtain a very different result when we investigate the relation of the two suicidal categories to age.

Unluckily in the criminal statistics which deal with suicidal attempts, and in the returns of the Registrar-General which deal with actual suicide, age groups are classified on different systems, and it is consequently impossible to place the figures in complete parallelism. They present, however, a contrast so marked as to appear vividly in spite of this difficulty.

Thus in the mortality returns of adult males it is found that the proportion of suicides by persons aged over 45 years is 55·6 per cent., the period of maximum incidence being the decade 45—55. On the other hand, amongst adult males tried at assizes and quarter sessions during the last five years for attempting to commit suicide, the proportion aged over 40 years was only 46·7 per cent., and the period of maximum incidence was the decade 30—40. A similar contrast is found as regards females ; the maximum incidence in suicides of that sex is in the decade 35—45, while in attempts to commit suicide it is in the period 21—30. Hence it appears that abortive suicidal attempts differ widely from actual suicides in that their predominant cause tends to operate at a relatively early age.

In regard of seasonal influence the results of comparison are negative ; actual suicide and suicidal attempts increase with equal regularity from winter to summer, and decrease from summer to winter.

The fourth important influence which we have mentioned—the form of religious cult—cannot be directly investigated, owing to the absence of information on the point in respect of both varieties of suicidal tendency ; we may attempt, however, an indirect comparison of the phenomena by reference to suicide in Ireland, where the religious conditions are different. Without going into details, we may summarise the facts with regard to that country by stating that, while in Ireland, as in most predominantly Catholic countries, the rate of actual suicide is very low, that of suicidal attempts is relatively high, and in recent years has even been considerably in excess of the rate of actual suicide. For instance, in the year 1896 attempted suicides reached the proportion of 37 per million inhabitants, while suicides amounted only to 28 per million. And this excess has been comparatively much more decided in the Catholic provinces than in Ulster. From these facts we may most reasonably infer that if, as seems probable, the low suicide rate of Ireland be due to the influence of Catholicism, that influence is, relatively, ineffectual against the causes which determine suicidal attempts.

Another point to which considerable interest might have attached is a comparison of the modes of self-destruction in actual and in attempted suicide, but the statistics of the latter phenomenon give no information on this subject. In a series of personal observations, too few, of course (only 143 in number), to carry much weight, there was noted a marked predominance of drowning and poison (57·3 per cent.) over hanging (7·6 per cent.). This is a reversal of the conditions found in actual suicide, where hanging is the chief method resorted to ; but it is interesting to observe, in connection with the earlier age incidence of suicidal attempts, that the prevalence of hanging in actual suicide is normally least marked in the early age groups. Wagner (¹²), by figures drawn from the Danish statistics, has shown that while the proportion of suicides by hanging steadily progresses in each age group above 15 years, the reverse obtains for drowning and for poison. And the same condition is found in English suicides ; for instance, in the years 1890-91 amongst male suicides in England the proportion in persons aged under 45 was, in suicides by hanging 33·5 per cent., drowning 47·5 per cent., poison 50·0 per cent.

To sum up, therefore, the results of our comparison of actual

and attempted suicide, we find that these two phenomena do not appear to differ in regard of seasonal distribution and sexual incidence ; that they probably differ in their predominant form, hanging being more frequent in actual suicide, more impulsive methods in suicidal attempts ; that they most probably differ in their reaction to religious influence, which is potent in actual suicide, insignificant in suicidal attempts ; and that they differ clearly and decisively in regard of age incidence, suicidal attempts being related to early, actual suicide to later age groups.

Age Incidence in Alcoholic Suicide.—Now the tendency to occur at a relatively early age, which we have found to be the chief distinctive feature of abortive suicidal attempts, is also a characteristic of a special group of actual suicides, viz. those dependent on alcoholism.

In the occupational groups dealt with in the returns of the Registrar-General, there are several which present a very high rate of alcoholism and a corresponding frequency of suicide. These are more particularly the groups related to the liquor traffic, or those where the social conditions lead directly to alcoholic excess.

In these groups we may safely regard the suicide as a consequence of the alcoholism, since there is no evidence of the special operation of other causes capable of originating an abnormal degree of suicidal tendency.

From Dr. Tatham's tables for the three years 1890-92 we may select the following as examples of such alcoholic groups :—Publicans, butchers, coach and cab service, commercial travellers, hairdressers, and musicians. In the period named these groups furnished 404 cases of suicide by persons aged over twenty-five years. Of these 220 (54·4 per cent.) occurred before the age of forty-five years. The normal average proportion of suicides below that age being, as we have seen, 44·4 per cent.

To demonstrate the significance of this contrast, and to avoid possible fallacies due to differences in the age constitution of the groups, we may compare the suicide rates per million living at each period in this composite alcoholic class with the corresponding figures for all occupied males :

	25-	35-	45-	55-	65-
Occupied males	137'1	214'2	307'6	421'8	553'1
Alcoholics	249'5	404'0	405'3	622'1	869'6

The meaning of the figures will be better seen if we translate them into terms of a single standard. In the following table this is done: the suicide rates per million living in each age period of the composite alcoholic group, of publicans taken as a purely alcoholic class, and of agriculturists taken as a typically non-alcoholic class, are shown in percentage relation to the corresponding rates for occupied males:

	25-	35-	45-	55-	65-
Occupied males	100	100	100	100	100
Alcoholics	181·9	188·6	131·7	147·4	157·2
Publicans	260·3	246·8	166·9	156·2	100·9
Agriculturists	64·2	68·8	70·6	78·1	86·6

In this table, comparing the two groups preceding with the two following the age of forty-five, we observe that it is in the former that the alcoholic influence is chiefly perceptible. In the composite alcoholic group the excess over the average suicide rate rises to more than 80 per cent. in the earlier groups, to only 37 per cent. and 47 per cent. in the two later groups. And the contrast is still more vividly apparent when it is made between the opposed groups of publicans and agriculturists. In the earlier age periods the deviation from the standard is at its maximum; in the decade twenty-five to thirty-five in the class where alcoholic influence is least active the suicide rate is more than 30 per cent. below the average, in the class where that influence is most potent it is more than 150 per cent. above the average. In each successive age group this influence is less perceptible, and in the last group—above the age of sixty-five—the suicide rate in agriculturists is only 14 per cent. below the average, while that of publicans falls to a figure practically identical with the standard.

This is not a merely casual feature of the last census figures. The same result is obtained if we examine earlier statistics. For instance, in a paper read by Dr. Ogle⁽¹⁸⁾ before the Statistical Society, figures are given showing details of the age incidence of suicide in various occupations during the six years 1878–83. Calculating from his figures we find that compared with the total male suicide rate taken as 100, the suicide rate amongst publicans amounted to 271·6 in the vicennial age period twenty-five to forty-five, while falling to 168·5 per cent. in the period forty-five to sixty-five.

We may take it as proved, therefore, that suicide due to alcoholism is characterised by a tendency to occur at a relatively early age, thereby contrasting strikingly with suicide from other causes, but approximating to the type of suicidal attempts.

Alcoholism the Predominant Cause of Suicidal Attempts.—The next stage of our inquiry will be to determine whether the resemblance of suicidal attempts to alcoholic suicide is the result of an identity of origin.

Clinical evidence, as I have endeavoured to establish elsewhere⁽¹⁴⁾, tends to prove that the abortive suicidal impulse is chiefly dependent on alcoholism, that it is related in its most typical form to a state of cerebral automatism developed by a bout of drunkenness supervening on a chronic intoxication. Thus as compared with the mass of actual suicides these attempts differ in their issue because they differ in their origin; they depend on a cause which evolves the suicidal impulse in the conditions least favourable to its realisation.

There is an *a priori* probability that this view, derived from a special and limited field of observation, has yet a general validity. It is, in fact, difficult to see how any large proportion of suicidal attempts could fail of execution unless they were made under the influence of cerebral conditions interfering with the normal power of co-ordinated action; and, further, the only agent of sufficiently wide-spread activity to produce these conditions on the requisite scale is alcoholism.

We have just noted how fully this hypothesis of an alcoholic origin would harmonise with the peculiarities of age incidence in suicidal attempts. We have now to inquire whether the other characters of these attempts are equally consistent with that view.

First, with regard to sexual incidence; we have found that the female contribution to suicidal attempts amounts to 27·1 per cent. This figure is very near the judicial estimate of female drunkenness, 29 per cent. If, therefore, alcoholism is the main cause of attempts to commit suicide, and if its influence in that respect is equal in the two sexes, the proportion of women among attempted suicides would be normal.

In the influence of season, again, the facts accord with our hypothesis; as we have seen, the seasonal distribution of suicidal attempts corresponds with that of actual suicide; there

is an exactly similar correspondence with the seasonal distribution of alcoholic insanity.⁽¹⁵⁾

Similarly the apparent independence of religious conditions, and the tendency to the more direct and simple methods of execution are characters which would belong naturally to suicides of an impulsive type.

In all these points accessible to inquiry we find, therefore, that the facts are most consistent with the theory which attributes suicidal attempts mainly to alcoholism.

Role of Alcoholism in the Recent Increase of Suicide.—Now, as we have already indicated, there is a *prima facie* probability that the same agent which has produced the increase in the abortive manifestation of suicidal tendency is also largely responsible for the slighter coincident increase in actual suicides.

If this view be correct, then the increase in actual suicide should in its characters conform to the type of the suicidal impulses of alcoholism, that is to say, tested by what we have found to be the main distinction of that type, it should be most marked in the earlier age groups.

From the decennial period, 1861–70, to the decennial period 1881–90, the increase in the suicide rate per million inhabitants amounted amongst males to 19·1 per cent., amongst females to 8·3 per cent. How was this increase distributed in the age groups?

It is in the years from twenty-five to sixty-five in men, and from twenty to fifty-five in women, that the vast majority—considerably more than three fourths—of suicides occur, and the variations of the age groups comprised in that period are decisive of the general tendency in the statistical movement.

To determine the question at issue we may, therefore, take as a central point the age of forty-five in men and thirty-five in women, and we may examine the variations from the earlier to the later decade in the suicide rate per million inhabitants living in the two age groups preceding and the two following these ages.

The result is given in the following table :

*Increase of Suicide-rate per Million Inhabitants living in each
Age Group from 1861-70 to 1881-90.*

	Age.	Increase.
Males	25-35	24·7 per cent.
	35-45	20·3 "
	45-55	17·5 "
	55-65	15·9 "
Females	20-25	25·8 "
	25-35	20·0 "
	35-45	24·5 "
	45-55	1·2 "

Thus it will be noted that of the four groups whose numbers entirely dominate the statistics of suicide, it is the earlier ages—those in which we find the maximum incidence of suicide from alcoholism—that have been most influenced by the recent increase in suicide.

And an alcoholic origin would probably explain also the other peculiar character of that increase, the character on which Sir John Sibbald bases his doubt of its reality, namely, its predominance in suicides by drowning and poison.

For, as we have already pointed out—and the experience of attempted suicide confirms the idea—it is obvious that these methods have a more natural relation to impulsive suicide than has, for instance, the more elaborate process of hanging.⁽¹⁸⁾ And we find indirect evidence in the same sense in the facts regarding suicide in Ireland. There, as we have already indicated, suicides, particularly in the Catholic provinces, are rare, while suicidal attempts are relatively frequent. Corresponding with this fact we note that, while differing widely from England in other respects, Ireland is only a very little less alcoholic than that country.

It appears probable, therefore, that owing to the absence of other factors, alcoholism occupies a relatively important position in the causation of suicide in the Catholic provinces of Ireland as compared with the northern province, or with England.

Now, contrasting suicide in Ulster with suicide in the rest of Ireland we find that in the four years 1887-90 the proportion of suicides by hanging amounted in Ulster to 32·1 per cent. of all suicides in that province, in the rest of Ireland to 23 per cent.

Hence we may assert that such evidence as is available points to these modes of suicide as the predominant expression of alcoholic genesis, and, therefore, the limitation of the increase

in suicide to these methods does not so much impugn the accuracy of the statistics as it supports the theory of augmented alcoholic agency.

Alcoholism and Suicide in the Occupational Groups.—Having examined the statistical evidence referring to the connection of alcoholism and suicide in the population as a whole, we have now to complete our inquiry by the investigation of their relationship in social groups—groups defined either by similarity of occupation or by geographical distribution.

We shall consider in the first instance the former class, concerning which the mortality reports of the Registrar-General afford us very direct information.

The following table, extracted from Table IV of Dr. Tatham's Report, shows in a series of the larger occupational groups the "comparative mortality figures" for suicide, alcoholism, and diseases of the liver, this latter being the form under which alcoholism chiefly masquerades in the registration of non-pauper patients. The groups are arranged in the order of their decreasing alcoholism.

Comparative Mortality Figures for Alcoholism, Hepatic Diseases, and Suicide in the Occupational Groups.

Group.	Alcoholism.	Liver disease.	Suicide.
Publicans	94	174	29
Costers	36	29	14
Butchers	35	56	23
Musicians	29	38	23
Cabmen	28	33	20
Bagmen	23	47	15
Transport Service	21	27	15
Domestic servants	17	29	25
Medical men	14	60	41
Shopkeepers	14	31	17
Labourers	14	21	13
Occupied males	13	27	14
Barristers	12	55	18
Tailors	12	31	15
Bakers	11	39	19
Metal workers	11	29	13
Building trades	11	23	13
Watchmakers, etc.	9	35	25
Shoemakers	9	20	13
Scholastic	8	21	15
Textile manufactures	7	23	16
Miners	4	18	9
Agriculturists	4	17	10
Fishermen	3	24	12
Clergymen	2	18	7

As a glance at these figures will show, there is a certain general correspondence between alcoholism and suicide in the different groups, this correspondence being very much more evident in the classes where alcoholism is above the average for occupied males. The only striking exceptions to this rule are the groups of medical men and watch and instrument makers—whose suicide rate is, through the operation of readily imagined causes, abnormally high—and the group of costers, who, though highly placed on the alcoholic list, are not above the average in suicide. The relatively low rate of liver disease in this group, and the usual readiness to predicate drunkenness of a coster, are considerations which suggest that alcoholism in this class is over-estimated.

The interpretation of the facts regarding the other groups is fairly obvious: alcoholism being an important cause of suicide, its prevalence produces a relatively high suicide rate, *cæteris paribus*; on the other hand, as it is only one of several causes, its decrease does not involve a diminution of suicide beyond a certain point, as other factors of suicide continue to operate.

The same fact may be brought out in another way. If we take a large occupational group in which alcoholism is frequent, and if we subdivide it into local groups, then it will be found that the variations of the mortality from alcoholism in these sub-groups are accompanied by corresponding variations in the mortality from suicide. On the other hand, if we submit to the same process a group in which alcoholism is not specially prevalent, we find no such correspondence between the variations of the two phenomena in the sub-groups. The following table of mortality figures for alcoholism and suicide in local groups of publicans, taken as an alcoholic, and of coal miners, taken as a relatively sober occupation, exhibits this point very clearly.

*Alcoholism and Suicide in Local Groups of Publicans and
Coal Miners.*

	Alcoholism.	Suicide.
Publicans	94	29
London	127	34
Industrial districts	93	27
Agricultural	69	21

	Alcoholism.	Suicide.
Miners	4	9
Durham and Northumberland	5	8
Lancashire	5	13
York, West Riding	4	14
Derby and Nottinghamshire	2	12

Regional Distribution of Alcoholism, Suicide, and Suicidal Attempts.—For our purpose the occupational group with which we have just dealt is in several respects superior as an unit to the regional group, which we have now to consider. In the first place the effort to determine the local distribution of alcoholism is impeded by the difficulty that we have no reliable measure of the intoxication in the regional unit. The police returns of the number of prosecutions for drunkenness are the only semblance of such a measure, and we have already seen how utterly inadequate they are for the purpose. And the objections which lie against their validity as a test of the alcoholism of the country taken in its entirety hold even more strongly against their use in the comparison of its different regions.

A further source of fallacy resides in the fact that, in so far as territorial divisions correspond to differences in social and industrial conditions—and that from our point of view should constitute their value—these conditions are themselves disturbing factors in the problem, and that in many ways. On the one hand, drunkenness and abortive attempts to commit suicide are events more likely to attract the attention of the police in areas where the population is dense, and hence it is quite possible that statistics may underrate their frequency in the more thinly-populated areas. On the other hand, if it should appear that suicide, actual or attempted, is really more frequent, and drunkenness more rife in districts where special industrial conditions prevail, then it might very reasonably be contended—and the argument undoubtedly expresses part of the facts—that the alcoholism in these districts stands in no casual relation to the suicide, but that both are results of the industrial environment.

If we give due weight to all these qualifying considerations, it will appear abundantly clear that the results furnished by this particular method of inquiry must be regarded as of very secondary and relative value, useful at most in so far as they may control evidence gained from other sources. For that

end, and not as possessing much intrinsic value, we include them here.

I have prepared maps, based on figures taken from the Criminal Statistics, 1891-95, showing the distribution of suicide, suicidal attempts, and drunkenness in the English counties during these five years.

The indications offered by these maps are somewhat vague, and such general tendencies as can be traced in them are largely tempered by exceptions. Certain main points can, however, be made out.

In the first place, if we direct our attention to the regional distribution of suicide and attempted suicide, we note that the correspondence between these two phenomena is only partial, that it is fairly evident where suicidal attempts are frequent, very imperfect where these attempts are rare. This result confirms the conclusion which we have already reached on other grounds, viz. that the factors which govern the origin of suicidal attempts play a much less important rôle in the causation of actual suicide, and that consequently while their activity, as shown by the frequency of these attempts, involves some increase in the rate of actual suicide, their absence or diminution does not necessarily produce a corresponding fall in the suicide rate, as the other causes of suicide persist.

If we now regard the distribution of drunkenness in connection with the other phenomena we find, as the considerations already cited would lead us to anticipate, that these maps give even more uncertain results. In general, however, drunkenness appears to correspond more with attempts than with actual suicides; this holds true at least in the lower figures, that is to say, with a low rate of drunkenness attempted suicide more usually rules low, while actual suicide not uncommonly rules high. It will further be observed that attempted suicide and drunkenness are chiefly found in counties which include large urban areas, while they are rare in agricultural districts, where, on the contrary, actual suicide may be fairly frequent. And if we take the urban districts alone, we find that in these centres of alcoholism suicidal attempts may even increase to such a degree as to be more frequent than actual suicides, though the latter also rule very high. This is the case, for instance, in London, Liverpool, and Manchester. The influence, of course, of the special circumstances of town life other than alcoholism

is a factor which detracts somewhat from the value of this evidence; nevertheless, it retains considerable significance by reason of its harmony with the facts from other sources.

Conclusion.—We have now reached the term of our inquiry, and from the results which we have obtained we are in a position to formulate a fairly definite statement of the relationship of alcoholism to the movement of suicide in England.

We have found that the recent increase of suicide has coincided with a considerable development of abortive suicidal attempts. These attempts, in such of their characters as are ascertainable, have approximated to the type of alcoholic suicide, thereby confirming the clinical evidence which attributes to alcoholism the chief rôle in the genesis of abortive suicidal impulses. Further, we have found that the most important of these characters—earlier age incidence—has also marked the recent increase of actual suicide.

For these reasons we may regard it as most probable that this increase of suicide has been in a large degree related to the influence of alcoholism, an influence which in the same period—as mortality statistics attest—has tended to augment.

And we may also draw a larger inference; out of the fragments of evidence of various origin which we have examined in the course of our inquiry we may construct the type of alcoholic suicide as a special variety, with characteristics distinguish it from suicide of other causation.

The chronic intoxication by alcohol, as we observe it clinically, produces generalised disorders of visceral function throughout the economy, whence there results an alteration and disturbance of those organic stimuli which form the ground-work of our personality, those stimuli whose activity, as Maudsley⁽¹⁷⁾ puts it, “is even of more consequence in determining the tone of our feeling or of our disposition and the character of our impulses than that activity which follows impressions received from the external world.”

The depressed emotional tone thereby induced prepares the suicidal impulse, which in the more typical instances issues in action when a supervening increase of the intoxication has still further lowered the level of function in the enfeebled brain, and has proportionately exalted the influence of the organic stimuli in the cerebral processes.

As compared, therefore, with cases of deliberate and co-ordi-

nated suicide due to other causes, alcoholic suicide is found to be more impulsive, more directly and immediately related to organic conditions in the individual.

And when we pass from the clinical to the statistical standpoint—when, instead of isolated cases, we envisage alcoholic suicide as a social phenomenon,—the consequences of this special mode of evolution appear with equal definition.

Thus we find that the factors—those notably of the social order, or operative as such—which dominate other forms of suicide are of comparatively small account, or are of different account in the suicide dependent on alcoholism ; and hence the characters which these factors impress upon ordinary suicide are frequently lacking, or are obscured in the alcoholic form.

So far, no doubt, as some of these factors are of a nature to further alcoholic excess at the same time that they further suicide, they co-operate in producing alcoholic suicide. This holds true, for instance, of seasonal influence, and in respect of it alcoholic suicide shows no divergence from ordinary suicide.

The relation is similar, though not perhaps essential, as regards sexual incidence ; alcoholism is a potent factor only in about the same fraction of the female population as that exposed to the ordinary social causes of suicide, and for that reason, and probably for that reason alone, the sexual incidence of the suicide which is alcoholic does not markedly differ from that of the suicide which is not alcoholic.

In religious cult we have, on the other hand, a social factor of decided influence on non-alcoholic suicide, but relatively insignificant—within the limits of the Christian sects—as regards alcoholism. We find its action also insignificant on alcoholic suicide ; the forms of Christian belief comparatively immune from ordinary suicide are by no means protected from the self-destructive impulse arising from alcoholism.

Finally, in age we have a factor whose influence on alcoholic suicide is not merely not co-operative with its influence on ordinary suicide, but is of directly opposite effect. In the relation of age to ordinary suicide—a relation in part, at least, of the complex social order—the forces which make for suicide grow with the years ; their zenith is in the phases of decadence. It is otherwise with alcoholic suicide ; the visceral disorders from which issues the suicidal impulse of the drunkard react with greatest potency on the affective *ego* in the period of fullest

vital activity. Hence it is in respect of this influence that alcoholic suicide and ordinary suicide exhibit their utmost variance; the earlier age groups—the years of active manhood, where normally the suicidal bent is slight—are those where alcoholic suicide reaches its highest development. From that point it sinks in importance, until in advanced life its influence is hardly traceable as a distinct force.

Thus the evidence of statistics is in entire harmony with the inferences of clinical experience. The impulsive suicide of the alcoholic, characterised as a phenomenon of the individual by obscuration of consciousness and absence of deliberation, is similarly marked as a social phenomenon by a relative independence of the ordinary factors of suicide, by an obscuration, as it were, of the more complex activities of the collective consciousness.

It is probable, of course, that this differentiation is not absolute in the social any more than it is in the individual instance; as the dream consciousness of the individual varies under different conditions in its degree of independence of the waking consciousness, so, also, doubtless the movement of toxic suicide in a given community is not entirely uninfluenced by the factors which govern social activities of a more deliberate order, including ordinary suicide; that is to say, the state of the collective consciousness, as reflected in these activities and in the organised forces which lie behind them, may react also in greater or less extent on the direction of the impulsive acts of the alcoholic, which would tend, for example, more towards suicide than towards homicide when and where suicide was normally more prevalent, and *vice versa*. The varying degree and character of this reaction probably account in part for local and periodic differences in the correspondence between alcoholism and its suicidal expression, and in the divergence between the latter and ordinary suicide.

In general, however, these influences which we have just considered are slight and partial; they never suffice to obscure in the statistical view the special characters of alcoholic suicide—the characters which indicate that the relation of that phenomenon is to the forces which govern alcoholism, and not to the forces which govern suicide.

(1) Magnus Huss, *Chronische Alkoholskrankheit*. Ubersetz, von G. van dem Busch, Stockholm, 1852.—(2) J. L. Casper, *Über den Selbstmord und seiner*

Zunahme, Berlin, 1825.—⁽⁸⁾ Lunier, quoted by Morselli.—⁽⁴⁾ Morselli, *Il Suicidio*, Milan, 1879.—⁽⁶⁾ Baer, *Der Alkoholismus*, Berlin, 1878.—⁽⁹⁾ Wynn Westcott, *Suicide*, London, 1885.—⁽⁷⁾ Ferri, *Sociologie Criminelle*, edit. française, Paris, 1895.—⁽⁵⁾ Grotjahn, *Der Alkoholismus*, Leipzig, 1898.—⁽⁸⁾ Colojanni, *L'Alcoolismo*, Catania, 1887.—⁽¹⁰⁾ Durkheim, *Le Suicide*, Paris, 1897.—⁽¹¹⁾ Strahan, *Suicide and Insanity*, London, 1893.—⁽¹²⁾ Adolph Wagner, *Die Gesetzmässigkeit, etc.*, Hamburg, 1864.—⁽¹³⁾ *Journal of the Statistical Society*, 1886.—⁽¹⁴⁾ "Alcoholism and Suicidal Impulses," *Journal of Mental Science*, April, 1898.—⁽¹⁵⁾ Baer, "Einfluss der Jahreszeit auf die Trunksucht," *Berlin. klin. Wochenschr.*, 1899.—⁽¹⁶⁾ It may be noted that in another variety of toxic suicide, that related to pellagra, drowning is the method almost always employed; hanging is very exceptional. (Roussel, quoted by Ritti in article on suicide in *Dictionnaire des Sciences Medicales*, Paris, 1884.)—⁽¹⁷⁾ Maudsley, *Physiology of Mind*, London, 1876.

Concerning Irresponsibility in Criminals. By CHARLES
MERCIER, M.B.Lond.

MR. WHITEWAY'S paper on this subject in the last number but one of the JOURNAL is very interesting to medical men as an indication of the view taken by an enlightened legal mind, and it is especially interesting to us as proving that all legal minds are not so steeped in mediæval notions of responsibility as some medical men are apt to suppose. It contains, however, statements that must not be allowed to go unchallenged, and it pushes the doctrine of irresponsibility further than I, for one, should be prepared to follow.

The statement that it is common knowledge that recently a general paralytic was received into an English asylum from a prison, with the marks of a flogging still fresh upon him, is incorrect. Such an incident may have occurred, but its occurrence is not common knowledge; and if Mr. Whiteway has any proof of the fact, the proof should have been adduced; for, although Mr. Whiteway seems to have a brief to fall foul of all our arrangements for dealing with criminals, from their birth to their final exit upon the scaffold, there are other people who, if less interesting, are not altogether outside the pale of our sympathies. Prison officials are, after all, God's creatures as well as criminals, and a charge brought against them should be substantiated or withdrawn.

Mr. Whiteway is of opinion that Mary Ansell should have been excused from the consequences of her crime on the ground that, although not herself insane, she had several insane rela-

tives, and was a degenerate. The first of these reasons we regard, taken by itself, as totally inadmissible. Mr. Whiteway is probably not aware that there are very few families indeed in which there are not, or have not been, some insane members ; and if once the insanity of a relative or relatives is admitted as a substantiation of the plea of irresponsibility, responsibility is practically abolished, and all prisons must be superseded by lunatic asylums. That this position is held by some extremists we are aware ; but it is not held by them on this ground, and it does not appear that it is held at all by Mr. Whiteway himself.

If we admit, as we should not be slow to admit, that the existence of a strong family history of insanity should be taken into account in estimating the validity of the plea of insanity, yet we do not admit that such a consideration ought to entirely overbear and swamp that of the circumstances of the crime itself.

As to the plea that she was a "degenerate" we must suspend our judgment, and ask Mr. Whiteway and everyone else to suspend their judgments, until they know precisely what "degenerate" means.

Mr. Whiteway says that Mary Ansell "wanted badly £22 10s., and got the idea that by sending phosphorus paste to her imbecile sister, if her sister ate it she would get the money." In this we should agree with him, and we would point out that it is for people who badly want things, and who get the idea that they can obtain these things by crimes, and then proceed to put the idea to the test of experience, that the whole of the criminal laws are enacted ; and that it is to such persons that these laws are meant to apply. Mr. Whiteway accuses us of begging the question when we infer that, since she knew that she would gain personal advantage by the crime, therefore she knew that she ought not to commit the crime ; and he says that the nature and quality of her act she did not properly evaluate ; and this statement, we suppose, is not begging the question. A little later he admits that it is a probability only, not a certainty, that she did not know that she was doing wrong. Now as to this, Mr. Whiteway, as a trained and experienced lawyer, must admit that we ought to be guided by the facts of the case. What are these facts ? The prisoner not merely knew that she was sending the poison for the purpose of killing her sister, and that if

her sister died she would get the money, but she took elaborate precautions to conceal her tracks. She obtained the poison by telling lies. She forged a letter some time beforehand to induce the asylum authorities to believe that the parents of their patient were dead, and so to prevent them from sending intelligence of the death, when it should take place. She induced her father to forbid the making of a post-mortem examination. She planned the deed with deliberate cunning, and carried it out with remorseless cruelty. That no criminal should under any circumstances be punished is a position which we find intelligible, although we cannot agree with it ; but that if any criminals whatever ought to be punished, such a criminal as Mary Ansell should not, is a position which we cannot even understand, for a crime more deliberate, more heinous, more sordid, more wilful, more abominable in any way, we do not remember, and we have a difficulty in even imagining.

On Bodily Disease as a Cause and Complication of Insanity.

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THE observations upon which this essay is written have been made in the Coppice Hospital, and refer to cases admitted between 1st August, 1859, and 1st August, 1893, and still surviving at the latter date, and to cases thereafter admitted consecutively, all of which have come under the writer's care, being 175 in all.

Of the whole number recorded, 80 are examples of mania, 29 being males and 51 females ; 55 of melancholia, 28 of whom are males and 27 females ; 12 of chronic mania, 7 males and 5 females ; 11 of general paralysis, all males ; 9 of dementia, 5 males and 4 females ; 6 of acute mania, 3 of each sex ; 1 of acute delirious mania ; and 1 of idiocy.

In the cases where bodily disease has preceded the insanity it is not contended that the latter is caused entirely, or even chiefly, by the physical condition, but only that this has an important influence.

Some exception may perhaps be taken to the manner in which the terms mania and melancholia are used, but it is in comparatively few instances that a case of melancholia or mania runs such a course as to be classified in the same way at different periods of its prevalence. In practice, mania and melancholia are merely symptomatic terms and denote no definite entity of symptoms, except where it is specially mentioned that a patient is a typical example of the one or the other.

The term dementia, too, is used with varying significance by different writers, and many cases described as chronic mania by one, would be classified as dementia by another. In chronic mania, and indeed in most cases of insanity, there is a considerable loss of mental power, and in proportion as stress is laid upon this weakening will be the tendency to classify as dementia.

I. Diseases of the Vascular System.

Among the physical causes of insanity, diseases of the circulatory system occupy an important if not the chief place. Several authors have found it affected in over 50 per cent. of insane cases. Although these results are disproved by later observers, the negative results of investigators who have endeavoured to demonstrate a vaso-motor nerve supply to the brain may to some extent form the foundation of a working hypothesis, that the supply of blood is mainly regulated by the vigour of the heart's action, the general arterial pressure, and the turgescence or emptiness of the venous system. The brain case being a rigid cavity, slight alterations in blood pressure are of much greater import to the brain than to any other organ in the body, considering its delicate structure and the grave psychical changes which follow alterations in its cells so slight as to be scarcely perceptible under the microscope.

The loss of consciousness consequent upon the sudden failure of the heart's action (syncope) is due, of course, to cerebral anæmia. Variations in the blood pressure, therefore, will be accompanied by a corresponding change in the manifestations of psychical energy.

The exhilaration which follows a moderate dose of alcohol is almost entirely due to its exciting effect upon the circulation, although the toxic phenomena of excessive indulgence are

probably due to its direct action upon the nervous system. The effect of reduced blood pressure, on the other hand, is manifest in the feeling of diminished energy or depression which results from prolonged abstinence.

In a large number of insane cases suffering from circulatory disorders, we are tolerably certain that but for these conditions the mental alienation would never have occurred. Heart disease frequently and directly causes permanent irritability with variations of gloom or boisterousness, thus completely altering character and conduct, though not sufficiently in the absence of neurotic predisposition to produce technical insanity.

The cases of John Hunter and Matthew Arnold, quoted by Dr. Kiernan, of Chicago, in a paper on the "Emotional Instability of Heart Disease" ⁽¹⁾ form well-known instances of this effect.

Sir T. Lauder Brunton refers to the case of a child whose irritability was considered unaccountable until an examination of the chest revealed extensive mitral regurgitation. The mental symptoms depended upon venous stasis in the brain and consequent incomplete elimination of its metabolic products. Much relief followed the administration of salicylate of sodium, which presumably acted by increasing the solubility and so aiding the elimination of the nitrogenous waste matters.

The mental condition in nearly all cases of chronic heart disease approaching dissolution, is often characterised by intermittent delirium, great mental feebleness, and obstinate insomnia, with a querulous and suspicious attitude of mind.

Among the cases under review there were nine in which there was definite organic disease of the heart, and in at least four of these the cardiac lesion would appear to have been the chief cause of insanity.

1. A. M. D—, æt. 41, sister insane, was admitted on 5th May, 1860, having then been insane for five years. First attack at the age of thirty. She was found to have mitral disease and failure of compensation, with rapid pulse and œdema of the feet. There was mental exaltation, with considerable variation in degree of violence from time to time, and ultimately chronic mania. There were certain prevalent characteristics common to patients of this class—a constant suspicion of the motives of those about her, a querulousness, and a fear of impending evil, markedly different from the chronic state of misery in melancholia. She died in March, 1898, at the age of seventy-four, from an attack of broncho-pneumonia complicating influenza

2. E. G—, æt. 61, admitted 31st October, 1895, after two days' mental illness. She had had a slight temporary attack of mania about ten months before. On admission she was suffering from mitral incompetence, the heart being considerably hypertrophied. A well-marked systolic murmur was conducted into the axilla. Her mental symptoms were restlessness and excitement, with suspicions of her friends, and the delusion that people were attempting to poison her by tampering with her food, and blowing chloroform through the keyhole of her room at night. She was afraid to remain at home, and had taken an unnatural dislike to relatives who lived with her. There was no ascertainable heredity in this case. The excitement subsided, and she is now in a state of deep dementia. Her cardiac lesion is well compensated by the administration of strychnine and digitalis.

3. E. C—, æt. 76, sister an imbecile. Admitted on 6th August, 1896, suffering from dementia of a melancholic type, with a constant fear of impending evil or injury by those about him, shouting "murder" when approached, and frequently groaning when left to himself. Mitral incompetence and displacement of the impulse of the heart outwards, with a soft systolic murmur conducted into the axilla. The pulse was feeble, and 92 per minute. There was slight œdema of the feet and legs, but no albumen in the urine. He was treated with nux vomica and digitalis, but the symptoms persisted, with occasional remissions and exacerbations, until his death from cardiac failure on May 23rd, 1897.

4. M. C—, æt. 67, admitted on August 14th, 1896, suffering from melancholia, her leading symptoms being a constant state of apprehension of some impending calamity, the nature of which she either could not or would not explain, and a delusion that her son was starving. She constantly ejaculated in a wailing voice, "I don't know what will be done," and both before and after admission made several suicidal attempts by strangling. She was found to be suffering from mitral regurgitation, which appeared to be well compensated.

The cardiac lesion in all the above examples was the same, and it will be seen that the mental symptoms also presented a certain amount of similarity. I do not attach undue importance to this correspondence in a few cases, but it is suggestive.

It cannot be justly assumed that compensation, apparently complete so far as serous effusions, œdema, or albuminuria are concerned, necessarily implies that the delicate cerebral cells will not suffer from the impaired condition of the circulation.

Dr. Solfanelli (³), of Rome, published in the *Archivio*, 1873-4, a series of seventeen cases of insanity with heart disease, including examples of aortic regurgitation, aortic stenosis, mitral regurgitation, and mitral stenosis. He found no correspondence between the form of the mental disorder and the cardiac

lesion ; nor is there any in that respect in the four examples just mentioned—one melancholia, one dementia, one chronic mania, and one acute mania soon resulting in dementia. Reference may also be made to Dr. Mickle's *Goulstonian Lectures*, published in 1888.

5. E. B—, æt. 50, was admitted on 3rd March, 1870, suffering from a third attack of insanity which had lasted for several years, her first having occurred at the age of twenty. She was violent, abusive, blasphemous, and indecent. There was no record of cardiac or renal disease at that time, but she was always pale and cadaverous, liable to bronchitic attacks and occasional severe abdominal pain. For years she was taciturn and irritable, with occasional outbreaks of abusive excitement. In December, 1897, she had a left hemiplegia with a purely motor aphasia. She could tell the use of objects and recognise their names when mentioned, but was usually unable to name them herself. When attempting to speak, a rare occurrence with her, she was frequently at a loss for a word. She was not left-handed. On examination, mitral stenosis and incompetence were discovered. The pulse was remarkably tense, the arteries atheromatous, and the urine contained albumen with a few granular casts.

Previously there were no symptoms sufficient to call for a thorough clinical examination. For fifteen months thereafter the patient was bedridden, having been treated with strychnine, digitalis, laxatives, etc. She had two or three intercurrent attacks of localised pneumonia, probably mainly hypostatic in character, but remained free from bedsores in spite of her dirty habits. Death occurred in April last.

The remarkable longevity of this case is no doubt explained to some extent by the regulated conditions of asylum life. There was no record of neurosis in the family history, and the cause of insanity is doubtful, but it is probable that the heart disease existed since youth and played an important part in disturbing the mental balance. The case shows the necessity for thorough periodical clinical examination of chronic patients.

6. In the case E. C—, also suffering from cardiac disease, there was a marked family history of neurosis and phthisis, but the symptoms presented many points of similarity to those of the four cases quoted above.

Of the 175 cases studied there was definite organic disease of the heart in only 10. I have examined 8 of these. Functional disorders of the circulation (from anæmia, malnutrition, etc.) existed in 36 additional cases.

Dr. Greenlees in this JOURNAL⁽⁸⁾ recorded cardiac disease as a cause of death in 14.67 per cent. calculated on 218 successive

autopsies, but was not certain whether the disease existed in all at the time of admission.

In a table of 672 cases in which the condition of the heart on admission was ascertained, it was stated that 13 per cent. of the total had some definite organic disease of the heart, while 44 per cent. had functional circulatory disorders of one kind or another. These percentages are more than double those obtained in my series of cases, but it must be remembered that about a third of these are the survivals of the admissions of nearly forty years. Dr. Greenlees found that functional disorders of the heart are more common in recent and acute cases. There is certainly every reason to believe that derangements of this kind are, in the great majority of instances, consequent on rather than antecedent to the insanity; but in all such cases there is action and reaction, leading possibly to a vicious circle of phenomena, in which the unduly sensitive heart, responding too readily to a comparatively slight stimulus, occasioned an irregularity in the cerebral blood supply, increasing the disturbance already existing in the brain, which might otherwise have been but temporary.

Many writers find a far larger percentage of cardiac cases among the insane than that given above; Esquirol, for instance, found heart disease in nearly 7 per cent. of his melancholic cases, Calmeil and Thore in as many as 30 per cent., while Sutherland in an analysis of forty-two post-mortem examinations found the heart diseased in thirty-four.

Dr. Wilkie Burman (*Heart Disease and Insanity*, 1873) says: 'There is a very striking and remarkable relation between the two diseases. It would, of course, be very rash on these general grounds to infer that because the relation does exist it must therefore be causal, yet that the relation has some special significance can scarcely be doubted, and it should be an important element to take cognizance of in any attempt to explain the differences that exist in the local distribution of insanity and its chief varieties throughout England and Wales.' He also states that heart disease is a most grave complication of insanity, 32 per cent. of the cases dying from this cause having lived only three months or less in the asylum.

II. *Diseases of the Respiratory System.*

Disorders of the respiratory apparatus are invariably attended with more or less mental disturbance, as may be expected from the increased effort required for the necessary oxygenation of the blood, and the diminution, slight though it be, in the amount of oxygen supplied to the brain. Deficiency of oxygen diminishes the vitality of the cells, and their normal functions are imperfectly performed. Anxiety, depression, and irritability are stamped on the sufferer from chronic bronchitis, thus resembling the effects of mitral disease, which are to some extent dependent upon the same cause. Among the cases under review, one in particular appeared to have as the exciting cause of her insanity an attack of bronchitis and pleurisy.

7. M. H—, æt. 49, admitted 24th November, 1896. Had been healthy until about a year before admission, when she had an attack of influenza with bronchitis and pleurisy; the latter was severe in character, and attended by considerable effusion. While recovering she became very depressed with the delusion that she had no lungs or backbone, etc. She was placed under care at a licensed house, whence she was transferred after a few months to the Coppice. There were then signs of old pleurisy with some slight contraction of both lungs; the cardiac dullness commencing at the third costal cartilage on the left side, and the liver dullness at the fifth rib on the right; impairment of resonance and diminished breath-sounds for a hand's breadth at the base of the right lung behind, and to a less extent on the left side. The face was congested and somewhat blue. The patient complained of feeling very cold, and said that she was condemned to live for ever in torment, and that her only way of escape was by being burnt alive. The leading delusion as to the absence of lungs in this case is interesting in view of the fact that the disease commenced after a pleuritic attack. The ideas still persist but are less constantly dwelt upon, and the depression is not so acute.

Morphia alone or combined with iron or strychnine, iron and strychnine, strychnine and acids, alkalies, and nux vomica, and alkaline bromides, have all been tried without benefit. The patient sleeps well as a rule, though she labours under the delusion that she never has an hour's consecutive rest. She takes her food fairly, and is considered to be gradually though slowly improving.

8. K. F. G—, æt. 56, admitted 15th October, 1898, is a case of interest as the attack of insanity directly followed acute lobar pneumonia. For many years this patient had been given to great alcoholic excess, with intervals of sobriety. In her sane condition she was lively, witty, and good-natured. Just before admission she had an attack of lobar

pneumonia with a temperature rising on several evenings to 105° , and this was followed by jaundice. She was sent to the seaside for convalescence, but was badly nursed and began to refuse her food, which was not forced upon her. On her return she was almost in a state of inanition, and though careful nursing and medical treatment restored the physical condition, her mind was found to have given way when her bodily strength returned, and she was brought to the Coppice in a state of acute mania. In spite of her physical weakness she was very violent, and though every care was exercised she sustained two fractures. The first, of the left middle metacarpal bone, was caused by the patient placing her hand underneath her body to raise herself up in bed. The second was probably produced by the patient striking her wrist on the end of a sofa, thus sustaining a fracture of the right ulna at its lower end. Both fractures united well under appropriate treatment, although the bones were so remarkably brittle. About a week after they had occurred the patient contracted a second attack of lobar pneumonia, which ran a very unusual course.

On the morning of 24th October the patient was noticed to be unwell, but there was no elevation of temperature. In the evening, however, she began to breathe very badly, and at 11.30 the respirations were 48 per minute, and the pulse 128, while the face was pale and cyanosed, with a temperature of 104.8° . There was subtubular breathing with diminished resonance over the whole of the right lung, but there was no fracture of ribs or any sign of injury. Ten grains of quinine were given immediately with Spir. *Ætheris* and Spir. *Ammon. Aromat.* $\bar{a}\bar{a}$ η xxx and Tinct. *Digitalis* η viiij every four hours. A hypodermic injection of strychnine was also given on account of the feebleness of the pulse. On the following morning the temperature had dropped to 101.4° , and the respirations to 36 per minute, the patient having perspired freely during the night. The respiratory sounds had not become tubular as was expected, but a few fine crepitations were heard over the whole of the back of the lung, most abundantly at the base. The temperature subsequently fluctuated between 99° and 101° , never rising above the latter point, and became normal on 1st November. Abundant food in the form of milk and eggs with four ounces of brandy daily was given during the illness, which would appear to have been an abortive attack of pneumonia. The patient rapidly convalesced, but was kept in bed during the four or five following weeks, as the rest was considered good for her, and she was thus more easily controlled.

Besides the occurrence of fractures and the rapidly developed pneumonia, there are two circumstances which deserve notice ; firstly, that the insanity commenced during a visit to the seaside, illustrating Blandford's remark that sea air appears to have a particularly prejudicial effect in the early stages of mental disease ; secondly, that it is most dangerous to allow a patient weakened by bodily illness and showing incipient mental symptoms to lose strength from lack of food.

9. J. W—, æt. 53, admitted 25th March, 1899, suffering from delusional melancholia, also emphasises the last-mentioned point. He had primary syphilis about four months before admission, with secondary symptoms, the chancre and inguinal glands having been removed by operation. Remorse was followed by melancholia, with delusions that his relatives and servants were conspiring to poison him. At home he was allowed to get into an extremely low state of nutrition and constipation. On arrival he struggled so violently that no proper examination could be made; but on the following morning his temperature was 101° , his pulse 140, and his respirations 42. He had been forcibly fed on admission, and had taken liquid food afterwards from the hand of an attendant. He still resisted all attempts at physical examination, but grew rapidly weaker, and died about thirty-six hours after admission. A post-mortem examination revealed early pneumonia of the lower lobe of each lung. Strychnine and digitalis were given hypodermically every four hours, but the heart collapsed at once, although not organically diseased, as soon as the onset of pneumonia made demands upon its reserve strength.

10. S. F. S—, æt. 37, admitted 18th March, 1898, suffering from acute mania with hallucinations of sight and hearing, and obstinate refusal of food, also showed an abnormal course of pneumonia. She had old tubercular consolidation at the right apex, and was subject to *petit mal*. Four days after admission the patient was found to be suffering from a slight cough and a temperature of 101° , but on the following morning the temperature had dropped to 99° , and in the evening it was normal. During the night, however, the breathing became very rapid, the face cyanosed, and the temperature rose to 103.4° , and the patient's condition appeared so serious that hypodermic injections of strychnine (gr. $\frac{1}{8}$) were given every six hours. On the three following evenings the temperature rose to over 105° , but on each occasion dropped to about 103° in less than an hour after the administration of ten grains of quinine. The latter drug was given after food through the nasal tube, as the patient refused to take anything by the mouth; and it is remarkable, considering the severity of the fever, that she was able to retain the large amount given, the total for twenty-four hours being four pints of milk, six eggs, and six ounces of brandy. Signs of consolidation first appeared over the right lower lobe, and afterwards spread to the left side, so that both lower lobes were involved; but notwithstanding this and the feeble character of the circulation, the patient recovered, mainly, no doubt, in consequence of the amount of food she was able to digest. On 27th March the patient's condition began to improve, and she got steadily better, though nasal feeding had to be continued for weeks. She is now very much improved both in bodily and mental health, and is looked upon as likely to recover completely. The case is fully reported in the 'Lancet' for September 24th, 1898.

In the three examples of pneumonia above recorded there was an absence of premonitory signs, which is common among

the insane. This may possibly be due to a functional change in the innervation of the viscera, or to an imperfect expression of sensations. The cases also illustrated the difficulty of prognosis in regard to acute maladies affecting the insane.

11. A. L. G.—, æt. 23, admitted 11th September, 1897, suffering from subacute mania. She progressed favourably until 25th October, when she began to suffer from toothache and became restless and excited. Three decayed stumps were extracted on 27th October, but without any mental improvement. She became gradually more excited. On 1st November she was acutely maniacal, refusing food and requiring forcible feeding. Two days later she appeared to have a slight cold, and on 4th November she was sick after having been fed through the œsophageal tube. Next day, though the temperature was normal and there were no signs of disease in the chest, she was put to bed. At 8 p.m. the temperature rose to 104.4° , and the pulse was rapid and feeble. She still resisted when any attempt was made to give her food or medicine by the mouth, and was sick when fed through the tube, though when thirsty would take a little iced milk and soda water. She was accordingly fed every four hours by the rectum, while strychnine (gr. $\frac{1}{10}$) and digitalin (gr. $\frac{1}{100}$) were given every six hours hypodermically. Signs of consolidation appeared over the lower lobe of the right lung on 6th November, but the disease never spread beyond this area. The patient laughed and shouted constantly, and the temperature remained high, keeping an average of about 103.5° until her death on 10th November.

The only rest obtained was for a few hours after hypodermic injections of morphia (gr. $\frac{1}{2}$), which were given two or three times, as bromides and sulphonal appeared to have no effect. The unfavourable termination is easily understood, as the irritability of the stomach led to exhaustion.

Nourishment is imperatively required in the treatment of most fevers, and especially among the insane, where there is an extraordinary waste.

III. *Phthisis.*

The members of a phthisical stock are as a rule of a sensitive and emotional disposition, and insanity is certainly frequent in tubercular families. The marriage of a phthisical with a neurotic person is properly regarded as dangerous for the offspring on account of their great liability to become insane. Clouston's⁽⁴⁾ work and opinions on this subject are well known.

12. A. B—, æt. 30, admitted 9th October, 1889. The first signs of phthisis were discovered after an attack of hæmoptysis in February, 1898. There was no evidence of hereditary neurosis, though the mother's family was phthisical. There were delusions of electrical influences, constant sexual excitement, with erotic conversation, and hallucinations of hearing. He gradually deteriorated mentally, and in 1897 was noticed to be losing flesh, but this was attributed to constant masturbation, from which it was impossible to restrain him. His temperature was of the hectic type, rising regularly to 100° or 101° in the evening, and falling as a rule to 98° in the morning. At the same time he began to suffer from diarrhœa, and suspicions were entertained that his bowels were affected by tubercular ulceration, which was not unlikely to be the case, as he absolutely refused to spit out his sputum, and invariably swallowed it.

In August, 1898, there was evidence of disease over the whole of the upper lobe of the right lung, and the apex of the left was also affected. In October both lungs gave evidence of extensive disease, signs of excavation being observed in the subclavicular region of the left lung as well as at the apex of the right. The patient now rapidly emaciated, and died in November, 1898.

After the discovery of his disease the patient was treated regularly with quinine, alkalies, and vegetable bitters, maltine, and cod-liver oil. He was originally a powerful and athletic man, and had gained distinction in various sports, but the disease ran a rapid course. The history of a case of this kind might lead one to believe that asylum confinement would tend to produce phthisis in those who were not originally predisposed to it, but this does not appear to be the case if large numbers of instances are examined.

13. J. W—, æt. 21, admitted 10th April, 1862, suffering from melancholia and gonorrhœa, may be referred to as contrasting with the last recorded case. After contracting phthisis here, he recovered from it, and is still under treatment after a residence of over thirty-six years. His mother had died of phthisis in an asylum, and one sister was insane. He had delusions as to being poisoned, was suspicious, obstinate and silent, and constantly masturbated. His general health continued to be fairly good until 1890, when he had an attack of pleurisy with effusion on the left side. The fluid continued unabsorbed for months, and signs of tubercular disease were found at the apices of both lungs. At the present time, however (1899) there are no signs of active disease, though there is flattening at both apices, and the breathing is harsh and subtubular in character, while for a hand's breadth at the base of the left lung behind the breath-sounds are very faint, and there is diminution of vocal fremitus and resonance. The heart is not displaced to any appreciable extent. For several years this patient has been almost completely demented, and has had to be fed; notwithstanding which he has not lost flesh. He spends the morning in bed, and is only allowed to go out in bright warm weather.

Neither of these cases can be described as typical examples of phthisical insanity, and no such case occurs in the series

now under review ; yet Clouston (1874—1882) diagnosed and classified 2·7 per cent. of the admissions at the Royal Edinburgh Asylum as examples of this malady.

IV. *Diseases of the Digestive System.*

In almost every case of melancholia which comes under treatment it is found that there is disordered digestion, which of course may in some cases be the result of nervous depression, but which is not uncommonly the exciting cause of the mental malady ; the efferent impulses from the brain to the viscera being disturbed and abnormal in character, so that the work of secretion or specialised tissue change is not properly carried out, while as a result of this, abnormal afferent impulses are sent back to the nerve centres, and their regular automatic or reflex activity is still further thrown out of gear. It is obvious that in such cases our only hope of cure is to give as much rest to both functions as is compatible with improved nutrition. This, of course, may be secured by avoidance of worry or unpleasant excitement of any kind, abstinence from excessive exertion of mind or body, occupation in light amusing recreation, and the careful medical and dietetic treatment of the disordered digestion. In my series of cases there are twenty-three in whom there was at the time of admission some disorder of the digestive system such as dyspepsia, constipation, or organic disease.

14. A. H—, æt. 54, admitted 10th December, 1896, had always been inclined to nervousness and depression, but had been fairly healthy until about a year before admission, when he consulted a leading surgeon about rectal ulceration and constipation of so obstinate a character as to give rise to the belief that he was the subject of malignant disease of the bowel. When he was admitted here, however, the rectal ulcers had nearly healed. He had a right scrotal hernia which was not quite completely reducible, and which some years previously had been strangulated, but reduced by taxis without operation. His attack of insanity dated from two months before his admission, when he became depressed and suicidal, expressing the belief that his soul was eternally lost. On admission he refused food, and had to be fed through the cesophageal tube. His bowels were very costive, but at first were regulated by means of aperients and enemata. About a month after admission he appeared to be somewhat improved both in mind and body, but on 16th January, 1897, the constipation had become obstinate. On 21st January he was sick after food, and seemed very weak and ill. Vomiting

continued at frequent intervals, the patient rapidly grew weaker, and he died on the following day. The question of operation was considered, but rejected on the ground of the patient's extremely feeble condition.

At the post-mortem examination the rectum and descending colon were almost empty, but the ascending and part of the transverse colon were hugely distended. The transverse colon was dragged down so as to form a sharp angle and constriction at its centre by several adhesive bands, which appeared to form part of the great omentum, and these passed into the internal abdominal ring. What had happened was obvious: when the hernia had become strangulated some years before the omentum had passed into the inguinal canal with the bowel, and on the reduction of the hernia had not left the canal with the bowel, but remained there exerting traction on the transverse colon, which was permanently fixed by inflammatory adhesions. As time went on the continuous traction thus exerted upon the transverse colon had dragged down the latter, causing more and more difficulty in the passage of fæces, and ultimately ending in complete obstruction.

15. X. X—, æt. 41, admitted 4th April, 1893, transferred from a licensed house. Her mental illness dated from the birth of a child in December, 1891, after which she had some septic trouble, probably pelvic peritonitis. She became very depressed, her bowels being obstinately constipated. It was not considered necessary to place her in an asylum, and in April, 1892, she had apparently quite recovered. In June of the same year, however, the depression recurred with a suicidal tendency. She stated that she had told a lie, and that in consequence two nurses had banged her head upon the floor until she was dead. She heard a voice constantly whispering, "Crack-pot, your brain is gone," and imagined that she was about to be killed by poison. She was then placed in an asylum, and was at first noisy and excitable, but afterwards quiet, sullen, and depressed. She frequently refused food, and would never take medicine unless it was given her by force or stealth, although the state of her bowels demanded the constant administration of aperients. She was transferred to the Coppice in a condition of resistive, silent melancholia, and frequently required forcible feeding with aperients. She occasionally had attacks of sickness and abdominal pain, and once or twice these were accompanied by jaundice. After a residence of about a year she ceased to require feeding, but still obstinately refused medicine, and unless carefully attended to would pass urine and fæces into her clothes or bed, though the bowels frequently refused to act even in response to large enemata containing castor oil or turpentine.

In July, 1895, she had an attack of pneumonia, which had a rapid and satisfactory course, the temperature being normal at the end of eight days. After this the case went on with occasional sickness and abdominal pain until 10th March, 1898, when she had an attack at first supposed to be similar to those described above, but more collapsed than usual. She was put to bed, and her bowels acted well in response to an enema. On the following day she vomited a little bile, but retained about two pints of milk which were given her. The temperature

in the axilla at 10 a.m. was reported normal. In the evening, as the patient seemed in pain, the abdomen was examined, and considerable tenderness and resistance were found in the right iliac fossa, and the temperature taken in the rectum was 100.8° . The abdomen moved fairly with respiration, and was not distended.

On 12th March the patient was obviously much worse, the abdomen being almost rigid and very tender, while vomiting began to occur very shortly after feeding. Her bowels did not act, and the rectal temperature was 100.4° . General peritonitis was diagnosed and an operation was suggested to the friends; but as they were unwilling and the measure was not regarded hopefully by us, the matter was not pressed. The patient rapidly grew worse, the vomiting becoming more and more severe, while the pain was relieved by morphia injections. The temperature remained steadily at about the same level until the patient's death on 14th March, at 3 a.m. A post-mortem examination was unfortunately refused. The severity of the chronic constipation was probably due to some old inflammatory adhesions about the cæcum, by which peristalsis was considerable reduced, while the occasional pain and sickness were due at times, perhaps, to gall-stones, but, as a rule, more probably to a temporary gastric catarrh or bilious attack. Her last illness was doubtless due to appendicitis of the malignant or perforative variety, which after causing temporary local peritonitis of insufficient duration to protect the general peritoneal cavity by adhesions, allowed the escape of fæces into the abdominal cavity, and so caused the general septic peritonitis of which she died.

The insanity cannot be considered to have been due to the disorder of the bowel from which the patient suffered, as the attack originated after the puerperium, but the relapse and obstinate character of the subsequent disease were not improbably influenced very unfavourably by the severe chronic constipation and gastric troubles which supervened.

The depression due to chronic gastritis and dyspepsia, with the attendant malnutrition, is but too well known to need remark, as also is the consequent danger to a person of neurotic predisposition.

16. E. G—, æt. 30, admitted 21st September, 1896. The patient's brother has since become melancholic. Before marriage the patient was healthy, except for occasional attacks of sickness and dyspepsia, but afterwards these became worse, though she never had hæmatemesis. She had a miscarriage some months after marriage, and since then has not menstruated regularly. Subsequently to admission the catamenia never appeared. There are no abnormal signs in the abdominal or pelvic organs. She was never markedly anæmic, but she began to lose flesh, and her temper and spirits suffered; she became morbidly sensitive about the distresses of her neighbours, and occasionally hinted at suicide. About a fortnight before admission her self-control completely gave way; she was found one night under her bed, and refused

to move because she was not fit to live. When dragged out by force she resisted violently and attacked her husband and her nurse. She also attempted to injure herself with a knife, and bit and pricked her fingers. Shortly after her admission here she refused her food and was frequently fed with the œsophageal tube. She stated that she was dead, and talked in a rambling, incoherent manner. On three occasions she made half-hearted attempts at suicide: firstly, by cutting her pharynx from the inside, the wound being very slight and inflicted most probably by a hair-pin; secondly, by dashing her head against a wall, using, however, so little force that no injury was done; thirdly, by swallowing a fungus which she picked up in the garden. She was immediately sick and sorry, and readily swallowed an emetic of zinc sulphate, which acted quickly and efficiently. Shortly afterwards the patient vomited a considerable quantity of blood, and for three days her stomach rejected everything swallowed, including a mixture containing bismuth subnitrate, which accordingly had to be discontinued while the patient was fed every four hours by the rectum. The food given in this way consisted of 1 oz. of beef tea, one egg, 1 oz. of milk, $\frac{1}{2}$ oz. of brandy, 10 grs. of sodium bicarbonate, and a drachm of Liquor Pancreaticus each time the patient was fed; and she did not appear to lose flesh under this treatment. On one or two occasions $\mathfrak{m}x$ of Tinct. Opii were given with the food to allay the irritability of the rectum. Four days after she had swallowed the fungus she was given two-minim doses of Liquor Morphinæ Bimeconas every two hours, and three days after this feeding by the mouth was cautiously recommenced, though the rectal feeding was continued for ten days longer.

On 11th May, 1897 (the fungus having been swallowed on 26th April), the rectal feeding was discontinued, and the patient was fed entirely by the mouth, but shortly afterwards began to refuse food altogether. From 16th May till 2nd September she was fed four times daily through the nasal tube, gaining flesh and colour during this time, but maintained an obstinate silence, although rarely resisting the passage of the tube. She occasionally vomited after receiving her food, but, as a rule, retained it well, even if given, as was sometimes the case, immediately after an aperient. Her daily quantity of nourishment consisted of four eggs and four pints of Bengers's food and milk.

Since September, 1897, the patient has taken her food voluntarily, having only occasionally to be fed with the nasal tube. She has had one or two attacks of sickness, and has recently been slightly jaundiced, but otherwise her bodily health has been fairly good. Her mental condition is, however, in no way improved; she is obstinately silent and idle, and apparently to a considerable extent demented. There is little doubt that in this case the gastric trouble played a very important part among the causes of the insanity, and it is probable that had the digestion been carefully attended to and the patient placed under a cheerful, well-regulated *régime* at the commencement of her mental symptoms, the power of self-control would have been retained.

17. M. D—, æt. 37, admitted 24th October, 1898. There is no record of any serious hereditary neurosis, though her father was said to have been passionate and irritable. For several years past she has had frequent

attacks of severe dyspepsia and constipation, has contracted influenza three times, and has been rather depressed after each attack. The last of these occurred less than twelve months before admission, and shortly afterwards she began to have unreasonable suspicions of her husband's conduct towards her, and threatened him with an action for cruelty, refusing to live in the same house with him. She then imagined that everyone despised her, and that she was pointed at with contempt in the street, so that it was at length decided to place her under treatment here. On admission she was quiet and depressed, her bowels were very costive, her tongue foul, and her breath offensive. Since admission she has had several attacks of dyspepsia and constipation, and is still thin, having only gained two pounds on her previous weight. She has been treated with chiretta, soda, and nux vomica before meals, gentian and acid after meals, and every attempt has been made to improve her nutrition, but with very little effect. Until a patient of this class has been got into a good state of nutrition there is little hope of curing the mental disease, and her liability to sickness and dyspepsia render the former a very difficult task. Her bowels are obstinately constipated, and she needs constant aperients and enemata. The catamenia have not appeared since admission six months ago, but there are no signs of pregnancy. She is more cheerful and contented than on admission, and is wary in concealing her delusions, but they sometimes appear in spite of herself.

The obstinate constipation and dyspepsia from which this patient suffered seem to have been the main cause of the mental alienation, though these were further complicated by a uterine fibroid, which caused irregularity in the time and quantity of the catamenial flow.

Consideration of cases like the two last described suggests an analogy with examples of pregnancy in which all these symptoms are frequently found, and in which mental disorders are far from uncommon. The theory of auto-intoxication by the products of a vitiated metabolism or retained excreta through overtaxed excretory organs may be held to explain the mental symptoms in these cases, just as it can be applied to the explanation of the polyneuritis, eclampsia, or other nerve phenomena of pregnancy.

Turney,⁽⁶⁾ in his paper on polyneuritis in relation to gestation and the puerperium, states that among thirteen cases of universal polyneuritis recorded by him, mental symptoms, from acute mania downwards, were present in six.

There must, of course, be an individual predisposition or undue excitability for these nerve phenomena to be produced by the causes above mentioned, and this is present to some

extent no doubt in all cases of pregnancy, while the conditions of hereditary or congenital defect may supply it in others.

V. *Glycosuria and Insanity.*

Diabetes appears to be a rare condition in insanity, and Savage, in his paper on *Alternation of Neuroses* (1887), said that cases of true diabetes among his patients were almost unknown, and Clouston agrees with him as to its rarity. On the other hand, Hubert Bond has collected a series of cases which show a considerable prevalence, in the London asylums at least.

Considering the depressing influence of malnutrition, enforced abstinence from most of the common luxuries of the table, irritation of the skin, and general anxiety which almost invariably accompany diabetes, it is remarkable that insanity as a consequence of this disease is not more common.

Of the cases under care here, only one had glycosuria to any considerable extent, and in this it occurred as a complication of a spreading cellulitis, which unfortunately ended fatally, and is of sufficient interest to be described at some length.

18. Y. Y—, æt. 41, admitted 13th December, 1888. Her disease was attributed to intemperance, and had existed for about four months before admission. She was at first obstinately morose and silent, and there was a history of suicidal threats and attempts at home. She refused food, and frequently required forcible feeding. A few months after admission she became acutely maniacal, noisy, abusive, and erotic for about six months; settling down ultimately into a condition of chronic mania with delusions as to her own social importance and personal attractions, with occasional outbursts of violent abuse directed against her fellow patients and the nurses. During the last three years, 1896—1899, she has occasionally suffered from boils about her head and face, but her urine, which was examined during the occurrence of one of these, showed no albumen nor sugar. She was in the habit of rubbing her hair off one side of her head, and stated that the nurses caused this baldness by looking at her. While suffering from boils she would never allow them to be examined if she could by any means prevent it, and on several occasions they burst of their own accord and got well without surgical interference of any kind.

On 16th January, 1899, a swelling was noticed on the left side of her lower lip, and attempts were made to treat it with hot applications, but without avail. On 19th January the left cheek was involved in the swelling, but although an incision would have been desirable at this stage in a sane patient, her resistance was so troublesome that it was considered advisable to wait. The patient's bowels were being kept well open, the face was poulticed and the poultice held on. Tinc. Ferri Perchlor. ℥xx

with glycerine was given thrice daily. The urine was examined and found to contain 10 grs. per ounce of sugar with a trace of albumen, and she passed 80 oz. in twenty-four hours. The cellulitis continued to spread, and the whole of the left cheek and part of the forehead and neck were involved, the eyelids being very oedematous. Quinine gr. v was added to each dose of the medicine. In the meantime the sugar in the urine continued to steadily increase, and on 26th January contained 25 grs. per ounce, 70 oz. of urine being passed in twenty-four hours. On the same day the face was incised in three places, and the whole thickness of the cheek was found to be involved in the celluitic swelling, the masseter fascia being reached before any definite abscess cavity was found. The inflammation did not subside after the incisions, and the patient gradually became weaker and semi-comatose, the smell of acetone being obvious in the breath. The temperature during the whole illness never rose above 102° F., generally keeping at about 99° in the morning, and rising to a little above 100° in the evening. There were no signs of disease in the heart and lungs, and the pulse was very good until the last three days of the illness. On 28th January the patient became completely comatose, and died on the morning of 29th January at 6 a.m. The rapidly increasing glycosuria of this case is certainly unusual, and I do not remember seeing a similar instance in other cases of cellulitis in which I have examined the urine, but Dr. Handford states that he has not uncommonly seen glycosuria during the occurrence of carbuncles, which has disappeared after the local disease has been cured.

19. E. M.—, æt. 57, admitted 2nd May, 1898, suffering from melancholia with delusions of a conspiracy to poison him. He had sugar in his urine to the amount of about 2 grs. per ounce, and this rapidly increased in quantity, being present to the extent of 6 grs. per ounce on 19th May. He was given codeia, gr. $\frac{1}{2}$, with citric acid and Tinct. Nucis Vom. twice daily, the sugar dropping to half its previous quantity. The urine was not increased in quantity, and averaged about 30 oz. per day. Notwithstanding this, however, he continued to lose flesh, and on 13th August he weighed only 10 st. 6 lbs., having lost 17 lbs. since his admission. We have since come to the conclusion that his habit of frequently masturbating, as well as his chronic state of anxiety, was the cause of his loss in weight, for the following reason:—During September, 1898, he made a successful attempt to escape, and walked a distance of forty miles. For some time after this he appeared to have resigned himself to the inevitable, was comparatively calm and cheerful, and discontinued his previous bad habit. He gained flesh, and the urine, except for a mere trace, .8 gr. per ounce, became free from sugar. He has now, after the lapse of some months, begun to show a renewal of his former bad habit, anxiety and restlessness, and the sugar has increased to 3 grs. per ounce of urine. This increase of glycosuria coincidently with the excitement of anxiety and masturbation is an interesting fact, of which he is the only instance that has come under my notice. His mental state varies very much from time to time, being occasionally moderately hopeful, and at others anxious, restless, intensely depressed and lachrymose; and although he is better than when admitted,

it is obvious that his old suspicions and delusions have not disappeared.

20. J. H. D—, admitted 12th December, 1897, showed constant slight glycosuria of about two 2 grs. per ounce, which, as it caused no unpleasant symptoms, appeared to require no treatment beyond slight modification of the diet. The patient, who was acutely melancholic and demented on admission, recovered completely, and gained more than a stone in weight, but the sugar in his urine remained practically constant in quantity during the eight months of his residence at the Coppice. In this case there was a history of insanity and diabetes in his mother's family.

Conclusions.

The foregoing cases constitute illustrations of the important modifying influences exercised by mental and bodily diseases upon each other. While bodily illness is assigned as the cause of insanity, or at any rate as the sole cause, in comparatively few instances, there are in a large number of instances well-marked histories of chronic visceral maladies which had undermined the vitality and diminished self-control. The depressing influence of slight illnesses among the sane is but too well known to need remark, and affords indication of what the corresponding effect must be in persons whose will power and judgment are inherently weak. Treatment must therefore proceed in view of these considerations. It is in the beginning of mental illness and before pronounced symptoms of insanity have declared themselves, that care is necessary. Nothing is more detrimental than conditions of malnutrition, and drugs are of the greatest value when used to counteract some physical evil which is undermining the general health.

In examining the causes of insanity we find that intemperance in the use of alcohol is among the most frequently assigned reasons for the attack, and unfortunately the prognosis in cases of this kind is very bad. This might be expected from the chronic congestion of the brain and the deterioration of its cells which the long-continued abuse of alcohol invariably produces; but other physical evils follow in the train of alcoholic excess, and play their part in preventing a favourable result. The liver, so important in nitrogenous metabolism, and the kidneys, which excrete the nitrogenous waste products, are invariably affected by the poisonous influence of alcoholic excess;

and in cases where this condition prevails, a state of auto-intoxication by perverted or retained metabolic products necessarily becomes more or less chronic, and thus presents an almost insuperable obstacle to successful treatment.

Among the twenty-nine cases in which intemperance is mentioned as a cause of the attack, four recovered, one was discharged unimproved, five died, and nineteen still remain under treatment, only two of whom show any sensible improvement. Of the other assigned causes, those most frequently mentioned are hereditary predisposition, business anxiety and pecuniary trouble, domestic trouble and overwork. Business anxiety, of course, occurs most frequently among the males, and domestic trouble among the female cases, the latter holding a much higher place in the list than the physiological epochs of childbirth and the menopause. The assigned cause, however, is only one, and frequently not the most important, of many existing causes all of which play their part in disturbing the mental balance and lessening the power of self-control.

The average age of the male patients when first attacked was 38 years, and of the females 40·5. It may be noticed that among the thirty-three chronic male cases which survive from the admissions of thirty-four years all but seven are single men and of these seven two are widowers. If any significance can be attached to this fact, in view of the early disability of many cases, it would tend to show that the unmarried state is less favourable than the married to the mental health of those predisposed to neurosis, for the longevity of these patients appears to justify the inference that their physical condition did not *per se* account for their insanity, and moreover their proportion is far in excess of that in the consecutive cases, who, it will be seen, much more frequently succumb to some physical ailment or are discharged recovered. Thus, of the chronic survivals from 1859 to 1893, 78 per cent. were single men, 15·7 per cent. married, and 6·3 per cent. widowers; while of the fifty-two cases subsequently admitted only 16, or 30 per cent., were single men, thirty, or 59 per cent., were married, and six, or 11 per cent., were widowers.

In the female cases the contrast is much less marked. Thus, of the chronic survivals 60 per cent. were single, 23·3 were married, and 16·6 widows; while of the consecutive admissions

61·6 per cent. were single, 30 per cent. were married, and 8·3 per cent. were widows.

As regards the incidence of bodily disease in the cases under care, we find that only thirty-nine, or 22·34 per cent., were returned as physically healthy, while in 134, or 77·66 per cent., there was some organic disease or abnormal physical condition which occurred either antecedently to or as a complication of the mental malady.

In ten instances there was organic disease of the heart, and in twenty some functional disorder of the circulation. In seventeen there was emaciation or weakness from malnutrition, in seventeen constipation, in eight dyspepsia, in seven bronchitis, in five phthisis, in two asthma, in two emphysema, and in one malignant disease of the lung.

Chronic renal disease was present in six cases, glycosuria in four, hemiplegia in four, old infantile paralysis in three, neuralgia in three, and epilepsy in three. In connection with this last, however, it may be remarked that epileptic cases were generally refused admission on account of their annoyance to the other patients, so that their proportion is far smaller than would be found in the total insane population. Uterine complaints such as menorrhagia, etc., were found in eleven cases, and puerperal complications in three. Syphilis was definitely ascertained to be present in only four of the cases, but it is probable that it really existed in a far larger number.

Myxœdema caused a relapse in one instance, and gouty meningitis appears to have been the sole cause of insanity in another. A few examples give evidence of feeble circulation by the presence of varicose veins, hæmorrhoids, etc.

How far these various bodily diseases caused the mental alienation it is impossible to say, but it is certain that in a considerable number they exercised a most unfavourable influence. In insanity, as stated by Maudsley,⁽⁷⁾ "It happens that the morbid state of some internal organ becomes the basis of a painful but formless feeling of profound depression which afterwards condenses into some definite delusion." The truth of this statement is proved by numbers of examples if their physical and mental symptoms are compared. Thus we find, as in the case of M. H—, that an attack of pleurisy may leave traces giving rise to uneasy sensations, which lead to the delusion that the lungs are absent. The disordered state of the

stomach and liver in the alcoholic dyspeptic may become the basis of the delusion that he is being poisoned, or that he has lost his abdominal viscera ; the depression and suspicion which not infrequently accompany deafness may develop into delusions of conspiracy and persecution, while in some patients the cœnæsthesia or state of individual consciousness resulting from the sum of the various sensory impressions may be so modified as to lead to belief in a change of personality.

Of the part played by bodily illness as a complication of insanity a considerable number of illustrations have been given. The onset of acute diseases may be masked by the mental symptoms or the abnormal nervous conditions which prevail in insanity. Their course may be variable, and the symptoms of the patient liable to mislead, so that prognosis is more difficult.

J. A—, apparently in robust health, was seized with bronchitis—probably a complication of influenza—on 30th March, and, notwithstanding every effort made to alleviate his condition and maintain his strength, died on 4th April, 1899, after an illness of five days.

J. A— had appeared perfectly healthy until 5th April, when he was found to be suffering from influenza, the first symptom being an attack of syncope. The chest was carefully examined and no signs of cardiac or pulmonary disease were found, so that the condition of the patient was not regarded with anxiety. On the night of 7th April he was seized with pleurisy of the left side, the pain and friction sounds being most marked over the base of the lung and cardiac area, though no signs of pericarditis could be detected. On the following day there was slight effusion into the left pleural cavity, not sufficient, however, to account for the weakness and irregularity of the pulse, which now became very marked, while the pleural friction-sounds were still audible over the cardiac area. Injections of morphia and strychnine (gr. $\frac{1}{8}$ and $\frac{1}{16}$, respectively) were given to alleviate the pain and stimulate the heart, and local applications were also employed, but with only slight and temporary relief. The patient died on the following morning—9th April.

The frequency of phthisis or rather of tubercular lesions in the insane has been already alluded to, the first evidence of even extensive disease being not uncommonly found in the post-mortem room. The case of M. E— affords a further example both of the latency and rapidly fatal effect of phthisis during general paralysis.

This patient was admitted with the mental symptoms of the latter disease, but in robust bodily health, in May, 1898. His thoracic and

abdominal viscera showed no signs of disease. His nutrition appeared to be quite good until February, 1899, when he was noticed to be losing flesh ; but as he had no cough or any other symptom of purely physical disease, the loss of flesh was attributed to his constant restlessness.

On 10th April the patient's chest was examined, and he was found to be the subject of extensive phthisical disease, although he had never suffered from any symptom to draw attention to the condition of his lungs. He was found to be intensely emaciated, and died on 14th April, 1899.

The number of recorded deaths among the above cases is too small for the induction of any trustworthy conclusions, but it is a somewhat remarkable fact that 9 out of a total of 26 were due to inflammation of the lungs and bronchi. Of the others, general paralysis was the cause of death in 5, cerebral hæmorrhage in 2, cardiac disease in 2, (?) pulmonary embolism in 1, phthisis in 2, pleurisy in 1, appendicitis in 1, intestinal obstruction in 1, exhaustion from mania in 1, and senile decay in 1.

In considering the part played by bodily disease in causing insanity, it must not be forgotten that in every case where mental alienation occurs there is some individual predisposition, and this in by far the greater number is accounted for by hereditary influence, a factor which is present, no doubt, much more frequently than can be definitely ascertained.

In the whole number of cases under consideration there were 44 males and 49 females with evidence of neurosis in the family history, making a total percentage of 53·14. In 15 members of each sex, *i. e.* in 17·14 per cent. of the whole number, there was insanity in previous generations. In 13 males and 17 females, 17·14 per cent., there were other instances of insanity—brothers, sisters, or cousins,—in the same generation. In 4 males and 6 females, 5·714 per cent., there was insanity both in the previous and in other members of the same generation. In 11 instances of both females and males, or 18·28 per cent., there was a family history of neurosis or intemperance without actual insanity, while in 4 males and 3 females there was a family history of phthisis.

In 41 members of each sex, or 46·86 per cent., there was no ascertainable hereditary influence, though without doubt it was, in many of these, intentionally or unintentionally concealed. How the neurotic taint originates it is difficult to say, but once

having arisen it is certainly fostered by the intermarriage of members of neurotic families, and anything which throws undue strain upon the nervous centres, such as over-fatigue of mind and body, emotional strain, or the habitual abuse of stimulants, will tax the individual capital of nervous energy beyond those safe limits of which the sensations of healthy fatigue are an index.

Physical disease, by impairing the healthy action of the various organs, puts a greater strain upon the nerve centres which regulate organic activity, and may thus prove the starting point of a mental defect which only disappears with the extermination of the stock in which it has arisen. How far the mental symptoms of the individual are determined by his bodily illness is a matter of great uncertainty, but there is probably no organic disease without its accompanying psychological changes, though these will vary with the susceptibility of the patient.

Some brains are much more sensitive than others and respond with greater readiness to afferent impulses, so that a whole series of psychic changes may result from that which in more phlegmatic subjects would be followed by a mere reflex or some slight subconscious mental phenomena. Considerations of this kind suggest many subtle ways in which mental and bodily disease can affect each other, but their discussion belongs rather to the domain of physiological psychology, and scarcely comes within the scope of an essay which is merely concerned with the practical points of mental and physical relationships.

(¹) See *Journ. of Mental Science*, vol. xxxvi, p. 560.—(²) See *Journ. of Mental Science*, vol. xxi.—(³) "A Contribution to the Study of the Circulatory System in the Insane," by T. Duncan Greenlees, M.B., Edinburgh, *Journ. of Mental Science*, vol. xxxi.—(⁴) Dr. T. S. Clouston, "The Connection between Tuberculosis and Insanity," *Journ. of Mental Science*, 1863 *et seq.*—(⁵) "Polyneuritis in Relation to Gestation and the Puerperium," by H. G. Turney, M.D. Oxon., *St. Thomas's Hospital Reports*, vol. xxv.—(⁶) "Alternation of Neuroses," G. H. Savage, *Journ. of Mental Science*, Jan., 1887.—(⁷) Maudsley, "Physiology and Pathology of Mind," London, 1867.

[The elaborate tables prepared by Dr. Conford in connection with this article have been presented to the Library of the Association.—ED.]

Clinical Notes and Cases.

A Case of Syphilitic Insanity. By R. D. HOTCHKIS, M.D., Assistant Medical Officer, Glasgow Royal Asylum.

THE following case is one in which insanity supervened after an operation for a tertiary syphilitic lesion, followed by recovery; then cerebral hæmorrhage a year later producing a second attack.

R. M. B—, æt. 52, widower, a clerk, admitted to the Glasgow Royal Asylum on July 19th, 1897.

History.—He was admitted into the Western Infirmary on June 2nd, 1897, suffering from extensive cario-necrosis of the left tibia, which was chronic in its onset and course, and had been operated on some seven times. He admits having had gonorrhœa thirty years ago, and this was followed by some symptoms pointing to syphilis; otherwise he has been healthy. There is no hereditary predisposition. On June 8th the tibia was extensively opened by Dr. Macewen, and found to be much eburnated and thickened, and with necrotic scales in the interior. Mental symptoms came on shortly afterwards, and he was transferred here.

State on admission.—He is a stout man in good muscular condition, but very pale and sallow, suggestive of cachexia from syphilis or other organic disease. The only other physical sign is a greatly thickened left tibia with a discharging wound.

His chief mental symptoms are defective memory, incoherence, and delusions of suspicion. He also has hallucinations and illusions of sight, *e. g.* sees pictures floating before him, and thinks that everything has a dirty blue tint. Occasionally he is noisy, and seems to fear injury from those about him.

The acuteness of the above symptoms passed away after a few days, but he remained in a confused and somewhat variable state of mind for some months. His memory continued very defective, and he often made foolish and irrelevant remarks, *e. g.* gravely said one day that he had had three children born within two months of one another. In addition he was often despondent, and had little self-reliance, asking guidance in everything. At first he slept badly, but afterwards both slept and took his food well.

On August 27th Dr. Dalziel removed nearly the whole of the left tibia, which was of ivory hardness and whiteness. The patient took the chloroform badly, but his mental condition after the operation was quite unaffected.

October 13th.—There were no complications after the operation, and now the wound is nearly closed, and is looking healthy. Mentally his condition is one of slight depression, facility, and weak-mindedness.

He is getting mercury and potassium iodide. By the end of the year the wound had closed, but his mental condition showed no change. He remained for nine months longer in the asylum, during which time his bodily health steadily improved, and latterly he was able to walk with the aid of two sticks. His mental symptoms slowly disappeared; he became bright and cheerful, more self-reliant, and though he never became quite as well as formerly he improved sufficiently to be discharged as recovered on October 7th, 1898.

He kept well for a little over a year, when he had an attack of cerebral hæmorrhage producing right hemiplegia, and he was taken to the Victoria Infirmary. Mental symptoms soon developed,—incoherence, excitement with much noise and violence, defective memory, so that he was readmitted here on January 26th, 1900.

State on admission.—He is hemiplegic (right) and partially aphasic, but seems to understand what is said to him. He is also subject to recurrent attacks of excitement, in which he speaks much more distinctly; but his vocabulary consists chiefly of abusive and profane words, and he would readily strike if he got the chance. His left leg remains healed, and before this attack he could walk fairly well.

Up to the present date, March 2nd, his condition is slowly improving; he can speak much better, and has some power in his right arm and leg. His attacks of excitement are less in number and not so acute, but there is left considerable mental weakening, with very defective memory. The probability is that these latter symptoms will be permanent.

Remarks.—The effects of the syphilitic poison on the nervous system are well known, the chief characteristic being its universality. Any nerve may be affected, also some tracts of the spinal cord, and the brain with its surrounding membranes and bone. In fact, if there be irregular paralysis, especially in the cranial nerves, not pointing to one definite lesion, the cause is most probably syphilitic. The subject of syphilis as a cause of insanity is a complex and obscure one, and this is best shown by the diversity of opinion among authors, who vary much in their descriptions. Diverse mental symptoms are produced not only by syphilis, but by other poisons, *e. g.* alcohol, and the *modus operandi* has not yet been fully solved. The influence of the syphilitic poison in the present case seems to be fully if not absolutely paramount. It might be claimed to be post-operative insanity; but the symptoms are different, and a much severer operation was performed in the asylum with no mental effect. Further, the cerebral hæmorrhage two years later points strongly to syphilitic disease of the arteries, and it is instructive to note the brain instability in a man whose constitution is undermined through syphilis. There was no other

apparent cause—no hereditary predisposition and no alcoholic excess, but he had been a hard-working, fairly intelligent clerk in a large warehouse. Though he was discharged recovered on the first occasion, he never seemed quite to get back his former mental tone or energy, and took things very easily afterwards. The prognosis now is much graver, for even if he survive the present shock he will always be liable to other hæmorrhagic attacks, and the mental enfeeblement, which was a symptom in his former attack, is now very marked and will be permanent. There are described several forms of syphilitic insanity, and this one corresponds, though not in every respect, to the delusional form found in the third stage of the disease, and in these cases the delusions are so various that they have no common features except that of suspicion. The treatment adopted was of the usual antisyphilitic kind, but whether the improvement on the first occasion was due to that or not is a matter of doubt.

A Case of Remarkable Chloral Idiosyncrasy. By ARTHUR W. WILCOX, M.B., C.M.(Edin.), Senior Assistant Medical Officer, Warwick County Asylum.

A FEMALE patient, A. H—, unmarried, æt. 44 years, was admitted to the Warwick County Asylum on 18th August, 1899. She was a pale and somewhat anæmic woman, suffering from acute mania. She was stated to be not suicidal, epileptic, nor dangerous to others. There was no family history of insanity nor phthisis. On admission she was excited and delusional, and appeared frightened, thinking that people wished to injure her. She mistook the identity of those around her, and shouted murder when anyone approached her. On the following day she was no calmer, so a sedative mixture containing Pot. Bromid. gr. 30, Tr. Valerian. Am. ℥ 15, Chl. Hyd. gr. 10 three times a day was prescribed. There was no material change in the patient's condition, mental or bodily, during the next three weeks.

On September 12th she was noticed to be covered with a scarlatinal rash, particularly marked on the face, chest, and forearms, but present all over her body. Her face was swollen and her eyelids œdematous, while the glands of her neck were enlarged and tender to the touch. She complained of sore throat, and her tongue was somewhat white. Her temperature was found to be 104° and her pulse 100 per minute. Mentally she was irritable and fretful, but could converse fairly rationally.

As at the time we had a patient suffering from scarlatina (in whose

case a clear history of infection had been made out) this fever was diagnosed, and patient accordingly isolated.

On the next morning her temperature was 103° , rising to 104.8° in the evening. On the third morning after the appearance of the rash it was again 103° , rising to 104.2° on the evening of the same day. On the fourth morning it was 101.2° , and 102.4° in the evening. The temperature then began to fall gradually, showing slight evening rises and morning remissions until it became normal on the eleventh day after the appearance of the rash. There were no complications, and the urine at no time contained any albumen. Mentally patient was simple and childish in her manner, irritable, querulous and exacting, and often mistook the identity of those near her. The sedative medicine was discontinued on the first day of the appearance of the rash. She was isolated for two months. She desquamated very freely, the skin leaving her hands in a glove-like manner, and pieces an inch long peeling from the soles of her feet; her body giving off a shower of epidermic scales on any movement.

Patient continued quiet, tractable, and well conducted (but still delusional) until 2nd January, 1900. On the evening of that day I saw the patient about 6 p.m. She was then sitting before the fire quietly sewing. At 12 p.m. I was called to visit her, and found her being held down in bed by three nurses. She had become acutely maniacal and actively suicidal. She was struggling and shouting, had tried to strangle herself, and was endeavouring to dash her head against the wall. It was necessary to remove her to another part of the asylum and place her in a padded room with a special nurse to watch her to prevent her from injuring herself. It required the services of four nurses to remove her, and of several more to undress her, as she was very resistive and fought and bit in a determined manner. She was given $\text{m} \nu$ of a $\frac{1}{4}$ per cent. solution of hydrobromate of hyoscine without benefit, as she was very violent and noisy, and made many attempts to injure herself during the rest of the night. The next day she was quieter, but informed me that she could not control herself, and did not know what she might do next. She was given a mixture containing Pot. Bromid. gr. 30, Chl. Hyd. gr. 10, of which she had two doses only. On the following morning, 4th January, she was found to be covered with a red rash, markedly scarlatinal in character. Her eyelids and ears were œdematous, and her tongue was covered with a slight white fur. Her temperature was 102.4° , and her pulse rate 85 per minute. She conversed rationally and complained of great thirst, slight sore throat, and intense headache. Her urine was loaded with urates, but no albumen was present. The next day the rash was even more pronounced, particularly on the face, which was somewhat swollen and œdematous. Her tongue had assumed a strawberry-like appearance, and she complained of difficulty in swallowing and severe sore throat, which on examination was found to be much congested. Her temperature was 103° and her pulse 85. On 6th January her temperature fell to 100° and her pulse to 80. The rash was less marked, and her tongue comparatively clean. On January 7th her temperature became normal, and she was allowed to leave her bed on the 16th, having desquamated slightly about the face and chest. Two days

later her hands and feet were peeling freely, some of the flakes of skin being one eighth of an inch in length. She still complained of only being able to control her actions by the greatest effort of her will. On February 2nd her mental condition required that a sedative should again be administered, and she was given one dose of a mixture similar to the last, *e.g.* containing Pot. Bromid. gr. 30, Chl. Hyd. gr. 10. About seven hours afterwards the nurse who had charge of her case (and who had been told to watch carefully for such a possibility) reported that she was again covered with a red rash, and her temperature was found to have risen to 101.4° . The following morning her temperature was still the same, and continued so until the medicine was discontinued on February 5th, when it again fell to normal. On this occasion patient had not become acutely maniacal, but complained of great nervousness and a fear that she should be unable to control herself.

A week later she was given a draught containing η 15 of Tinct. Valerian. Am., and a few days later one containing Pot. Br. gr. 30 without any abnormal therapeutical effect. After a few days a draught containing Chl. Hyd. gr. 5 was administered. This caused marked flushing of the face and irritation of the skin of the whole body within a few hours. The temperature remained normal. The tongue also became rapidly covered with a white fur. The patient became more irritable and peevish, and asked that the medicine might be discontinued, as she could feel that it did not suit her.

This case, I think, presents several points of interest. Various writers have described a scarlatina-like rash, with considerable irritation of the skin, and followed by desquamation, after large doses of this drug, or when administered for a long time. Dr. Garrod thinks that the rash more often resembles that of urticaria.

Dr. Fowler states that albumen may be found to be present in the urine, which occurring in a patient with signs and symptoms like these described in this case would make yet another difficulty in arriving at a diagnosis.

A rise of temperature is, I think, quite exceptional, as Chl. Hyd. has been found, both by experiments on animals and in practice, to lower the heat of the body.

It will be noted that on one occasion a single dose of 10 gr. caused a rise of temperature of 3° within a few hours.

The glandular enlargement, œdema of the face, sore throat, and the rapidity with which the tongue became furred are also worthy of remark.

It has been observed in the case of sane persons who have contracted the chloral habit and indulged it for any length of time that they become irritable, peevish, and querulous. A

single dose of 5 gr. was sufficient in this case to produce these symptoms to a marked degree.

Occasional Notes.

The Lunacy Bill.

THE Lunacy Bill of 1900 has passed through the House of Lords, and it may be that it will become law in the course of this session. The Bill has been so fully discussed in previous numbers of this JOURNAL that we need not revert to provisions which now reappear unchanged, or to points of comparatively little importance.

There are, however, certain clauses which cannot meet with our approval, and certain notable omissions which we must deeply regret.

First, with regard to the reduction of the valid duration of urgency orders from seven to four days. Experience has shown that this will be attended by difficulties and dangers which will not fail to leave their mark, unless there is a concomitant alteration in the powers of the Justices. Of course it is well known that the emergency certificate in Scotland is limited in operation to three days, but the circumstances are altogether different from those which have to be considered in England. The sheriff of a county or his substitutes are always accessible through the sheriff clerk's office, which is open for the transaction of business every lawful day. Dr. Percy Smith and others have graphically described the difficulties of finding a qualified Justice, when circumstances of urgency required orders for the detention of insane persons within the narrow limits of time available. No one has been found to say a word in vindication of a system which imposes such delays and distractions in view of dangers to insane persons and to the lieges. The experience of those placed in responsible positions should be considered, and their condemnation of this hazardous proposal should have due weight in the House of Commons. It should be plainly stated that the present duration of the urgency order

sometimes barely suffices to obtain the permanent order, and the failure to obtain that order means the release of the patient however dangerous he may be—unless it be made an affair of police, which cannot be too strongly deprecated. Ireland has suffered in this way, and has made its well-grounded complaint times without number. This is, indeed, a proposal which may in any case be a source of possible pain and needless worry to the relatives of insane persons. The curious point is, that after all the talk of illegal detention to which we have been treated, it is almost impossible to get the friends of patients to understand that the law must be observed in detail; and it is only when the rigors of legal procedure are brought home to individuals that they begin to realise what has been imposed upon them.

This further restriction on the medical treatment of the insane, it has been said, has been found necessary because the present law has been abused. But no details have reached the public ear. Surely the difference between seven days and four days can have no effect in the prevention of possible wrongdoing. Why four days? Why not one day? For by thus minimising the duration of villainy, the girl's excuse for the production of her illegitimate infant would be proportionally lessened—it would be such a very small one! If the procedure is right in principle, then it should be of sufficient duration to be effective. In reducing the time the principle remains, whether right or wrong, but the procedure is rendered ineffective. We trust that our Parliamentary Committee will not fail to make adequate representations to the medical members of the House of Commons in regard to this important alteration in the law. Either the present procedure should remain unaltered, or the permanent order should be obtainable without delay and inconvenience.

For the first time in its history the Bill has been introduced without clauses ensuring the granting of pensions to officials in pauper asylums. This omission has been very fully considered by the Parliamentary Committee of the Association, and we may safely leave it to them to press for a substantial measure of justice. We are all aware of the vast amount of work which has been done by Dr. Hayes Newington as chairman of that Committee, and it is now late in the day to press upon our colleagues the importance of fully informing their representatives

in the House of Commons in regard to the actual state of matters, and the urgent need for a compulsory system of assured pensions. The literature of the subject is now so voluminous that every conceivable argument has been brought into play. On the one hand, we have heard how the West Riding asylums have been deprived of pensions in consideration of an increase in pay—an increase totally inadequate to make provision for old age. On the other hand we have heard how other similar services have been dealt with, and equal claims on consideration made for asylum officials. We cannot but feel, let the result be what it may, that the Parliamentary Committee has done its best throughout this protracted struggle.

Turning to more satisfactory phases, we are glad to observe that the clauses relating to the private care of cases of incipient insanity have been retained, and that a new clause for the establishment of pathological laboratories has been inserted. This last alteration will give an impetus to the plans formulated by certain medical superintendents in the Midlands, and will, we trust, remove the last obstacle to the fruition of their hopes.

A clause, which is more important from a political than from a scientific point of view, has been added to give power to a local authority to appoint not more than one third of the visiting committee of its asylums from persons not members of the local authority. It is by no means clear how such a provision was thought to be necessary, and it is unlikely that the House of Commons will pass a clause so directly antagonistic to the system of local government built up of late years.

It may be, indeed, that the introduction of such contentious matter will affect the fortunes of the Bill, and that we shall yet see it re-introduced in coming years. At any rate, the discussion sure to be awakened by this clause may incite to a fuller consideration of the whole measure than it might otherwise have had.

Laboratory of the Scottish Asylums.

The third annual report of the Pathologist has been published. It relates to the year 1899, and gives evidence of a success which has been well deserved by the indefatigable

industry of Dr. Ford Robertson. He states that nine gentlemen have been given a laboratory course of instruction. Four were assistant medical officers of the associated asylums, two were from English asylums, and three were not officially connected with such institutions. After a reference to the library which is being gradually formed, Dr. Ford Robertson goes on to show what reports have been made and consultations given ; work accomplished, in progress, and contemplated. He enters fully into a consideration of the aims and methods adopted at the Laboratory. We hope that this Report will be widely circulated, as it cannot but be most helpful to those contemplating development of pathological work and scientific research.

The experience gained at the Laboratory of the Scottish Asylums is not of merely parochial importance. It has demonstrated that a practical scheme has been worked out at inconsiderable cost to the institutions. It has afforded a reasonably remunerative position to a physician engaged in research. It has given an impetus to scientific work, aid to scattered observers, and has already done much to remove the opprobrium of the loss of important material to psychological medicine. While fully recognising the pioneer work done at Wakefield and other large asylums, we cannot but commend this firmly established, amply justified institution as an example to other districts. The tedious and delicate processes of modern pathology require the uninterrupted attention of men skilled in observation and research. No doubt the greater asylums may and do command the services of competent pathologists, and provide them with the necessary apparatus ; but the smaller asylums should combine to obtain similar advantages. If the Lunacy Bill becomes law, and is not shorn of the recently introduced clause which will remove the only real difficulty, we shall expect to see several pathological laboratories founded in England at no distant date. We would fain hope that pathology will not be the only subject of study in these institutions, but that allied sciences will have equal attention. In a recent volume of this JOURNAL Dr. Van Gieson put forth an irresistible plea for this wider scope of research as the foundation of a newer psychiatry, and Dr. Ford Robertson endorses his arguments. It is, indeed, on such a foundation only that the art of healing can be perfected.

The Metropolitan Asylums Board and its Medical Officers.

A letter in the *British Medical Journal* of January 13th, 1900, is well worthy the perusal of all members of the profession who might think of taking service in these asylums.

The writer, a former assistant medical officer, points out that the assistant medical officers are classed by this Board with the kitchenmaids, laundrymaids, etc., as subordinate, to distinguish them from the principal officers, viz. the matron, steward, etc. The kitchenmaids, he asserts, are better lodged, he (and his successor) having to use his bedroom as an office and general living room.

That medical officers thus treated should be put under regulations tending to prevent promotion under the Board, and rendering advancement elsewhere next to impossible, is not a subject of surprise, and the writer of the letter shows how this result is brought about.

The social standing of the medical officers from the point of view of the Board is perhaps most forcibly and comically illustrated by the presentation to each of its assistant medical officers of the magnificent sum of two shillings as a Christmas box.

This Board, it is well to remember, recently dismissed one of its superintendents after sixteen years' service on grounds that would not bear investigation. The facts as reported to us at the time seemed to indicate the commission of a most atrocious injustice, resulting from the indescribable stupidity, or worse, of the investigating committee, which was afterwards severely censured by the general Board.

The service of the Board would appear, therefore, not only to be attended by extreme physical discomfort and social degradation, but by the absolute loss of all hope of advancement and the risk of unjust treatment, resulting in the destruction of professional reputation.

Medical men entering the service of the Metropolitan Asylums Board, after such a warning, must not look to this JOURNAL for defence or assistance in the event of their being maltreated.

A professional man who is content to be classed with scullerymaids, will certainly be ranked by his brethren in a still lower grade; but we must still hope that the Metropolitan Asylums

Board, which has shown considerable capacity in some respects, may have the good sense to see that their own dignity and importance is not enhanced by degrading their officers, and that good pay and good treatment are conducive to efficiency,—that the Board is indeed a modern governing body, and not a survival, as its dealings with its medical officers would suggest, of an obsolete Bumbledom.

The Publican's Responsibility in Criminal Drunkenness.

If drunkenness be a crime, as the latest legislation indicates, any person helping to produce it becomes of necessity an accessory, both to the crime and any criminal consequence.

That publicans are responsible, on this contention, for much of the crime in this country appears very probable. Within the few months last past, three judges of assize, Justices Kennedy, Matthew, and Grantham, in charging grand juries, drew attention to the large proportion of drunken crime, and its association with public-house drinking. Justice Grantham, at Durham, went so far as to assert "that every publican from whose house a drunken person went out should be *put in the dock and punished.*"

Public-house drinking is associated with a very large proportion of the crimes reported in the daily press, and the least observant person must have noted the invariable appearance of drunkards in the streets at the hour of closure of the drink-shops.

The evidence, indeed, is overwhelming that publicans do not limit themselves to their function of licensed victuallers, but do their utmost to pander to and cultivate the drink crave in the weak and depraved. It is astonishing that society at large has been for so long morally blind to the iniquitous conditions of the drink traffic.

Every drunken crime, if Mr. Justice Grantham is right, should entail an investigation in regard to the persons who were accessory to the drunkenness : but before this can be efficiently done, the police and local magistrates must be brought to regard their duties in this respect from a very different standpoint from that which now obtains.

The limitation of drink-supply to individuals—a very difficult

question—will have to be considered, and possibly guidance or control might be given to the publican.

The publican, however, is licensed to supply the reasonable needs of his customers, and it would seem right that on the publican should rest the burden of disproof of having aided in producing drunkenness and any resultant crime. If, for example, a drunkard or drunken criminal is proved to have come from a public-house, the licensee of that public-house should be held responsible for the drunkenness, unless he can prove the contrary.

The publican's responsibility must be recognised in the most definite and legal manner, as a necessary antecedent to any real reduction in the amount of the drunkenness and resultant crime in this country. The continuance of the existing licensed production of crime cannot but be considered as a disgrace to our age and civilisation.

The Correlation between Sexual Function and Insanity and Crime.

From the earliest period of medicine a connection has been supposed to exist between the generative activities and the processes of thought. Perhaps to some degree the perception of this connection was in early times due less to observation than to a fanciful association in the mind of the thinker between the two great functions which seemed the most mysterious belonging to our organisation, and which seemed to have in common a certain portion of the divine attribute of creation. And so we find the Egyptians worshipping the generative impulse under various forms, while the Greeks believed that the nymph Memory was the mother of the Muses (various types of mental activity) by Zeus himself.

In later days more substantial reasons have been found for associating disturbances of the generative organs, particularly in women, with abnormal states of cerebral action. The accomplished outgoing president of the British Gynæcological Society, Dr. Macnaughton Jones, dwelt upon this subject in his valedictory address delivered on January 11th. Dr. Macnaughton Jones has been for some time collecting statistics

in relation to the connection of insanity with diseases of women, and has brought to the investigation a very extensive experience as a gynæcologist and as a general physician. Dr. Jones appears to have gone into the question with care, considering how morbid impulses originating through the process of menstruation in the various groups of a woman's pelvic nerves can find their response in reflected neuroses in other organs, and thus influence the coherence and stability of her nervous acts; considering also "how the normal fulfilment of ovulation with menstruation developed for the time being erotic impulses," and led eventually to "distorted mental visions and erratic moral acts, vulgarly called crimes, which the woman was helpless to evade or subdue." Having discussed these and kindred topics, and reviewed at some length the correlation of disease of the sexual organs in women with varying degrees of mental alienation, Dr. Macnaughton Jones concludes that this correlation is a point to be taken into serious consideration in dealing with the insane, that careful physical examination should be made when there is any reason to suspect disease of the uterus or adnexa, and that full weight should be given in considering criminal acts committed by women to the condition of the menstrual functions, or to the coincidence of such acts with the menopause. The greatest care is required to anticipate insane impulse and to prevent suicide and crime in the case of women who manifest symptoms that are due to a correlation between disorders of sexual organs and mental instability.

The views of so experienced a writer as Dr. Jones are always worthy of respect, and we are always glad when an earnest worker in another branch of medicine deals with those difficult subjects that form the boundaries of our specialty. The obstetric physician must often have opportunities for seeing slight mental disturbances which do not come under the eye of the alienist, and he very often has chances of studying incipient insanity which are denied to the man whose work is chiefly within asylum walls.

Nevertheless we are a little disappointed with the result of Dr. Jones's studies. If we are to judge from the abstract of his address which has appeared in the *British Medical Journal*, it cannot be said that he has done more than add his own valuable observations to those of many others as to the correlation which he dwells upon, and which undoubtedly exists. He

does not seem to aid us in comprehending the connection. As to questions of operative interference, we hold that the same rules guide gynæcological operations in the sane and in the insane. Many alienists have entertained the highest hopes of obstetric aid in the mental diseases of women, and have in the great majority of individual cases been much disappointed. We are bound to put our patients in the best circumstances (gynæcological and other) for recovery, but we have to remember that we are not dealing with a disease which runs its course like a fever, but with an affection which, whatever its origin, is often essentially degenerative in its course. Again, there is another matter to consider. Affections of the female sexual organs are of such enormous frequency that it is difficult to understand how they can alone produce insanity in many cases. There must surely be in the majority of instances a *tertium quid*. Akin to this consideration is the reflection that affections of the sexual organs often seem to produce their effect upon the brain indirectly, that is through the mind. Thus the distress produced by sterility may be of a very complex nature, and may even lead to insanity (it is, by the way, a common cause of suicide among Oriental women), which we would no doubt be wrong to attribute solely to a reflex from trouble of the nerves of generation. Similarly mere vexation at the well-marked entry upon old age which the menopause is held to connote is sometimes a factor in producing depression at the climacteric period.



Aphasia and Will-making.

The difficulties which attend the making of a valid disposition of property by an aphasic are well known, and have attracted much attention. At the meeting of the British Medical Association in Edinburgh in 1898 the subject was very carefully discussed. Dr. Byrom Bramwell dealt exhaustively with it. Dr. Clouston proposed as a test that in every case where there was agraphia "the contrary case" or another disposition from the one apparently desired should be put, so as to secure not only an affirmative assent, but a negative dissent by the testator.

In the month of February the validity of the will of an aphasic was tried by Sir Francis Jeune, and a new and ingenious test as to whether a testator understood what she was doing, and could make an intelligible choice, was applied. The case was that of Miss Edith Marian Moore, who died in London on August 26th, 1899.

In July, 1899, Miss Moore had a stroke of paralysis, after which she suffered from aphasia and could not express herself by words. She was attended by Dr. Edmunds, who suggested that she should make her will. Under his advice two packs of large cards were printed, one pack containing the names of Miss Moore's relatives and the other pack the items of her property. Mr. Garrett, her solicitor, was sent for, and, at an interview, he dealt out the cards, one from each pack in turn. The name of Arthur John Moore was turned up, and Miss Moore intimated by signs that she wished him to have her Ballycohy estate in Ireland. The next matter was the disposal of her half-share under her father's will, over which she had the power of appointment, and the cards were again shuffled and the name of the relative selected. The shuffling of cards went on in the same manner until Miss Moore had disposed of all her property. Then came the selection of the executor. The cards were again shuffled, and as soon as her brother's name was turned up Miss Moore indicated by signs that he was her selection. She wanted another executor to be appointed, and the names of her other relations were shown her on the cards, but she did not come across the name she desired. She attempted to write it down, but what she wrote could not be read, and she then agreed that her brother should be her sole executor. The will was drawn up and afterwards carefully read over to Miss Moore, who put her mark to it, and Dr. Edmunds and Mr. Garrett witnessed the making of the mark.

Dr. James Edmunds, in the witness-box, said when the cards were used Miss Moore sorted them out in a perfectly intelligent and methodical way. She had the two packs spread out before her, went through them, and at last put them together in the way she wished. At the time she executed the will she perfectly well knew what she was about. It was not unusual for a person suffering from aphasia to put the wrong names to things. Miss Moore could not put together sentences nor write. The names of all her relatives were put on one of the

packs of cards. She could not give instructions on her own initiative.

Sir Francis Jeune said the mode of arriving at the wishes of the testatrix was novel, well intentioned, and most ingenious, and on the whole satisfactory. Taking the matter as it stood, nothing could have been more fair or more skilful, and he pronounced for the will, the costs to come out of the estate.

Editorial Comment.

The development of the JOURNAL is a matter of interest to all our members. It is published by the authority of the Association, and should therefore form, as we hope it does form, a fair index to the vital force of that body. The production of such a periodical, maintaining the high standard at which the *Journal of Mental Science* has always aimed, is nowadays not an easy task. There is immense activity in the field of psychiatry, and great efforts are being made everywhere to enable our science to keep pace with the general progress of medicine and with the rapid advance of some other and younger specialities.

Every year sees the establishment on the Continent and in America of new periodicals dealing with medico-psychology in its scientific aspects and as an art. Reference to our quarterly exchange list of journals will show a few of those which seem most representative and most valuable; but in addition to special journals we receive numerous reprints of articles from general medical journals dealing with our subject, as well as monographs, detached papers from works by several authors, etc. Surveying the vast and rapidly increasing volume of work which is being accomplished on all sides, there devolves upon us the arduous endeavour to keep pace with the entire progress of psychiatry, and to present to our busy readers well-sifted and thoroughly modern summaries of results.

It has for some time been evident that re-organisation is necessary in that department which deals with the current literature of insanity. The rearrangement of the Psychological Retrospects which have been prepared year by year at the cost of no little time and energy has been undertaken by

Dr. Lord, with the active co-operation of those who have already done much for the JOURNAL, and of those who willingly promise their services in the future. The preparation of these retrospects represents much reading and sustained effort on the part of skilled and competent specialists, and we doubt if the labours of these workers have been adequately recognised by the Association.

We cannot revert to former volumes without rendering a tribute of hearty thanks to the earlier workers in this field, among whom may be mentioned veterans like Dr. Ireland and Dr. T. W. McDowall.

It will be observed that the abstracts are now classified and generally signed by those responsible for them, and it would appear that the time has come when reviews of more important works should also, as a rule, be signed by individual reviewers.

It is also designed that critical digests of important subjects shall be published from time to time, thus resuming a method which this JOURNAL was among the earliest to adopt, and which, as developed by other periodicals, has seemed to us most serviceable.

The progress of knowledge makes readers more critical, the advance of science calls for greater exactitude ; but, apart from the literary and scientific aspects of our task, its business side does not grow easier. The production of plates and diagrams, for instance, almost indispensable nowadays, is costly and troublesome to every one concerned. It is pleasant, on the other hand, to note that the sale of the JOURNAL is increasing, until 1000 copies are hardly sufficient to meet the demand, notwithstanding that the price was materially raised some years ago. Advertisers are beginning to recognise the advantages which so widely read a journal offers them, and thus some relief of the expenses of publication is obtained by the Association.

We cannot forget that the *Journal of Mental Science* continues to stand as the sole representative of Psychiatry in this country. Nearly half a century has elapsed since the Association began to publish a journal. It has a long and honourable record. We doubt if the founders of the JOURNAL were sanguine enough to anticipate the success which has followed upon their venture, but we are assured that they would not

have been content to stop short while progress is possible. We are mindful of the words in which Dr. Savage repudiates self-satisfied science, and of Landor's saying that those who are not quite satisfied are the sole benefactors of the world.

We confidently appeal to the members, and especially to the younger members of the Association, to increase their efforts to keep the JOURNAL in the front rank by the only method whereby that end can be attained, the contribution to its pages of work of real importance. Only by a constant show of continually improving work can any medical journal maintain a foremost place in modern times.

Part II.—Reviews.

A System of Medicine by Many Writers. Edited by THOMAS CLIFFORD ALLBUTT. London: Macmillan and Co., 1899. Vol. viii, pp. 998. Price 25s.

THE final volume of Professor Clifford Allbutt's *System of Medicine*, containing as it does the section on "Mental Diseases," is the one which will prove of most interest to the readers of our JOURNAL. The list of the contributors is a sufficient guarantee that the quality of the section is maintained at the same high standard which characterises the work in its entirety. That nervous and mental diseases, taken together, would seem to receive very full treatment is evidenced by the fact that the sections devoted to these occupy nearly 1800 out of the total of about 7800 pp., and yet we could have wished that more space had been devoted to the latter, which are disposed of in only 315 pp., or 4 per cent. of the whole. From the point of view of the general practitioner, who is chiefly concerned with the treatment and difficulties arising in cases of threatened outbreak of, or fully developed, mental disorder among that class of society from which private patients are drawn, the treatment is sufficiently full and adequate. In the case of the poorer classes of the community, where no less than 90 per cent. of the existing lunacy has its origin, the difficulties that present themselves to the attending physician in a case of mental disorder are easily resolved. In the ordinary run of cases it means relegation to the asylum. In the case of the well-to-do the difficulties are enormously increased, and, after perusal of the section, the general impression that one gets is that the various contributors, in their recommendations as to care and treatment, had this class specially in view.

In recent years the additions to our knowledge of disease have been many and great, and these have always had as their consequence the

benefiting of humanity. A steady diminution of the death rate during the past half-century is equivalent to a diminishing occurrence of sickness and diminishing fatality of disease, but there is very little doubt that this improved condition of affairs is to be connected not so much with improved methods of treatment as with efforts which have been directed to the prevention of disease. Certain diseases have been clearly recognised as to a large extent preventable, and enlightened public opinion has taken energetic steps to check their occurrence, finding, with keen business instinct, that in the long run the expenditure necessitated is in every way a paying investment. Mental diseases, every one will admit, in no way differ, or ought not to differ, from any of the other "ills that flesh is heir to." If anything they differ only in their greater gravity and far-reaching consequences, social and economic. Yet what, in this department of medicine, has been done? Have any real practical efforts been made either by the medical profession or the public to grapple with this very grave aspect of social life, and if so, what are the results? Much has been done, and is being done, by members of our own specialty, aided and encouraged by enlightened public authorities, in the investigation of the pathological conditions of mental affections, and much may be hoped for in the future; but so far the result is not, to say the least, encouraging. Not only is there no appreciable improvement in the recovery rate of these diseases, but there is no evidence that there is any diminution in the occurrence of fresh cases. In the opinion of one of our most eminent authorities, Dr. Savage, it must be admitted that there is an increase, but not to an alarming extent. If anything can be done to stem this increase, it can only, or chiefly, to all appearance be in two directions: (1) prevention; (2) the early recognition and prompt treatment of cases by the practising physician under whose care all cases come in the first instance.

As regards the latter, the whole section dealing with mental diseases seems to us quite admirable. There is but little opportunity during training for the clinical study of the early stages of mental disorder, and a medical man usually begins to acquire real practical knowledge only when he has begun the actual practice of his profession. In every one of the contributions dealing with mental disorder the prime necessity for early recognition is specially emphasised, and to that end the premonitory symptoms of impending disease are very fully set forth, and the treatment appropriate to this early stage as fully described. That something can be done in this direction is proved by the fact that the number of cases of puerperal insanity which require removal to an asylum for treatment is steadily lessening, and that, too, notwithstanding the fact that there is no diminution in the number of deaths from puerperal fever and other accidents of childbirth. As a guide, therefore, to the general practitioner, this section seems to us all that could be desired.

In the all-important matter of prevention, however, we think it is decidedly lacking, for the question receives but little consideration, and we do think its value would have been enhanced by a clear and authoritative exposition of the subject. Such an addition would not have

increased the space given to the section so as to make it disproportionate.

The exclusion of general paralysis of the insane from this section, and its relegation to that dealing with nervous diseases, is difficult to understand. Only last year, for the first time, this affection received the official recognition of the Commissioners as a distinct type of insanity, and its absence from this section and this volume is productive of a distinct sense of incompleteness.

We have not dealt with the contributions which make up the section individually. All are characterised by a high level of excellence. We would point out, however, that the table of ages on p. 185 is of but little value, giving as it does merely the absolute numbers of patients in asylums at various age-periods without any reference to the population at corresponding ages. Nor is it the case that (in proportion to population) "the largest number of cases of insanity occurs between the ages of twenty-five and fifty." It is during the twenty years, thirty-five to fifty-four, that the proportion attains the maximum; and if general paralysis, which alone, and not puerperal insanity, is responsible for this occurrence, is left out of consideration, the liability to insanity, judging from the age on admission, is one which increases by steady progression with advancing age. The relationship to insanity of age, sex, and condition as to marriage is by no means a simple one, and no one of these can be considered by itself, but must be taken in conjunction with the other two. To say, for instance, as Dr. Savage does, that "over half the insane are married," tells us really very little, and taken by itself is positively misleading; for if the two conditions, celibate and married, are compared for ages over twenty, *i. e.* the marriageable age, the proportion of single to married among the admissions in relation to the corresponding population is between two and three to one. Table xviii, which gives the condition as to marriage, refers to population, though that is not stated, and its place should have been occupied by either Table xix or xx of the Commissioners' Report, though both of these are also misleading if only the totals for all ages are given.

Apart from the few exceptions which have been mentioned, the section on "Mental Diseases" is in every way excellent. To the general practitioner, whose difficulties in dealing with these cases are often trying in the extreme, it will prove a very present help. To the specialist also is it likely to prove helpful, and some of the contributions, such as those on dull, delicate, and nervous children (Dr. F. Warner), vice, crime, and insanity (Dr. Mercier), and criminal lunacy (Dr. Nicolson), are such as should appeal to that section of the enlightened public which interests itself in the moral and mental welfare of the community.

Diseases of the Nervous System. By CAMPBELL THOMSON. Baillière, Tindall, and Cox, London, 1899, pp. 123. Price 4s.

The author in his preface tells us that the object of his book is to serve as an introduction to the study of diseases of the nervous system,

and that the arrangement he has adopted is that which he has found in his experience as a teacher to be useful to students. Of the thirteen chapters into which the book is divided eight are devoted to the description of the motor system and the actions and nerve-supply of the muscles, and the remaining five deal with the general structure of the nervous system, the sensory system, reflexes, localisation of spinal diseases, and disorders of gait. In the description of the architecture of the nervous system the results of the more recent microscopic investigations appear to be taken into account, though we have not found any reference to Waldeyer's conception of nerve structure, which involves the existence of neurons of association as a link connecting the sensory with the motor neurons, the whole forming the reflex arc. The chapters on the ocular muscles and the reflexes are particularly good, and the descriptions throughout are freely illustrated by photographic reproductions and diagrammatic sketches. There is nothing strikingly original in the work, but the manner of dealing with the principles of the subject is so lucid that the result is a very readable book, and one which fulfils very well the author's intention.

Clinical Studies in Vice and in Insanity. By G. R. WILSON, M.D.
Edinburgh: W. F. Clay, 1899, 8vo. Price 7s. 6d. net.

In this work Dr. Wilson has brought together a number of clinical records illustrating certain aspects of mental disease which are in some degree related, whether in origin or in symptomatic expression, to what we rather vaguely term vice.

The standpoint throughout is clinical, but the observations are preceded by and interspersed with very interesting considerations on pathology and treatment.

The vice disease specially dealt with is inebriety; and the first portion of the book is devoted to "an account of alcoholism intended to convey an idea of a progressive alcoholic lesion in drunkenness, with a provisional suggestion of the nature of the vehicles and modes of nerve-motion in health and in disease."

The author comments at the outset on the present confusion in the nomenclature of alcoholism, and suggests some emendations. We could wish that he had been even a little more drastic in his proposals: such secondary conditions, for instance, as paraplegia and hemiplegia in a drunkard are hardly entitled to rank as special alcoholic disease forms either separately or as constituents of "alcoholic paralysis;" and "alcoholic epilepsy" or "epileptoid alcoholism" is a term which, perhaps, asserts too much.

The chief interest of this section of the work centres in the very ingenious, if somewhat speculative, theories which Dr. Wilson advances in explanation of the pathology of alcoholism. His view is that the morbid condition consists essentially in a lesion of the dendritic system, whereby there results a reduction of mental function: new paths are not developed, new connections are not made, hence the loss

of the function of "initiative;" the latest evolved, highest, and most complex mechanisms are disorganised and impeded, hence the failure in the function of "discipline." The author regards the lesion as a tonic depression in the dendritic system; the normal circulation of nervous energy is obstructed in its highest levels, and this obstruction entails a deprivation of trophic influence throughout the nervous system.

This loss of tonicity is regarded by the author as adequate to account for all the psychic symptoms of chronic alcoholism. *Exempli gratiâ*, the application of the theory is presented in detail in the case of two typical disorders—aphasia and hallucination. In regard of the latter symptom this view appears to us to be somewhat too exclusive. To explain the remarkable prominence of hallucinations in the alcoholic and their characteristic emotional tone—as compared, for instance, with the relatively lower degree of importance of this symptom in general paralysis—it would seem necessary to give more weight than the author does to the influence of primary peripheral lesions.

The clinical reports, both of alcoholic and of non-alcoholic cases, which form the remainder of the volume, are lucid, and the writer is to be congratulated on his avoidance of tedious and immaterial detail.

In connection with several of the cases Dr. Wilson takes occasion to reiterate his opinion—of decided authority coming from so keen an observer—that in the production of the drunkard environment is, in the majority of instances, more important than innate disposition.

The hints on treatment scattered through the clinical records are original and practical, both as regards the exhibition of drugs and the use of moral stimulation, the latter being a therapeutic agent deserving, in the author's opinion, more attention than it usually receives.

Specie e Varietà Umane [Human Species and Varieties]. By G. SERGI.
Turin: Bocca, 1900. Pp. 224, large 8vo. Price 6 lire.

Prof. Sergi, of the University of Rome, is one of the most brilliant and accomplished of Italian anthropologists and psychologists. His interests are wide, and he has made his mark in many fields, but he is best known for his contributions to two questions, in each of which he has influenced the current of international work and speculation. One of these is the Aryan question and the origin of the races which have peopled Europe, the other is the problem of craniological method. The two questions are allied, for, as Sergi insists, without a sound anthropological method the Aryan problem cannot be settled. In the present volume he has not dealt (except in an appendix) with the peopling of Europe: he is working up his separate studies on that subject for publication as a complete work later. He has here presented a full exposition of his craniological methods, and these have attracted such wide attention and discussion that a brief account of them may not be out of place.

Sergi believes that the study of the skull form (and secondarily of the

form of the face) is of the first importance in anthropology; the pigmentation of skin, hair, and eyes, while not without significance, furnishes, he believes, a very inferior criterion of race, for he considers that it is very largely modified by climate and other environmental conditions. The same may be said of stature. Head form, however, he finds to be persistent in a race through enormous periods of time.

While he thus attempts to demonstrate the great importance of head form he severely criticises the cephalic index (the length-breadth index) which until recent years has been regarded as the best, if not indeed the only available, method of registering and comparing head forms. He has little difficulty in showing (with the aid of a few ingenious diagrams) that the most unlike shaped heads may still have exactly the same cephalic index. And as a matter of fact the most dissimilar races, from opposite parts of the world, will sometimes yield identical indices. This scepticism as to the value of the cephalic index has, indeed, of late become widely prevalent among anthropologists, and the way has thus been opened for the sympathetic consideration of Sergi's method, a method which he regards as natural, and not different from the methods employed in other biological sciences, such as botany and zoology.

Sergi starts, as stated above, with the assumption that cranial types are persistent. He hesitates even to admit that mesaticephalic skulls are produced by the mingling of dolichocephalic and brachycephalic races, as is usually assumed by French anthropologists; he believes, on the contrary, that in such minglings it is the rule for one or the other head shape to be transmitted unchanged, and seems to regard the mesaticephalic skulls as belonging—if we retain the old cephalic basis of classification—either to the long-headed or the broad-headed group. He has found that at Rome in the earliest ages there were two types of skull—one native, the other foreign; and that though the proportions have varied, the same two types are still found. In Etruria, likewise, from the most ancient times there have been two types, never destroying each other. Moreover he regards it as an error to believe that cranial capacity has increased, as a result of greater intellectual activity, in the course of social evolution from prehistoric times to the present. He believes that the average cranial capacity of the various skull types has remained invariable, like the shapes themselves, and he gives measurements in proof.

Sergi's classification is mainly founded on the view of the skull from above (*norma verticalis*). He makes nine divisions, which are as follows (the names fairly indicating the shapes):—Ellipsoid, pentagonoid, ovoid, beloid, rhomboid, cuboid, sphenoid, spheroid, platycephalic. Most of these great groups are divided into several varieties (the ellipsoid into not less than eleven), so that there are about forty-five different varieties with separate names, some of these varieties being still further subdivided; on the whole, however, the classification is fairly clear and simple in its main outlines, as here fully illustrated. Sergi points out that the resemblances between the skulls of the first four divisions are sufficiently marked to indicate that they all belong to the same race, and that there is a similar resemblance between

the skulls of the last four divisions. The first race is the Eurafrican, the second the Eurasiatic; and these two races, according to Sergi, have peopled Europe.

There can be no doubt that Sergi's method is one of great value, and that familiarity with it must lead to great sureness of judgment in obtaining a really natural classification of skulls and in ascertaining their relationships. It tells us far more about a skull than we can learn from an index which merely shows the relationship of two variables. There are certain obvious criticisms. In the case of so complex a body as the skull it would often be extremely difficult to decide into which group we should place an individual skull; the changes which Sergi's classification has undergone in the course of years alone shows this difficulty. One is tempted to say that, valuable as the method is as an instrument of research, it remains a somewhat individual method, and that we could never be quite sure how far the results of two workers were comparable. It might almost be said to be an art rather than a science; also as a mere question of method, it may be pointed out that whereas the classification as a whole is founded on inspection of the *norma verticalis*, one of the nine divisions, the platycephalic, is decided by the *norma lateralis* (it may be noted in passing that Sergi regards the flat or platycephalic head as a racial and not a merely individual or abnormal character). On the whole, however, it must be admitted that the wide interest which this method has evoked is fully justified.

A somewhat similar but less extended classification is presented for the face, and it is incidentally pointed out that the somewhat general belief that a relatively large face characterises the lower human races (as it does animals) is by no means founded on fact. A classification of the palate is also brought forward: epsiloid, paraboloid, and ellipsoid.

The volume is furnished with appendices which are by no means its least interesting portion, and are both well illustrated. The first deals with certain anomalies of the skull. In the course of this a clear account is given of the interparietal and pre-interparietal bones, formerly called *os inca*, or, vaguely, Wormian bones; they indicate an arrest of development, and morphologically represent a character of lower Vertebrates. The term "Wormian bones" should be reserved for the small intercalary bones which have no morphological significance, and merely serve to compensate for incomplete ossification at the marginal sutures of the parietal bones. Sergi is among those who consider that the frontal or metopic suture has no significance as an indication of great frontal development, but is merely due to arrest of development.

The second appendix is "an application of the method." Here Sergi gives a brief but luminous account of his investigations and conclusions concerning the first inhabitants of Europe. The first recognisable inhabitant of Europe is the man of Neanderthal, in Sergi's opinion a type still persisting on the shores of the Baltic, and especially in Friesland. With the Neolithic epoch came the long-headed man of finer and higher type from his original home on all the shores of the Mediterranean. This is Sergi's *Homo Eurafricanus*, to whom is chiefly due the Egyptian, Greek, and Roman civilisations; this race came up by

Spain as far as the British Islands, and under Northern influence emerged afresh as the tall, fair, long-headed Scandinavian. Then towards the end of the Neolithic period came, together with the introduction of metals, the dark broad-headed man from the East, *Homo Eurasiaticus*. He is Mongolian in type, and radiates from Central Europe in many directions; so far as there are any "Aryans" at all, that name, Sergi concludes, can only be given to this race. (Sergi notes in passing that to Prichard probably belongs the honour of first recognising the Mongolian element in the "Celtic" skull.) This is, in brief, the theory—now gradually gaining distinguished adherents—with which Sergi's name is chiefly identified, and in his next work he purposes to give a full and elaborate demonstration of it.

The Races of Europe: a Sociological Study. By WILLIAM Z. RIPLEY, Ph.D. London: Kegan Paul, 1900. Pp. 624, with bibliography (paged separately), pp. 160. Price 18s.

For many years anthropologists, psychologists, and sociologists have been working at the detailed elucidation of the numerous and important problems connected with the races of Europe. An immense amount of material has thus been accumulated by specialists whose contributions were mostly hidden away in the Transactions of the learned societies published in every European language, the huge bibliography, drawn up by the author in conjunction with the officials of the Boston Public Library and appended to this volume, testifying to the enthusiasm with which they have worked. So complex, however, are the problems that even this vast mass of material was scarcely sufficient to settle more than their main outlines. Yet the time had certainly come for the results of the specialists to be woven together into some kind of harmonious whole by a competent hand. This has been done in the most admirable manner by the author of the present work.

Dr. Ripley is Assistant Professor of Sociology at the Massachusetts Institute of Technology, and Lecturer in Anthropology at Columbia University. He possesses the initial advantage of being an American, and thus devoid of those racial prejudices which have had a subtly pernicious influence on so many European anthropologists who have sought to discover the wider bearings of their work. Professor Ripley has also fully realised the magnitude of the task he has undertaken; this is shown not only by the attention given to bibliographical details, but also by the manner in which he has sought the aid and counsel of the most distinguished experts throughout Europe, and the anxiety which he has shown to obtain really typical photographs of the various European people. There are not less than 222 such photographs, all admirably reproduced and clearly printed as plates, and in such a work they are of the greatest assistance. Moreover there are eighty-six maps and diagrams, all constructed, so far as possible, on a uniform method of gradation, and exhibiting at a glance the various characteristics of each

separate country. It will thus be seen that the author has fortified his position with the most elaborate precautions.

Such care would be useless, however, without the special personal qualifications which alone enable a writer to grapple with complicated problems. These qualifications the author in the main clearly possesses. He can range facts in order with ease and skill; he shows good judgment in finding his way among conflicting theories, and in avoiding extreme positions; and although it can scarcely be said that he has mastered the art of writing, he always presents his results in a clear and readable fashion. It was not his business to contribute new material, or even to invent new theories, but the task was still one that called for, and has found in Dr. Ripley, a special combination of intellectual qualities.

It seems well to dwell on these preliminary considerations, for the value of a work of this kind depends very largely on the confidence we can place in the skill and competence of the author, and it is more important to feel assured that we have a reliable guide than to know exactly whether he will take us.

The exact conclusions reached by Dr. Ripley cannot be summarised within the limits of a short review, but we may touch on two or three of the most important and significant. After a preliminary sketch of the development of the questions concerned and of the factors involved—language, nationality, race, etc.—the author turns to the discussion of methods, devoting a chapter to head form. In accordance with a growing tendency the cranium is put in the first place as the criterion of race; the size is unimportant, and the form is no indication of intelligence, but no other easily measurable character is so persistent or so little influenced by selection. Pigmentation (which Huxley took as the basis of racial classification) and stature are useful as secondary criteria, but they are more modifiable through environment, nutrition, urban life, and other influences, and cannot be placed on a line with the head form. In this statement Prof. Ripley is at one with the distinguished Italian anthropologist, Prof. Sergi, but he differs from Sergi in accepting the validity of the length-breadth or cephalic index. In this he is certainly wise. While Sergi has convincingly shown that there are distinct limits to the reliability of the cephalic index, so long as we confine ourselves to Europe it serves us fairly well; and since nearly the whole of the available cranial data are expressed in terms of the cephalic index, we should indeed be helpless if we threw it aside.

In a subsequent chapter the author deals with the great central problem of European anthropology: How many European races are there? Up to within the last ten years it was generally held that there was only one really important race in Europe, the bearer of all its civilisation—the so-called “Aryan” race,—and the problem was to find who were the closest representatives of that primitive race. Even when the Eastern origin of the “Aryans” was discredited, the “Aryans” had still to be placed in Europe. This was the state of the question when Canon Taylor wrote his brilliant little book, *The Origin of the Aryans*. It is now generally agreed that there is no “Aryan” race at all, though we may still retain the name for a group of languages. The problem remains to determine the number, nature, and origin of the European

racés. Deniker holds that there are six races, a statement which Ripley qualifies by the remark that by "racés" Deniker really means "varieties." Sergi, on the other hand, holds that there are two—the African, long-headed race, and the Asiatic, broad-headed race. Prof. Ripley steers a judicious middle course by accepting three races,—a long-headed race of African origin, a long-headed of Northern origin, and a broad-headed race which he terms Alpine, probably of Asiatic origin. At the same time he conciliates the upholders of the two-race theory by reaching the conclusion that the Northern long-headed people are probably derived from the southern long-heads. It seems probable that, as far as our knowledge goes at present, this is the most satisfactory solution of the problem.

The bulk of the work is necessarily taken up by chapters devoted to the separate countries of Europe; there is also a chapter on the Jews and one on Western Asia. Finally, there are chapters on social problems, environment *versus* race, culture, urban selection, and acclimatisation. Although these latter chapters are always interesting they are not always so satisfactory as some of the early chapters, owing to the data, in many cases, still being very imperfect, and also, perhaps, because the author has endeavoured to deal with a great many important questions in a short space. In a chapter on urban selection the tendency for modern European cities to be nearly everywhere mainly populated by brunette long heads is clearly brought out. On the question of environment *versus* race the author is inclined to emphasise the influence of the former factor in the belief that the latter factor has been unduly favoured by some writers; there can be little doubt that we must attach great weight to both factors. On the question of acclimatisation Dr. Ripley reaches the conclusion that the Teutonic peoples, including the English, have a very limited power of adapting themselves to a new climatic environment. He notes that the Dutch in Africa are the most notable exception to this rule; as to this it may be remarked that the South African Dutch have a large infusion of French blood, and as this element was Huguenot we very reasonably conclude that it came mainly from the south of France, and therefore belonged precisely to that race which, as Dr. Ripley points out, has a special aptitude for acclimatisation. "A popular opinion is abroad," the author remarks, "that Africa is to be dominated by the English and German nations. If there be any virtue in prediction it would rather appear that their activities will be less successful as soon as the pioneering stage gives way to the necessity for actual colonists, who with their families are to live, labour, and propagate in the new lands."

We have probably said enough to show the great value and interest of Prof. Ripley's work. For all practical purposes it will doubtless be the standard work on this subject for many years to come.

After-images. (*Monograph Supplement, Psychological Review.*) By SHEPHERD IVORY FRANZ. London and New York: Macmillan, 1899, pp. 61, large 8vo.

After-images were first described by Aristotle, who seems to speak of them as familiar phenomena, and apparently regarded them as a continuation of the stimulus of vision, and at the same time as closely allied to the images of the dream state; they were re-discovered by St. Augustine, and in the eleventh century again discovered by the Arab Alhazan; in the seventeenth century the great humanist, Peiresc, regarded himself as their original discoverer, and made many observations on them. Since then they have been studied by a number of distinguished investigators—Boyle, Newton, Buffon, Goethe, R. W. Darwin, Fechner (who lost his eyesight mainly through long-continued experiments with the after-images of bright lights), etc.

Yet, although after-images have received so much attention, we are still very much in the dark about them. At the present day a number of widely divergent theories (duly set forth in the present monograph) are held regarding their nature. There is not even conformity with regard to the exact definition of positive and negative after-images. Dr. Franz decides that the positive after-image may best be defined as "an after-image in which the image and its background bear the same intensity relation as in the stimulus," and the negative image as "one in which the relation of intensity is reversed."

The interest of after-images is largely due to their seemingly two-fold character (indicated from the first by Aristotle), since they are allied both to sensation, and to memory images and imagination images. In the history of after-images, the author here remarks, "we seem to have an epitome of the interrelation of physics, physiology, and psychology, and probably no other single phenomenon is so good an example of the growth of experiment and measurement in psychology."

Dr. Franz has not attempted to settle the ultimate question concerning the nature of after-images, but to give an experimental analysis of the conditions affecting the production, duration, latent period, space relation, etc., of the after-image, and he also considers their relation to sensation, memory, and imagination. The chief subjects were eleven advanced students in psychology at Columbia University, New York, and the apparatus used was adapted from that devised by Fullerton and Cattell. The results are fully illustrated by tables and diagrams. During three series of 3000 experiments, only five times were negative after-images seen under the conditions of the experiments; these were noted only with the longest time, largest area, and greatest intensity, towards the end of the experiments, and indicate that the negative after-image is due to eye-exhaustion. The image, especially as regards duration, was found to be affected by many mental and physical conditions, especially the mental attitude of the subject. It is much affected by attention. The author finds reason to believe, in opposition to some other observers, that the peripheral seat of the image is only in the stimulated eye, and is not transferred. The monograph is accompanied by a bibliography.

Psychologische Arbeiten. Herausgegeben VON EMIL KRAEPELIN.
Bd. II, Heft 4; Bd. III, Heft 1. Leipzig: Engelmann, 1899.
Price 5 marks each.

Professor Kraepelin's students and fellow-workers are still vigorously prosecuting the laborious investigations which have done so much to further the scientific study of insanity in many parts of the world. Kraepelin's aim, as expressed in one of the studies before us, is so to adapt the methods of experimental psychology as carried on in modern laboratories that they may yield useful methods of diagnosis in the investigation of pathological mental conditions, and aid in the recognition and definition of mental diseases. The elementary and fundamental nature of many of the questions investigated—the fact that many of the results obtained merely enable us to give precision to undemonstrated truisms—render it sometimes difficult or unprofitable to summarise these investigations, and in many cases indeed the experiments are merely partial and preliminary attempts to deal with the subjects under examination. But it is impossible not to feel that the methods here adopted are sound, and that their development in years to come will render the study of the sane and insane minds a comparatively exact science.

Among the studies contained in these two parts we find Adolf Gross on the psychology of traumatic psychosis, a preliminary study of a single patient which is to lead up to an investigation of a large number of normal persons, with the object of establishing a sort of "psychic status" for comparison with minor degrees of psychic disturbance. In a somewhat lengthy paper Joseph Reis presents a series of simple psychological experiments on the sane and insane: the latter were cases of hebephrenia and general paralysis; the former were students and attendants. It was found that the patients at their best efforts equalled the sane at their best, but the inferiority of the former was well marked when they were considered in groups; the general paralytic in every respect showed more intellectual activity than the hebephrenic. A short and preliminary study deals with the relation of meals to mental capacity, as attested by Kraepelin's favourite method of ability in adding. The advantageous effects of eating were found to be very rapidly produced, and the importance of a good breakfast for school children is emphasised. Ragnar Vogt deals with the influence of distraction on simple mental processes. One of the most interesting studies is that by August Diehl, who, following up a previous investigation by Adolf Gross, has inquired on simple and scientific lines into the characteristics of the handwriting of the sane. Diehl points out the special significance of handwriting for the alienist. Disturbances of the will, though playing a large part in mental disease, are much less easy to investigate precisely than disturbances of attention or memory, and handwriting seems especially adapted to lead to a more exact knowledge of such disturbances. The experiments were made on eight asylum attendants (four of each sex) with a writing apparatus in connection with a kymograph, and the experiments consisted mainly in writing the figures 1 to 10 at various degrees of speed and under

various conditions. A certain number of interesting results were obtained, and notable sexual differences were observed: thus the women wrote larger, more rapidly, and with less pressure; and when the difficulties of the task were increased the men responded with a greater effort of will, and the women by decreasing the difficulties, as by writing smaller.

The Anatomy of the Central Nervous System of Man, and of Vertebrates in General. By Prof. LUDWIG EDINGER, M.D. Translated from the fifth German edition by W. S. Hall, M.D., assisted by P. L. Holland, M.D., and E. P. Carlton, B.S. The F. A. Davis Co., Philadelphia, and H. K. Lewis, London, 1899. Pp. 446, 8vo. Illustrations 258. Price 15s. net.

A distinguished physician, who is also a brilliant physiologist, not long ago remarked that the proper understanding and practice of neurology requires a very little knowledge of physiology, but a great deal of anatomy. At any rate, it is true that the logical processes by which neurological diagnosis is accomplished invariably necessitate the statement of certain anatomical facts.

And we can perhaps best convey a sense of the value and purpose of the work before us by saying it is one in which these and other facts of human anatomy are presented in philosophical relation to what is known of the nervous anatomy of vertebrates in general. It is a work—appropriately enough dedicated to Waldeyer—that has, in earlier editions, by means of Prof. Rigg's admirable translations, already commanded the attention of British and American neurologists.

Prof. Hall, of Chicago, is responsible for the present translation, and of the manner in which he and his subordinates have acquitted themselves we shall presently speak. But for the moment it is sufficient to notice, in Edinger's last edition of his own work, that some increase of scope and expansion of matter have not hindered a persistence of the original plan and purpose. And we must generally praise the breadth of conception and minuteness of detail with which the comparative morphology of the nervous system of vertebrates is here presented to the physician, zoologist, and psychologist alike.

The book is divided into three parts, of which the first is introductory, and the first chapter, properly enough, historical. It is, though, perhaps fortunate for the credit of Edinger's work amongst Anglo-Saxons that the historical matter is that alone, if any, from his pen that is tinctured by Germanic exclusiveness—we had almost said parochialism.

In the succeeding chapters of this part, dealing as they do with fundamental conceptions, the dry bones of anatomical precision are clothed with morphological significance in the light of embryological research. We may, it is true, regret that Edinger has found no place for mention of Gaskell's famous theory of the origin of the nervous system of vertebrates, although it is obvious from the text that he is acquainted with much of this worker's research.

Again, it is true that Edinger deals ostensibly with the central nervous system ; but since the currency of the newer neurological ideas it has become hardly possible to maintain the old distinction between "central" and "peripheral" organisations, and we therefore are the more surprised that Edinger fails even to afford a hint that he appreciates the significance which many of late have become inclined to attach to the endings of nerve in muscle.

Neither is the last chapter of this part free from fault. In it Edinger develops a kind of "overflow" theory of ganglion-cell dynamics, and we are assured that ganglion cells store up "irritation" till the "accumulated irritation" becomes "too great," when they then "discharge." Something more than inadequate powers of expression is revealed by the laxity of these phrases, which are, as they stand, a monument of philosophical confusion. Unless it be—which we doubt—that Edinger desires to evade any show of adhesion to chemical, physical, or vitalistic theories of cell dynamics, we are inclined to blame the translators for these and other crudities.

The second division of the work deals with the embryology and comparative anatomy of the vertebrate brain, and is a comprehensive and accurate digest, written with an abundance of morphological statement such as few but the author could supply ; while the third and last division, treating of the anatomy of the mammalian, and especially the human brain, contains the author's best work.

One chapter in particular, that on form-relations of the human brain, is of interest to psychologists. In it the author develops the hypothesis that the intellectual peculiarities of prominent men may be connoted with increased development of single cortical regions, and this without any expression in the general relations of the gyri or in the brain weight. In other words, as many have long foreseen, we are drawn across the threshold of a new phrenology. Incidentally it may be mentioned that Edinger revives the old idea that some men of prominence have been the subjects of retrogressive hydrocephalus. He mentions Cuvier and Rubinstein, but omits the salient instance of Thackeray.

On the whole Edinger's work is a fine one, and deserves high praise. Its renewed appearance in an English dress is sufficient proof of its vitality, and of its usefulness to the practitioner and systematic teacher. The diagrams are of a high standard of excellence, and many of them are, in their way, of more value than much letterpress.

But our praise of the translators' efforts must be more qualified.

We suppose it hopeless to pray Transatlantic authors to spell the language of Shakespeare and Milton with acceptance to Englishmen, but surely we have a right to expect, in scientific works, an absence of the colloquialisms of the evening newspapers.

The translators' knowledge of English may be inferred when we say they suffer "knowledge" to be divided thus: "knowl-edge." That they have less Latin is obvious from the fact that they frequently write "et al" without the least sign that they are aware that "al" is an abbreviation of "alii."

We find on one page such a remarkable statement as that certain portions of protoplasm form the "fundament" of the central nervous

system, and on another such an absurdity as that ganglion cells "usually" send out certain processes. In one line the noun singular "fascicle" is used; in the next the noun plural "fasciculi."

The pages are literally sprinkled with such monstrous phrases as "Gudden experiments" and "Purkinje cells," while the reader's task is rendered difficult by the overweighting of cumbrously constructed clauses with complex words imitated from the German.

But more than this, the translators have taken it on themselves to restrict the use of the term "neuraxon" to axis-cylinders having an efferent function, while those of afferent function they call dendrites. In consequence of this, as appears from a foot-note, the reader is expected to suffer the mental burden of two sets of symbols for one and the same verity.

It is the great value of Edinger's work that prompts us to point out these, amongst others, of the translators' shortcomings, and to express the hope that in a new edition the translation will undergo revision at the hands of some competent English scholar.

On the Relation of the Nervous System to Disease and Disorder in the Viscera. By ALEXANDER MORISON, M.D.(Edin.), Edinburgh and London. Young J. Pentland, 1899. Demy 8vo, pp. 132. Price 7s. 6d.

Dr. Morison here presents us with a reprint of the six Morison Lectures given by him before the Edinburgh College of Physicians in 1897-8. "Some verbal corrections have been made, and a little additional matter interpolated to make my meaning clear. Some illustrations which were unsatisfactory have been omitted, and others added." In these words the form of issue of the present volume is explained. The anatomy of visceral innervation is dealt with in the first two chapters. Much of the work done of recent years by workers with the Golgi silver methods is utilised in compiling these chapters, and the account given is clear and concise. Dr. Morison has worked independently at the histology of nerves in such viscera as the heart and uterus, and an excellent account is given of this part of the work, the value of which is enhanced by microphotographs. Here and there we notice in the earlier chapters a tendency to fall into poetical quotations and other digressions—perhaps as a flavouring towards aid in the digestion of a difficult subject. The pathology of visceral innervation naturally succeeds the subject of the physiology of visceral innervation. Some valuable observations on the nerves of the uterus during and after pregnancy, and such topics as cardiac pain and Graves' disease, respiration and vaso-motor innervation, are briefly and fragmentarily dealt with, but this portion of the subject lacks systematisation. Pulse tracings and respiratory tracings are given in illustration of cardiac and pulmonary disturbances. The sixth and concluding lecture deals with the "brain regarded as one of the viscera," and with the subject, so dear to psychologists and metaphysicians, of "mind and body." The exposition here, in its

efforts to rise to the height of the great argument, becomes stilted and pompous. Thus, speaking of cerebral memory, we are informed that it "may be impressional and conclusional; that is, the automatic record of impressions received through the senses, or the record of the results of that inward digestion of such impressions by the recepto-retento-motor process we call thought or reasoning, in the exercise of which more cerebral organules than one take part" (p. 118). Again, "It seems feasible to argue, or assume, or imagine, as you will, that the polymorphous cell, with its universality of axonic direction and equal universality of dendritic receptivity, is the type of that retentive and connective organule, the repletion and utilisation of which is the mainstay of mental life, as the greater or less storage of supplies—potential energy—is the necessary condition for the increase of any power whatever,—or kinetic energy." "There are, moreover, preponderant (nerve) centres for the evolution of energy, otherwise direction could not be given to motion, and the universe itself would have been a chaotic pyrotechnic display of short duration, if it had existed at all, which, having flared imposingly into being like the rocket, would, like the residual stick, have fallen into the abyss of oblivion in a similarly ridiculous manner." It would be ungracious to criticise further, for the work is very unequal in its parts, and portions of it exhibit decided ability and merit, especially where anatomical and physiological facts are concerned, as already pointed out. The volume is well got up, and the type and printing clear and easy to read.

Le Rire et les Exhilarants. By Dr. J. M. RAULIN. Paris: Librairie J. B. Baillière et fils, 1900, pp. 292.

This monograph on laughter fairly sums up our recent knowledge on its mechanism. In the first two of the three parts into which the book is divided, the anatomy and physiology of laughter are considered. While the zygomaticus major plays a leading part in its production, the author shows that Duchenne attached an undue importance to it, neglecting the functions of other muscles—the risorius, orbicularis palpebrarum. Stress is laid wisely on the rôle of the muscles of expression about the eyes in laughter, and attention is drawn to the sound *i* (pronounced English *ee*) found in different words relating to laughter in various languages, thereby illustrating the analogy which exists between speech and its primitive expression,—sounds seen corresponding to labial gestures.

The evolution of laughter, its predisposing causes, are next considered.

Laughter as a pure reflex is discussed in relation to tickling, and in the chapter on exhilarants (nitrous acid, opium, Indian hemp) as a result of central stimuli. The exhilaration arising from the inhalation of nitrous oxide gas is closely related to that produced by tickling, and the sensation of pleasure is especially localised around the mouth and lips. With regard to haschisch (Indian hemp) Dr. Raulin says, "Hitherto it has been but little used therapeutically. But sooner or later this agent,

which exercises a considerable influence upon the nervous system, will probably occupy an important place in therapeutics."

Laughter, which is a marvellous stimulant in normal life, also frequently recalls mental disorganisation, and in certain pathological cases is a most expressive sign; hence in part iii we are given a good account of the semeiology of laughter—its occurrence in facial palsy, progressive muscular atrophy, glosso-labio-laryngeal palsy, general paralysis, etc., and in the various psychoses.

With regard to the localisation of laughter, the commanding centre is in the cortex (operculum of Arnold); that of co-ordination and inhibition in the grey nuclei of the optic thalamus; that of execution in the medulla. So far as post-mortem evidence can enlighten us at present, Raulin concludes with Brissaud that spasmodic laughter (*e.g.* in disseminated sclerosis, tumor cerebri, etc.) is due to an irritative lesion of the anterior segment of the internal capsule.

A full bibliography is included.

Die Geistesstörungen im bürgerlichen Gesetzbuch und in der Civil-Process-Ordnung (20th May, 1899) [The Insanities in the Code of Civil Law and in the Form of Civil Process]. Von Dr. C. MOELI, Prof. an der Univers. Berlin, Director der Anstalt Herzberge, etc. Berlin, 1889, 8vo, pp. 47.

In this pamphlet Dr. Moeli considers the changes introduced into the law in May, 1899. He cites the provision that a person can be put under curators who, in consequence of mental derangement (*Geisteskrankheit*) or mental weakness (*Geistesschwäche*), is unable to look after his affairs. There is nothing new in this, but the professor pertinently observes that there must always be a difficulty in distinguishing between insanity and mental weakness, which may be congenital or the sequel of insanity, or the two may alternate. He thinks that the Prussian law is often too hard upon weak-minded persons, as it takes from them all voice in their own affairs, whereas in some cases it would be enough to reduce them to the status of pupils or minors.

For persons afflicted with dipsomania (*Trunksucht*), defined as an irresistible craving for continued or periodically returning indulgence in intoxicating drink, guardians may be appointed if their dissipation threaten to end in destitution or be dangerous to the safety of others. It does not appear that it is necessary for the judge to take the evidence of a medical man to determine this condition.

Dr. Moeli observes that drunkenness may be the outcome of a diseased state of the brain, or simply of vicious indulgence which might be resisted by a vigorous exertion of the will, and it would require a physician to distinguish between these two varieties.

We learn that in Prussia nullity of marriage may be declared if one of the contracting parties be proved to have been in such a condition that he had not recognised the nature of the engagement (this would cover insanity); or if there were certain peculiarities concealed, apart from

deficiencies of means, unless this has been condoned or accepted by the party aggrieved.

Divorce is permitted if one of the spouses has become insane and the insanity has lasted at least three years during the time of marriage, and has reached such a grade that rational intercourse between the married persons was suspended, and any prospect of the renewal of such intercourse was excluded. Dr. Moeli's remarks on the civil code are sensible and well stated, but one would need to have the text of the code to follow his criticisms.

WILLIAM W. IRELAND.

The Pathology of the Emotions: Physiological and Clinical Studies. By CH. FÉRÉ, Physician at the Bicêtre. (Translated by Robert Park, M.D.) University Press, Limited, Watford, 1899, pp. 517. Price 15s.

This book is a translation by Dr. Robert Park of the work on the pathology of the emotions by Ch. Féré. As a translation it gives a literal—too literal—presentation of the original; for frequently the French terms are represented by their verbal equivalents in English, although these may be conventionally used in totally different senses in the two languages; e.g. the translator speaks of the author making experiments on the *personnel* of his “services” at Bicêtre. Again, he frequently speaks of the insane as aliens—a word conveying a totally different meaning in English; we shall have some one terming them “outlanders” next. In one place, indeed, an insane individual is actually termed an “alienist.” The whole translation teems with ungainly additions to the English language, such as “icery,” “peripheral,” “odorating,” “tonality,” and many hundred others. An amusing mistranslation is that in which “membre,” a limb, is rendered penis (p. 16). Dr. Park claims that this work has been “rendered into English” by him; “rended from French” would, in our opinion, be a more accurate description.

In his preface the translator advances views, though in somewhat cryptic language, advocating the materialisation of the mind, but we do not think any support will be found for them in the work of the author himself. This work is in itself most interesting, both in subject and treatment. Starting, in his preface, with Herbert Spencer's definition of the emotions as being states of consciousness proceeding from the centre, as opposed to sensations, which are states of consciousness proceeding from the periphery, the author in his work proceeds to enumerate experiments on the sensations, which seem somewhat to invalidate the definition, as tending to show that the emotions are really dependent on the sensations. In showing how perverted sensations are responsible for certain hysterical emotional states, we are struck by the well-known fact that the French are in a more pathological condition with regard to the latter than ourselves. We are next shown the influence of emotions, of undoubtedly central origin, upon the bodily functions, circulation, respiration, digestion, etc. In this connection is noted the incidence of

chorea after fright. From chapter ten onwards the matter will be found especially interesting to the alienist, for here we are dealing with the emotional value of the cardinal insane states—mania, melancholia, dementia. The author points out how the various states shade into one another, though he balances opinions so impartially that we are left in doubt as to his own views; for instance, it is not clear whether he regards mania as an exaggerated state of exaltation or joy, or as a prolonged anger. The influence of the insane states upon the bodily functions is compared with that of the emotions, and the author notes, with apparent surprise, the low tension pulse of mania, a point recently emphasised by Dr. M. Craig. While pointing out the anomalies of pthisis in the insane, he seems to think that the temperature will always rise, but this need not be so. A striking paragraph runs, "The harmony of movements is especially affected in psychopathics; and the default makes itself principally remarked in the physiognomy so easily altered. One may say that madness is the enemy of beauty; beauty is rare amongst the insane: when they regain harmony of expression one may prophesy a speedy cure."

In speaking of the hypersensitiveness of degenerates the author propounds the theory that "second sight" may be due to such a degenerate emotional state; but surely this phenomenon, largely associated as it is with such a typical non-degenerate race as the Highland peasantry, has been more plausibly claimed as an embryo in the evolution of a new faculty.

No one who has begun the perusal of this most interesting work is likely to put it down until he has made himself master of its contents, for, though not calculated to prove of any great practical value, as a philosophical exposition of the subject of which it treats it cannot be too highly praised.

The book contains ten psycho-physical diagrams, and is furnished with a very full index.

Les Troubles mentaux de l'Enfance. Par le Dr. MARCEL MANHEIMER.
Paris: Société d'Éditions Scientifiques, 4, Rue Antoine-Dubois.
Cr. 8vo, pp. 189. Price 5 fr.

In this little treatise on the mental disorders of childhood, Dr. Manheimer, an old assistant of the clinical professor of mental medicine, Dr. Joffroy (who writes an introductory preface), gives a "summary of infantile psychiatry with its pedagogic and medico-legal applications." The divisions of the subject are set out, with the usual French precision, under the headings of Etiology, Semeiology, Nosographic Description, Legal Medicine, and Cure and Treatment. The book is to a considerable extent a compilation giving the views of the leading French authorities on the psychological and psychopathic aspects of the period of childhood. Legrain's observations on "degeneration and alcoholism" are quoted to prove that in three generations the alcoholic family is practically reduced to a progeny of imbeciles, idiots, insane, hysterics, or

epileptics. *Psychical* causes of mental trouble are less frequent in juvenile than in adult life: *physical* play a more prominent part in the young, especially in those with inherited predisposition to mental breakdown; unwholesome home surroundings and injudicious schooling are, says our author, important factors in determining mental troubles, but the latter is the more potent. Urban agglomeration (he thinks) and the vices of city life have much to do with the increase of juvenile insanity.

The section on legal medicine is perhaps the most interesting and original part of the book, and the part played by mental weakness in the production of tramps, "larrikins and hoodlums," of incendiaries, of thieves, and of homicides is carefully considered. A judicious warning is given as to the credibility of children as witnesses in courts of justice, the influence of suggestion and imagination often leading them to exaggerated statements. With regard to suicide in children, it is stated that the proportion of such cases has increased by 50 per cent. in the years 1881-95, and that the females of Paris under age furnish no less than 40 per cent. of the whole number of suicides. Some judicial remarks on care and treatment close the volume, which we may characterise as an interesting summary of the subjects with which it deals.

The Cerebro-spinal Fluid: its Spontaneous Escape from the Nose. By Dr. STCLAIR THOMSON. London: Cassell & Company, Limited, 1899. Royal 12mo, pp. 132.

It is more valuable to study one case thoroughly than thousands casually. Dr. Thomson has had a case of cerebro-spinal rhinorrhœa (escape of cerebro-spinal fluid through the nose not due to erosion of bone), and he has studied it carefully and thoroughly, with the result that he has added a valuable monograph to medical literature. This monograph, which is of the nature of a critical digest, successfully accomplishes its intended task of "finally establishing a hitherto unrecognised pathological possibility."

Taking his own patient as a text, the author reviews all the published cases of cerebro-spinal rhinorrhœa (nine certain and nineteen possible cases).

It is demonstrated that the clinical picture usually, if not always, includes cerebral symptoms premonitory to the flow, which are absent as long as the flow continues. This indicates that the pathology of the condition includes more than the presence of an accidental foramen in the base of the skull through which the fluid escapes. Hydrocephalus internus is suggested.

There are several interesting chemical analyses of the fluid by Prof. W. D. Halliburton.

The most successful treatment of the condition is one too often, alas! neglected by us all in the treatment of disease, viz. non-interference.

Diseases of the Nervous System. By C. E. BEEVOR, M.D., F.R.C.P.
London: H. K. Lewis, 1898. Cr. 8vo, pp. 432, Illustrations. Price
10s. 6d.

This introductory work on neurology forms one of the volumes of "Lewis's Practical Series," and will be found of real interest and distinct value. The author has planned his work so as to begin with anatomy and physiology, and, having laid a secure foundation, proceeds to discuss the various diseases affecting the nervous system. The limits of space at Dr. Beevor's disposal do not permit of discussion of points which are still in dispute; but perhaps that is fortunate, in rendering his opinion clear-cut and lucid. Indeed, the book can be read from cover to cover with ease and with profit. Although it is concise, brevity has not caused any sacrifice of the author's meaning; and his explanations of nervous phenomena are sure to meet with a grateful appreciation on the part of those who are desirous of arriving at an understanding of these difficult problems.

In dealing with localised diseases of the brain Dr. Beevor lays us under special obligations in having avoided superfluous details while conveying a vivid impression of his experience. In an introductory handbook, of course, one cannot expect a full discussion of disorders which, when dealt with at length, require monographs for each. Alcoholism is disposed of by the author in six pages, but these pages give the impression of having been written by a physician who has determined, in the fulness of his knowledge, that his words shall be few and well chosen. We must also refer in terms of appreciation of the practical and scientific spirit which is made manifest in Dr. Beevor's remarks on treatment, and cordially commend this book to students and junior practitioners, while indicating that a perusal of its pages will not come amiss to those of wider knowledge.

Part III.—Retrospects.

1. Anthropology.

Anthropological Work in Asylums. (*Lancet*, July 15th, 1899.) Goodall, E.

A clear and comprehensive statement of the *raison d'être* of anthropological work, with its practical application in asylums. A list of instruments required is given, together with a scheme of anthropometric and descriptive data, and in conclusion a comprehensive bibliography. A valuable paper. J. R. LORD.

Pleasurable Emotions in Certain Animals [*Des Émotions gais chez quelques Animaux*]. (*Rev. de l'Hyp.*, Jan., 1900.) Coutaud, A.

This short essay raises the question of the possibility of laughter as an emotional expression in animals. That animals can be gay and

give gestural expression to this feeling all will admit ; that the smile may be the signature of this inner joy, and is possible anatomically for the animal, we may grant ; but that the sense of the comic, which laughter generally conveys, is present even rudimentally is more than doubtful. For our own sakes let us hope that the animal germ of humour, if present, will never develop. The discussion is interesting if rather academic. The author, M. Albert Coutaud, refers us with interest to two precursors in this field of psychology—Laurent Joubert in the sixteenth, Godenius in the seventeenth century.

HARRINGTON SAINSBURY.

2. Neurology.

Structure of the Nerve-cells of the Spinal Ganglia [Di Nuovo sulla Struttura delle Cellule Nervose dei Gangli Spinali]. (Com. fatta alla Soc. Med.-Chir. di Pavia nella seduta 20 Gen., 1899.) Golgi, C.

In this paper Professor Golgi gives an account of some further observations upon the reticular figure revealed within the protoplasm of certain nerve-cells by his silver method (see *Journal of Mental Science*, 1899, p. 403). He set himself to investigate more minutely the structural differences presented by it at different ages, in the hope that they might throw some light upon its functional significance. He has found that these differences are so pronounced as to make it possible to say whether a spinal ganglion, upon which organ his observations were carried out, is from a young animal or from an old one. In the ganglia of a twenty-year-old horse the most characteristic features of the endocellular reticulum were its peripheral disposition (although there still remained a narrow outer zone unoccupied by it), a tendency to be arranged in lobules of a globose or conical form with the narrow ends directed towards the nucleus, and the absence of a segment in correspondence with an accumulation of pigment in a portion of the protoplasm. This endocellular figure was already well developed in the bovine fœtus of from two to three months. It presented itself, however, only at one point in the cell, close to the nucleus, which was often displaced to the opposite side of the cell. It did not consist of a distinct reticulum, but rather of short filaments passing in various directions and ending in little swellings of the form of a pin-head. At a somewhat later stage of foetal life the figure, although still tending to present the characters just described, occupied a larger portion of the cell. In the ox, though not in the cat and rabbit, it now presented a distinctly reticular character, and with greater frequency than at later periods was placed in contact with the nucleus by means of short and delicate processes, each of which terminated in a slight swelling. In the newly born animal the figure had essentially the characters that it presented in the adult, which were described in his earlier papers. The reticular character was, however, not quite so pronounced, and figures occupying an eccentric zone of the cell were still common.

He admits that, up to the present, his hope that the study of this apparatus at different stages of its development would lead to some

definite knowledge as to its nature has not been justified. As no one else seems as yet to have been any more successful in throwing light upon the subject, the significance of this remarkable structural feature of the nerve-cell must still be regarded as obscure.

W. FORD ROBERTSON.

The Axial Nerve-fibres of the Brain [*Wander-Versammlung der Neurologen und Irrenärzte, Baden-Baden*]. (*Monats. f. Psychiatrie u. Neur.*, April, 1899.)—*Markfasergehalt der Centralwindungen eines normalen männlichen Individuums*. (*Neur. Cbl.*, No. 6, 1899.) *Passow, A.*

In the report which he delivered at Strassburg on the nerve-fibres of the brain cortex, after reviewing the steps by which our present knowledge of the histology of the brain has been reached, he quotes Meynert's division of the cortex into four layers: (1) Tangential fibres (Tangential Fasern); (2) Superradial fibre-work (Superradiares Faserwerk); (3) Interradial plaited work (Interradiares Flechtwerk, also named the Baillarger and Gennari layer); (4) Radiating axial fibres (Markstrahlen). Kaes, to whom Passow gives the credit of making the most progress in the study of the nerve-fibre, uses this division. Tuzek made the important observation that there was a marked wasting of the nerve-fibres in general paralysis. Zacher two years after showed that there was a similar disappearance of fibres in other varieties of insanity. Amongst the microscopists who have advanced our knowledge of the minute structure of the nerve-fibres of the brain, Passow especially signalises Righetti, Vulpius, Monakow, and Flechsig. He explains in detail Wolter's method of staining and preparing sections under which the finest nerve-fibres are dyed a deep blue, and the nerve-cells a yellowish brown; but he objects that it is scarcely possible to mount thin sections with this process without injuring them. He prefers the method of Kaes, who cuts the whole brain in frontal slices, and makes a segment of the central convolutions, and carefully notes the parts from which the segments are taken. Kaes has already examined ten brains, from a child of ten months old to a man fifty-three years of age, and two brains of members of the lower races, Hindu and Chinese, and a microcephalic and macrocephalic brain of subjects aged two years and twenty-five years. Dr. Passow refers to plates which were before the meeting, but which are not reproduced in the *Monatsschrift*; this is one reason why his descriptions are difficult to follow. He indicates the development in the first month of life of the projection fibres towards the periphery of the cortex, of the *fibriæ propriæ* of Meynert of the association system, and the formation of the different layers of the cortex. Kaes has shown that there is a difference in the texture of the nerve-fibres of the anterior and posterior central gyri, and also a difference at various depths of sections of the same convolutions.

Dr. Passow above four years ago set himself to study the brain of a man thirty-three years old, who died of phthisis in a normal mental condition. He spent two years in making sections and mounting them. He now possesses 1890 sections. He finds a difference in the construction of the brain at different parts of the cortex. The

change never begins abruptly. Dr. Passow shows (*Neur. Cbl.*, No. 6) by two woodcuts that the posterior median convolution has fewer fibres than the anterior one. This was confirmed by careful measurements with the micrometer. The parts richest in nerve-fibres seem to lie in the motor area of the hand and finger. Dr. Passow examined the brain of a man who suffered from epileptic convulsions from youth upwards. He was treated with the bromides. He died of inflammation of the lung at twenty-eight. Passow observes that although the patient was ascertained to be not weak-minded, and even to possess some technical capacity, the cortex was found to be very poor in nerve-fibres; even in sections of the median convolution a type was found inferior to the brain of a child under a year old. We ought, therefore, to be cautious in coming to conclusions which are not controlled by comparative observations, for examinations of the brains of epileptics who do not suffer from mental alienation are seldom obtained by physicians in asylums, who do most of the pathological microscopic examination of the brain.

W. W. IRELAND.

The Heaviest Brain. (*Neur. Cbl.*, No. 13, 1899.) *Van Walsem.*

In this paper is given a short description of the heaviest brain on record. The possessor of this ponderous organ was an epileptic idiot, who died at the age of twenty-one. There was a hereditary neurosis, three brothers, having also large heads, dying in childhood. He began to walk at four years of age, never attended school, and was received into the institution at Meerenberg at his fourteenth year. He was an idiot of low intelligence, and of changeable but good-humoured disposition. He used but a few words, and only recognised the people who were daily round him. He amused himself with a common toy. Through care he was kept cleanly in his habits. The senses seemed good and the muscular system well developed. He was 1.40 metres in height. The gait was jerky; the tendon-reflexes heightened. He suffered from epilepsy, during an attack of which he died. The encephalon with the membranes weighed 2850 grammes. It appeared to be a general enlargement. The brain was found to be larger in the transverse direction than in the fronto-occipital. The cerebellum was regular in form. The spinal cord seemed slightly larger than usual, and the spinal nerves bigger. The optic and motor nerves seemed also somewhat bigger. On microscopic examination the ganglion cells of the brain seemed rare, the layers indistinct, the pyramidal layer scanty, the nerve-fibres everywhere distinct, and the tangential layer had wide meshes. Neither the cerebral vessels nor the neuroglia seemed to be altered.

W. W. IRELAND.

Lobulus Parietalis Inferior. (*Arch. f. Psych.*, B. xxxi, H. 1, 2.)
Monakow.

This is a treatise on the anatomy and pathology of this lobule, filling seventy-three pages, and illustrated with two large pages of lithographs and four woodcuts. The commonest symptom in lesions of the gyrus marginalis is disturbance of the muscular sense without injury to the power of movement. Monakow adopts the view that in the gyrus

angularis is situated the area of feeling for the eyeball, and that its removal is followed by loss of feeling in the conjunctiva.

Monakow's work is based upon profound anatomical and pathological researches. He has studied the inferior parietal lobule in all its connections, and at all stages of development and degeneration. While recognising the value of Flechsig's new method of studying the development of the axial nerve-fibre, Monakow opposes the view that the lower parietal lobule is not connected with the corona radiata, and that it only sustains its connection with the other parts of the brain through the association systems and the fibres of the corpus callosum. Flechsig observed that the inferior parietal lobe, as well as the basal temporal gyri and the frontal lobe, have no mature fibres up to the second month of infancy, a period of development in which the fibres in the projection system of the brain have long been clad with myelin up to the inner capsule. This gave occasion to Flechsig to reject the connection of the corona radiata with the said region of the brain surface. This was, however, pushing to physiological conclusions far beyond the anatomical data. Flechsig holds that only a third of the whole superficies of the cerebrum is connected with the brain stem, while the rest of the cortex, which is represented by three large insulated convolution areas, is only connected by association bands of fibres, and by commissures. These three association centres serve the higher mental activities, and are only connected with one another and the sensory spheres. The inferior parietal lobules he regards as belonging to the great posterior association centres. Monakow then enters into an argument as to the import of the degeneration of the tissues in a case reported by himself, but which is interpreted in a different way by Flechsig.

Monakow observes that Flechsig's theory is based upon the fact that, in the infant's brain, the mature axial fibres connecting the frontal parietal and temporal lobes with the corona radiata are not seen up to the third month, although at that time the other nerve tracts of the corona are fully formed. Is it, then, true that more than two thirds of the superficies of the human brain is unconnected with the corona radiata? That this is not the case with rabbits and dogs is certain. In these animals the connection of the parietal lobe with the ventral nucleus of the thalamus and indirectly with the fillet has been experimentally proved, but Flechsig argues that the human brain may be in its development different from that of animals. For some years past Monakow has studied these questions not only upon the operated brains of dogs and monkeys and upon some new pathological cases in men, but has also made embryonical researches on the development of the nerve-fibres.

Monakow examined the brain of an infant who died when three and a half months old. He found connecting nerve-fibres between the corona radiata and the inferior parietal lobule, as well as with the central temporal gyrus.

In the course of his paper, Monakow keeps his attention upon the Leipzig Professor as well as on the parietal lobule. He objects to some of his statements in detail, and questions if the nerve-

fibres always put on their medullary sheaths in the regular succession assumed by Flechsig. Monakow strengthens his position by detailing his experiments and observations of the brains of monkeys, and by the report and an analysis of some instructive clinical cases.

We await with interest the continuation of this important treatise.

W. W. IRELAND.

Brain Weight and the Peripheral Nerve-fibres v. Bodily Size [*Das Hirngewicht und die Zahl der peripherischen Nervenfasern in ihrer Beziehung zur Körpergrösse*]. (*Biol. Cbl.*, No. 13, 1899, reported in *Zeit. für Psych.*, B. xx, H. 5.) Brandt.

Professor Brandt, of Charkow, has for a long time paid attention to this subject. Haller observed that smaller animals always had a larger proportion of brain to the weight of the body than larger ones. These small animals have a greater surface in proportion to their bodily weight, and cool rapidly. In consequence of this they require a more active metabolism and a greater power of assimilation, as well as a stronger development of the trophic brain centres. The surface of their bodies therefore requires (to give them the same amount of sensibility) more sensory nerve-fibres in proportion, which fibres in their turn require a greater representation in the brain.

The number of fibres in a muscle depends not upon its volume, but upon its diameter. Thus, the smaller muscle possesses more nerve-fibres than the larger one reckoned by volume, consequently more leading nerve-fibres, and it is to be supposed a greater area of grey substance in the brain.

It has been proved by numerous measurements that smaller animals have relatively more peripheral nerve-fibres, sensory and motor, and that the number of these fibres is proportionate to their relative brain weight. For example, the rat has from ten to twenty times more bodily weight than the mouse, while it only has three to five times more nerve-fibres in its sciatic nerve, and about three to five times more brain substance.

W. W. IRELAND.

Lesions of the Hippocampus in Epilepsy [*Ammonshornbefunde bei Epileptischen*]. (*Arch. f. Psych.*, B. xxxi, H. 3.) Bratz.

This is an inquiry into the question of the alterations in the hippocampus major said to accompany epilepsy. The frequency of this lesion has been several times denied and reaffirmed. Dr. Ford Robertson, the Scottish anatomist, has only observed degeneration of the glia of the hippocampus in one case out of thirteen.

Dr. Bratz made his histological studies in seventy subjects, of whom fifty were genuine epileptics. There were alterations of the cornu ammonis in twenty-five of these cases; eleven times the lesion was on the right side, thirteen times on the left, and only once on both sides. The alteration was always of the same character—atrophy of the great pyramidal cells with increase of the neuroglia. Bratz found the gyrus hippocampi, and in several cases the parietal convolution, smaller on the same side as the contracted hippocampus, the result of a general wasting. In an epileptic boy, besides the contracted cornu, the whole left hemisphere was lesser in size. There is no adequate explanation of the

significance of this morbid process in the hippocampus, or why it should be so often present in epilepsy, and absent in so many cases of long-continued brain disease. It cannot be a necessary sequel of continued epilepsy, for here are twenty-five instances in which the alteration is wholly wanting. Nor can there be found any marked difference in the ætiology or clinical symptoms of the epilepsy, whether the lesion is present or absent. It was, however, observed that when the convulsion began on one side of the body, this took place on the side opposite to the alteration in the cornu Ammonis as afterwards found. Bearing in view that the great pyramidal cells of the hippocampus represent "integrating stations" for the perception of smell, the author made a careful test of the perception of odours in a number of epileptics without being able to find that the sense was injured either on the one side or the other. The commissure, as described by Edinger as connecting the two cornua through the psalterium leading to the fornix, was found in Bratz's dissections to be intact.

W. W. IRELAND.

Paralysis Agitans and Sarcoma. (*Amer. Journ. Med. Sc.*, Nov., 1899.)
Dana, C. H.

A case of paralysis agitans, with comments on the pathology of the disease, and a histological examination of the condition of the nerves, spinal cord, and brain, and of muscle-fibres (illustrated). The sarcoma referred to consists of multiple malignant warts of the skin of the lower extremities.

Acute Ascending Anterior Myelitis (Landry's Paralysis). (*Arch. de Neur.*, Nov., 1899.) Courmont and Bonne.

They record a case:—G. L.—, æt. 58 years, suffering from rapid acute paralysis of the lower limbs extending to the upper limbs, to the diaphragm, larynx, and tongue, with affection of sphincters, loss of knee-jerks, and no sensory troubles, ending fatally after four days. At the autopsy was found distension of spinal meninges with fluid; microscopically the cells of the anterior cornua were markedly affected in the lumbar enlargement of the cord, in the cervical enlargement (less), and there were decided alterations in the nuclei of the hypoglossal and vagus nerves.

A microbe related by certain characteristics to the *pneumococcus*, and by others to the *streptococcus pyogenes*, was found in the meningeal fluid (hence the infectious origin of the disease). No lesions of peripheral nerves were found.

The case seems to have been one of pure motor paralysis due exclusively to lesions of cells, the centre of the peripheral motor neurons.

Incidentally, the authors discuss the artificial alterations in cells by fixing agents (alcohol, etc.) in mounting, and the significance of Landry's syndroma (varying causation, etc.). H. J. MACEVOY.

Cases of Hemiatrophy of the Tongue [Fälle von Hemiatrophia linguæ].
(*Neur. Cbl.*, No. 18, 1899.) Wiersma.

In this paper, Dr. Wiersma describes seven cases. He illustrates how irregular atrophy of the tongue in its affected half, paralysis of one

vocal cord with one half of the soft palate, and the absence of the reaction of degeneration, indicate a bulbar origin; while uniform atrophy of the tongue, no paralysis of the vocal cord or soft palate, and the presence of the reaction of degeneration indicate a peripheral origin.

W. F. PENFOLD.

The Pathology of Paralysis Agitans. (Amer. Journ. Med. Sc., Dec., 1899.) Gordinier, H. C.

A description of the pathological appearances found in a case of paralysis agitans as—firstly, endarteritis and periarteritis with patches of perivascular sclerosis; secondly, degeneration and atrophy of certain nerve-cells; thirdly, a general increase of the neuroglia. These changes chiefly affected the cord. From comparing these with those already recorded the writer concludes they are characteristic of the disease.

W. F. PENFOLD.

A Case of Diffuse Sarcoma of the Whole of the Pia Mater of the Brain and Cord [Ein Fall von diffuser Sarkomatose der gesamten Pia Mater des Gehirns und Rückenmarks]. (Monats. f. Psych. u. Neur., Nov., 1899.) Schroder.

In this case, Dr. Schroder observed clinically head pain, advancing blindness and deafness, tumbling to the left, ataxia, loss of left patellar jerk, hallucinations of touch, difficulty in swallowing, and paralysis of the left arm. He found post mortem sarcomatous infiltration of the pia of the brain and cord, which was most marked over right hemisphere. The infiltration was mainly round the vessels, and dipped down between the nerve elements.

W. F. PENFOLD.

Pineal Gland: its Normal Structure; some General Remarks on its Pathology; a Case of Syphilitic Enlargement. (Trans. Path. Soc., 1899.) Lord, J. R.

This paper forms one of a series of contributions on abnormalities of the pineal body which were brought forward at the Society. These included cases of tumour by J. W. P. Lawrence and C. Ogle, cystic enlargement by A. E. Garrod and A. E. Russell, and "Notes of two cases of dilatation of the central cavity or ventricle of the pineal gland" by A. W. Campbell. Of these C. Ogle's paper is the more important, and enters into the literature of the subject.

Cerebellar Tumour, considered with Reference to its Localisation. (Scot. Med. Surg. Journ., September, 1899.) Bruce, A.

A fibro-sarcoma, accurately diagnosed, from the symptoms produced and verified after death, to have origin in the flocculus, to involve the glosso-pharyngeal and auditory nerves, to compress the facial and fifth nerves and the anterior pyramid, and to exert pressure on the nucleus of Deiters, the nucleus of the vestibular nerve and tract. Illustrated by photographs of the growth, and a diagram of the tracts involved. The case is a sequel to experimental evidence published by the author in *Brit. Med. Journ.*, May 6th, 1899.

Tumour of the Pituitary Body. (*Journ. Nerv. Ment. Dis.*, August, 1899.) *Walton, G. L., and Cheney.*

An "endothelioma" (? adenoma) of the pituitary with the symptoms produced. The patient had signs indicating early acromegaly.

Tumour of the Oblongata presenting Ataxia and Astereognosis as the most Prominent Early Symptoms. (*Journ. Nerv. Ment. Dis.*, August, 1899.) *Dercum, F. X.*

The tumour sprang from the occipital bone, and exerted pressure on the pons, medulla, and cerebellar lobe. The cause of loss of muscular sense and of the sense of position of the limb is discussed, and the view expressed that these are due to pressure on the direct cerebellar tract. The paper is illustrated, and references are given to other cases.

Acute Anterior Polio-myelitis. (*Clin. Rev.*, October, 1899.)

Lyman, H. M.

In a lecture at the Rush Medical College, Dr. Lyman develops the clinical and pathological aspects of this disease. Pathologically he insists upon its infectious nature, though the microbe is still to find; but whilst dwelling on the inflammatory nature of the affection, and the changes which the cells and their prolongations undergo, he does not mention the important part in the inflammation which is assigned to the arteries supplying the anterior cornua, and upon which recent observers insist. The statement is, however, very lucid, and well worth reading.

HARRINGTON SAINSBURY.

Jores' Formalin Method of Mounting. (*Scot. Med. Surg. Journ.*, March, 1899.) *Shennan, T.*

A short practical paper embodying writer's experience with Jores' method. His best results were obtained by a more prolonged fixation with the formalin, and an alteration in the final mounting fluid in the direction of greater dilution of the glycerine, and the addition of formalin as an antiseptic.

J. R. LORD.

Platinum Method for Central Nervous System. (*Scot. Med. Surg. Journ.*, Jan., 1899.) *Ford Robertson, W.*

In this new method the solution, provisionally recommended, is made by the addition of a 5 per cent. solution of formalin to a 1 per cent. solution of platinum bichloride. The tissue remains in this solution until thoroughly blackened, usually taking from three to four months. Sections are cut with the aid of dextrine and a freezing microtome, and are dehydrated, cleared, and mounted in balsam. This is a mere rough outline of the process. The facts revealed promise to be of great importance. So far it has shown (1) the presence of fibres in the wall of the cerebral and medullary vessels; (2) the primitive fibrils of the protoplasm of the nerve-cell; (3) the presence of certain granules in the nucleus of the nerve-cell; and (4) the existence of special cell elements in the brain.

J. R. LORD.

3. Physiological Psychology.

The Equipment of a Psychological Laboratory. (*Mind*, July, 1898.)
Titchener.

Prof. Titchener contributes a valuable article on this subject, founded on his own experience at Cornell, which will be useful even to those who contemplate the establishment of much more modest laboratories. The laboratory at Cornell was opened in 1891, and includes ten rooms, to which it is expected that two more will shortly be added. These rooms comprise optics room, acoustics room, haptics room, dark room, reaction room, taste and smell room, physiological process (pulse, respiration, etc.) room, etc., together with private rooms for directors and assistants. The instruments fall into four groups: (1) apparatus needed for research in experimental psychology, (2) for drill work in experimental psychology, (3) for class experiments in experimental psychology, (4) for the study of individual psychology. The last group is probably that of most interest outside university work. It requires apparatus which should be strong, cheap, and simple. Many of the instruments devised by Galton would be useful if they were less expensive. On the whole Prof. Titchener recommends as the best the instruments devised by Prof. Jastrow (and to which attention was called in these Retrospects some years ago). A full set of such instruments would include the ordinary sense tests (keenness of vision, audition, colour-blindness, æsthesiometric discrimination, power of smell, etc.), instruments for taking simple and associative reaction-times, tests of muscular strength, steadiness, fatigue, etc., as well as tests of "higher" mental processes: quickness of apprehension, ingenuity, accuracy, memory, co-ordination, memory-type, control of attention, temperament, etc. A laboratory can be equipped at any cost from £10 upwards. The expenditure upon the equipment and maintenance of Cornell Laboratory since its inception has been over £1000; but, on the other hand, Titchener quotes from Sanford "a liminal list of apparatus—the amount that is just noticeably better than nothing," costing approximately only £5. The paper is full of useful practical suggestions. HAVELOCK ELLIS.

Right-sidedness and Left-sidedness (L'Homme Droit et l'Homme Gauche).
(*Rev. Phil.*, February, March, April, 1899.) Van Biervliet, J.

Prof. J. van Biervliet, of Ghent, has lately completed a very elaborate study of this question in its widest bearings. By bringing together the observations of others and contributing many important new observations of his own he seems to have shown that right-sidedness or left-sidedness, anatomical and physiological, extends to the whole of the organism, and that everyone belongs either to one or the other class.

That strict symmetry does not exist is a well-known fact, known even to the ancients, for (as Hasse first showed) the head of the Venus of Milo is anatomically correct by being slightly larger on the left side, while her nasal septum also deviates slightly to the left. We have to admit *a priori* that the vascular irrigation of the left hemisphere is more abundant than the right, since the left carotid is larger than the right and is also less curved, so that the left blood-stream is both larger and

quicker. This fact will not, however, account for all the phenomena. In the right-sided, for instance, Biervliet has found the right nostril is wider, and in the left-sided the left nostril.

This asymmetry extends to the whole osseous and muscular system. The results of the measurements here brought together show that, while in the right-sided the head is more developed on the left side, in the left-sided it is more developed on the right side. The bones of the right arm in the right-sided are superior in length and in diameter, in volume and in weight, over the bones of the left arm. In women this predominance of the right arm appears to be less frequent, or else the asymmetry less pronounced. With regard to the leg it is not yet possible to speak with certainty, and Biervliet does not consider that one can yet accept the opinion of those who assert that in the lower limbs the asymmetry is crossed, the left leg becoming predominant. Observations on the muscles agree with those on the bones. On the living subject, also, Biervliet's own observations, conducted with great care, have never resulted in the discovery of a symmetrical person, either man or woman. As a further contribution to the subject he has consulted shoe-makers, tailors, hatters, glovers, etc. The evidence thus obtained, on the whole, confirmed that furnished by anthropological methods. It was impossible to find a perfectly symmetrical head, and one hatter stated that the proportion of left-sided heads among his customers was almost 2 per cent. Two tailors, one of whom had himself taken 40,000 measurements, stated that symmetry or ambidexterity never exists, one side of the body being always stronger than the other; in 98 per cent. cases the right shoulder is lower than the left by one or two centimetres (more still in those who use the right arm much), and the sleeve at the shoulder is larger on the right side. The right leg, the tailors state (in agreement with most anthropologists), is shorter than the left, but the right hip is more developed than the left. In the majority of men (93 per cent.) the fork of the trousers is in contact with the right thigh. Ladies' tailors and corset-makers confirmed their male colleagues; the great majority of women are right-sided; the right arm is larger and longer, the right hip is more developed, the breast is larger on the right side; the proportion of left-sided persons was not found to be greater among women than among men. The shoe-makers also stated that in from 90 to 95 per cent. cases the right foot is broader, though not longer, than the left, in both sexes; the customer instinctively puts out his best-developed foot for measurement. The glovers likewise declared that in 97 per cent. cases the right hand is broader but not longer than the left, the difference first becoming notable at the age of fourteen or fifteen, and being less marked in women.

It is when we come to the asymmetry of the nervous system that we reach the most original part of Biervliet's study. He examined about 200 subjects (chiefly students) by carefully contrived methods. The hands were tested in estimating two unequal weights; there was found to be great individual variation in delicacy of sensation, but a constant relation was found between the two hands; the skill of the right hand was superior to that of the left by one ninth. The force of the pre-

dominant side is always that of the other side $\pm \frac{1}{5}$. A similar relation was found with the special organs of sense. As regards hearing, for instance, when abnormal subjects were eliminated, this relation held good when the subjects were tested with an apparatus specially made for this purpose. Great individual variations were found in the estimation of differences of intensity, but not one was found who, being right-handed, was left-sided in delicacy of hearing. As regards sight, also, when the abnormal were eliminated and the subjects examined by a special form of the Snellen test, the power of the right eye in the right-sided (and of the left eye in the left-sided) was found to be about one ninth greater than that of the other eye. It was the same with tactile delicacy; if in the right-sided tactile sensibility is represented on the right side by 10, on the left side it is equal to 9.06. These results are the outcome of about 17,000 series of experiments on 200 subjects, and not in any case was any crossed asymmetry observed; the right-sided were always right-sided, the left-sided always left-sided, throughout. Biervliet does not, therefore, believe in the existence of really ambidextrous persons.

Another point brought out was that, when blindfolded and told to walk in a straight line, right-sided persons deviate to the right and left-sided to the left. This point is discussed at some length, with reference to the circular movements of animals and the observations of Guldberg.

With regard to the origin of normal asymmetry, Biervliet is unable to accept the theory that would account for it as a result of exercise; such a theory assumes that at the outset perfectly symmetrical human types exist. He is inclined to regard the tendency as inborn. He suggests that the structure of the pelvis may possibly influence the position of the fœtus, and in abnormal cases favours the development of the left side. It is in the development of the vascular system that he would find the primary cause of right-sidedness and left-sidedness.

HAVELOCK ELLIS.

Researches in Cross-education. (Studies from the Yale Psych. Lab., 1898). Davis, W. W.

The fact that the effects of practice on one side of the body are in part transferred to the other side, was first recorded by Weber in 1858, and confirmed by Fechner. It has lately been studied in detail at the Yale Laboratory by Mr. Walter W. Davis. The investigation consisted largely of experiments in rapidity of tapping on a telegraph key, the movements only involving a small amount of strength. As the weight of the finger was sufficient to press down the button of the key, the test was one of motor ability, with the factor of muscular power almost eliminated. The toes as well as the fingers were experimented on. The effects of practice were found not to be uniform, not only different individuals, but different members of the same individual, showing great variations. Still certain fundamental results appeared, and with few exceptions a marked increase in rapidity of tapping was reached, this increase manifesting itself not only in the member exercised, but in the other members as well. Age was found to be an important factor, the effects appearing more slowly at higher ages. The independent use of the great toe possessed by a Japanese

student served incidentally to emphasise the fact, already known, that civilised feet, as a result of tight and badly made shoes, are losing their natural powers. Another series of experiments showed that exercise producing a gain in growth of one arm caused a similar, though smaller, gain in the other arm. "Here it would seem," remarks the author, "is a provision by nature to prevent a one-sided development. If the right side of the body received all the benefit of its excess of exercise over the left, it would tend to outgrow it in much greater proportion than is actually the case." A series of experiments with the dynamometer showed similarly an increase of strength on the opposite side. The general conclusions were that the effects of exercise may be transferred in a greater or less degree from the parts practised to other parts of the body. This transference is greatest to symmetrical and closely related parts. There is thus a close connection between different parts of the muscular system, through nervous channels, the connection being closer between parts related in function or in position. Will-power and attention are educated by physical training, and when developed by any special act they are developed for all other acts. The most important effects of muscular practice are thus more central than peripheral, and the chief central effect is the education of the motor centres, the development of attention and will-power being secondary.

HAVELOCK ELLIS.

A Study of the Relations between certain Organic Processes and Consciousness. (*Psych. Rev.*, January, 1899). Angell, J. R., and Thompson, Helen B.

Since Mosso, Lehmann, and Féré first investigated the relationship of organic processes to psychic processes, there has been a tendency to believe that agreeable sensations of emotional tone are connected with dilatation of the peripheral blood-vessels, and disagreeable sensations with constriction. Some of the more recent investigations tend to throw doubt on the conclusion, and reference may be specially made to a series of researches recorded in this paper. The experiments consist of two very complete series of tests carried out on two subjects with Hallion and Comte's air plethysmograph for the capillary pulse tracings, and a modified form of Bert's respirator for recording the breathing curves. Eight plates showing the curves accompany the paper. These curves show no evidence of any marked and constant correspondence of agreeable states with one set of physiological processes and disagreeable states with an antithetical set. None of the various factors involved—vaso-motor level, rate and amplitude of pulse curve, position and emphasis of dicrotic notch, rate and amplitude of breathing,—change uniformly in one direction for agreeable experiences, and in the opposite direction for disagreeable experiences. Almost all the emotional experiences, pleasant or unpleasant, produced vaso-constriction, a result which the writers hold to agree with what the work of Mosso and Binet would lead us to expect. The search for uniformity in regard to the action of sensory stimuli proved as fruitless as in the case of emotional states. The great majority of the sensory stimuli produced vaso-constriction, and the few cases of pronounced vaso-

dilatation do not correspond to distinctly pleasant stimuli. The most pleasurable stimulus, harmony, caused constriction, and unpleasant odours, like camphor and capsicum, sometimes caused dilatation.

Having regard to the very various circumstances in which the organism is called upon to respond to changing stimulation, the authors are inclined to think that it is the *regularity* rather than the presence or absence of one feature in the organic process, which is the most characteristic expression of the total condition. They are led to believe that the changes in circulation and respiration which accompany alterations of consciousness can be formulated in terms of attention, as follows: when the attention process runs smoothly and uninterruptedly the bodily activities (*i. e.* of respiration and circulation) progress with rhythmic regularity. Relatively tense, strained attention is generally characterised by more vigorous bodily movements than in low level, gentle, and relatively relaxed attention, but both agree, so long as their progress is free and unimpeded, in relative regularity of bodily functions. Breaks, shocks, and mal-coördinations of attention are accompanied by sudden spasmodic changes and irregularities in bodily processes, the amount and evidence of such changes being roughly proportional to the intensity of the experience. No reference is made by these writers to the bearing of these researches on the physiological theory of emotion.

HAVELOCK ELLIS.

A Contribution towards an Improvement in Psychological Method.
(*Mind*, 1898.) McDougall, W.

In a recent series of articles, Mr. W. McDougall presents an able and noteworthy attempt to formulate the problem of consciousness in accordance with modern scientific conceptions. In doing this he makes considerable use of various recent views concerning the function of neurons, and also Stout's doctrine of apperception translated into terms of neurosis. The nervous system, he argues, in agreement with many previous writers, consists of superposed systems of reflex paths, together with a great mass of new neurons at the top of the system, not yet, or only partially organised into reflex paths. The organisation of these neurons into complex groupings constitutes experience, and is accompanied by consciousness. The young animal has great capacity for experience, and a varied and intense consciousness; in the older animal, more ruled by habit, there is little experience. The essential condition of the occurrence of consciousness is the making of new nerve-paths, the establishment of new functional connections between neurons. It is a logical inference from this, he proceeds, that the adaptation of nervous reaction to environment in the part has been accompanied by consciousness, even to some extent when the instincts of the lower animals were organised, and further, that if an animal becomes perfectly adapted to its environment, all the parts of its nervous system would become mapped into well-organised paths of automatic reaction, with absence of consciousness. He thinks it probable that this state has been reached in the Brachiopod *zingula*, which has remained unchanged since pre-Cambrian times. Man's environment, however, is so complex that the author does not think he

will ever thus lose consciousness and enter Nirvana. On the contrary, the multiplication of neurons still continues to be effected at a relatively more rapid rate than their organisation into fixed paths, with ever-increasing possibilities of the establishment of new relations among nerve-paths, and a more intense and varied consciousness.

The author protests against those who are always insisting that an impassable gulf lies between "mind" and "matter," but who do not seem to be aware that an equally impassable gulf lies between any two forms of energy. He holds that "unless we assume that the mind either destroys or creates energy, we must believe that consciousness is subject to the law of the transformation and the conservation of energy; we must, in fact, believe that it is a form of energy, and that it has its heat equivalent, that may some day be determined with more or less accuracy." As he sums up, "consciousness is the force that makes mind, that makes of neural processes experiences, that consolidates new reactions and thoughts into habitual mental processes, and habits into instincts and reflex actions. We act so and so, not because we are conscious now, but because we have been conscious in the past."

In this connection reference may be made to a highly competent and valuable "Critical Review of the Data and General Methods and Deductions of Modern Neurology" (*Journal of Comparative Neurology*, 1898), by Dr. Adolf Meyer, of the Worcester Insane Hospital, Massachusetts. It is too full to be summarised, but may be commended to all who are interested in the bearings of neurology on psychiatry. The author points out how the search for centres is giving place to the search for mechanisms, and at the same time protests against what he considers to be the premature theoretical definiteness in physiological and pathological processes asserted by Ramon y Cajal, Andriezen, etc.

HAVELOCK ELLIS.

The Psycho-motor Problem. (*Amer. Journ. Ins.*, 1897, vol. liv, p. 59.)
Nichols, H.

He studies the relation of mental processes to muscular activity. As regards "reflex action," he traces its development from Descartes in 1646 to modern times, when it is conventionally used to cover all conversion of afferent to efferent impulses. Similarly with "instinctive conduct," which covers reflex conduct due to inherited tendency. Finally, he discusses at some length those processes which are commonly classified under volition and will. In reality all these processes are the same, only of greater complexity. "Almost the bulk of the transactions of life fall under the same reflex categories with pulling one's hand out of the fire, etc." The occurrence of the conscious deliberate "I will do that—Fiat," is an infrequent occurrence, and is due to the formation of abstract concepts of "our bodily self doing things," which have definite neural bases, which in turn have strongly developed associational strength, and which, if not checked, become actual deeds,—all in strict accordance with the laws of reflex psycho-motor co-ordination.

J. R. LORD.

The Scientific Border-line between Sanity and Insanity. (*Amer. Journ. Ins.*, 1898, vol. lv, p. 219.) Runge, E. C.

The subject is treated in a very scientific fashion. He accepts as an indisputable fact the existence of some cortical areas as centres of psychic function. Insanity is the symptom of any pathological process implicating these centres. From both clinical and pathological stand-points we have no facts to justify us in separating the acute delirium of fevers or acute alcoholism from insanity. In both there is irresponsibility, and both require treatment along rational lines. The question is only one of degree. The real objection is contained in the word "insanity" itself, which word is objectionable and unscientific, and its disappearance would be hailed with genuine satisfaction.

J. R. LORD.

Art and Literature in the Mentally Abnormal. (*Amer. Journ. Ins.*, 1899, vol. lv, p. 385.) Hrdlecka, A.

He finds that among the insane there is seldom any manifestation of any high talent, and usually the faculties are acquired when sane. His paper resolves itself into the study of the effects of abnormal mental states on previously acquired artistic tastes. As regards education in the insane, he has collected statistics showing its degree in the various mental disorders, which point out that, on the whole, education is hostile to the development of terminal dementia, and is favourable to paranoia and chronic mania in men, and acute melancholia and paranoia in women. He found artistic and literary tastes most prevalent in paranoics and chronic manias, and least in parietic and terminal dementes. The melancholic may indulge in poetry, but any artistic production of the acute maniac is confused and shapeless. As a rule the insane indulge in drawing and music, and occasionally in decorative art or construction. The drawings are commonly symbolic or allegorical in nature. Supernatural figures, mysterious objects, secret signs and symbols, often occur. Religious objects are also frequent, and occasionally indecent drawings are produced, the latter mostly by epileptics. Execution is often most elaborate, but commonly lacks in detail and fine points. Painting is seldom done, more usually crayon, coloured pencil, and pen-and-ink sketches. Female patients sometimes produce symbolic embroidery. A curious feature is that some insane never finish their work. He continues the subject in much more detail, taking up music, dancing, literature, the theatrical art, etc., *seriatim*, finishing in all an interesting and instructive paper.

J. R. LORD.

Brain Anatomy and Psychology. (*Amer. Journ. Ins.*, 1899, vol. lv, p. 449.) Paton, S.

He reviews some of the influences which have aided psychology in passing from its metaphysical to its scientific periods. He greets with delight the advent of the "new psychology." He points out that the attempt to study mental disease from the clinical side has failed, equally with the effort of the introspective psychologist to establish his system for the study of the mind. He shows that the most rational ideas depend upon a knowledge of cerebral structure, and the correlation of the latter with function.

J. R. LORD.

Experimental Psychology. (*Brit. Med. Journ.*, May 13th—20th, 1899.)

In this occasional the subject is treated from a general standpoint, forming an excellent *résumé*, the perusal of which would be helpful to the beginner.

J. R. LORD.

Motor Mentalisation. (*Scot. Med. Surg. Journ.*, April, 1899.)

Bruce, L. C.

A short study of the physiological association of motor and mental activity with clinical deductions.

It traces their connections by examining cerebral activity in sleep and during voluntary acts, attention, will power, and speech. Two cases of melancholia are quoted which exemplify motor signs retarding return to the physiological, and treatment is indicated.

G. A. WELSH.

Suggestion and Anæsthesia in Dental Operations [*Suggestion et anæsthésie dans les extractions dentaires*]. (*Rev. de l'Hyp.*, Dec., 1899.)
Bloch, A.

The writer points to the great part which apprehension plays in the sum total of the sufferings in the dental chair. But if it be possible to suffer by anticipation, it is likewise possible to suffer in the retrospect, and it is precisely in these preceding and succeeding stages that the field for suggestion opens out. The sense of reliance upon the operator, the desire that he should assure us of the complete painlessness of the operation he is about to perform, the willingness to accept what we suspect to be a lie,—these states constitute a frame of mind eminently suited for hypnotic suggestion. It is a great deal to believe that we shall not suffer, and to learn that we have not suffered; and, as the writer insists, the same solution strength of cocaine will give different results according to the power of make-believe of the operator.

HARRINGTON SAINSBURY.

On the Mental States involved in the Post-hypnotic Appreciation of Time [*Les états mentaux impliqués dans l'appréciation post-hypnotique du temps*]. (*Rev. de l'Hyp.*, Nov. and Dec., 1899.) Milne-Bramwell.

This very intricate subject is discussed by Dr. J. Milne-Bramwell at some length. The phenomenon concerned is the power of impressing upon a hypnotised subject the performance of a given act after the lapse of a given time. The performance suggests a post-hypnotic memory, but inasmuch as the hypnotic memory ceases in the waking state the wonder is how the impression carries on from the one state into the other until its fulfilment, and the more so since this fulfilment may take place either in the waking or the hypnotic state or during ordinary sleep. Dr. Bramwell cites a number of experiments of his own, in which the performance of the act was commanded after some thousand odd minutes which he, as the suggestor, carefully avoided calculating out in days and hours at the time of the suggestion. The performance took place duly at the appointed time, and strangely enough this occurred, though the subject at the time of the command when questioned as to date of the imposed command gave erroneous answers, miscalculating the time. The views on this subject of

Bernheim, Beaunis, Delbœuf, Gurney, Janet, and of the author are given, but they do not pierce the mystery.

HARRINGTON SAINSBURY.

The Psychology of Hierology [*Les lois psychologiques de l'hierogénie*]. (Rev. de l'*Hyp.*, Dec., 1899.) Binet-Sanglé, C.

We are promised the study in succession of the devotional type and its variants, also of religious suggestion, religious contagion, and the developments of sects. Dr. Charles Binet-Sanglé selects the Port Royalists as examples of the devotional type, and finds in them unhealthy, sickly beings with neurotic tendencies, "leading an abnormal life because themselves abnormal." The description does not quite seem to fit the stature of the whole man. Blaise Pascal and this morbid anatomy of the saints strike us occasionally as rather inside out.

HARRINGTON SAINSBURY.

False Evidence by Suggestion [*Les faux témoignages suggérés*]. (Rev. de l'*Hyp.*, Jan., 1900.) Joire, P.

He refers to this important subject under three headings: 1st, the intentional suggestion of false evidence to the witness, who has been hypnotised for the purpose; 2nd, false evidence through *auto*-suggestion, the witness belonging to the hysterical class; 3rd, the unintentional suggestion of false evidence to, and the unwitting reception of the suggestion by, the witness. The first category is of minor importance because, though possible, it is unlikely by reason of its complication; the second is of well-recognised importance; but the third, which may be styled suggestion by the *leading question*, is less recognised, yet is of great importance, more particularly in the legal examination of children and of the impressionable. It behoves the doctor, as well as the lawyer, to have it prominently in mind.

HARRINGTON SAINSBURY.

Binocular Illusions [*Les illusions binoculaires*]. (Rev. Scient., Aug., Sept., 1899.) Dissard, M. A.

The author here analyses the phenomena of neutralisation in monocular vision and in diplopia, the neutralisation of phosphenes, the phenomena of total neutralisation of the excitation of one eye (*e. g.* in microscopy), etc.

As a result of his investigations he concludes that we may conceive the unification of the perceptions of each eye in binocular vision occurring in the following ways:

1. The perception of points of the common binocular field situated upon the horopter surface takes place by the fusion of the corresponding excitations of the two retinae.

2. The perception of points situated beyond the horopter takes place by the neutralisation of the decussated excitations and the juxtaposition of the direct excitations which are brought together in consciousness along the antero-posterior diameter of the eye, or "line of juxtaposition."

3. The perception of points situated in front of the horopter takes place by the neutralisation of the direct excitations and the juxtaposition of the decussated excitations.

4. Parts which are not common, seen monocularly, harmonise with binocular perception all the more easily that they are more distant on account of the predominance in the vision of the eye of the corresponding side.

H. J. MACEVOY.

The Neuron and Cellular Memory [*Le neurone et mémoire cellulaire*].
(*Rev. Scient.*, September 9th, 1899.) Renaut, J.

This is the subject of an eloquent introductory address given at the University of Lyons. The morphology of the neuron, "of which many people speak learnedly, without taking the necessary step of carefully studying it" is described, taken with its pole of reception and its pole of application (the extremity of the axon), and compared to a tree, such as the palm, the central nervous system as a whole being a forest in which the trees, shrubs, etc., intertwine their aerial and subterranean offshoots, without there being true continuity.

Concerning the fascinating theory of nervous amoeboidism to explain the articulation of the neurons during the passage of the nervous wave, Renaut recalls that it was in vainly searching for the pseudopodic movements in living nerve-cells that he found something else—the beaded appearance in the active branches of the neurons. With the aid of the admirable method of the injection of methyl blue in the blood of a living animal, the extremities of the processes of the neurons are found to be free, but at their extremity they are kept in a fixed spot by *adhesive contacts* (like the branches of ivy to a wall); and secondly, at the level of their active arborisations, a certain number of branches cease to be quite uniform and smooth like threads, and become beaded (hence Stefanowska's subsequent term "pyriform appendices"). Renaut thereupon bases an hypothesis that one may consider the variations in the beaded disposition, which are innumerable, as corresponding to the conditions, equally variable, of an accommodation of the receptive nervous filaments to the passage of the wave projected upon them by the inducing filaments (an analogy with the consonance of two violins). Concerning the memory of cells, the author believes that one of the most remarkable properties of the neuron is the aptitude which it seems to possess of superposing in itself distinct memorial impressions. He argues also in favour of the presence of recognition as an attribute of the neuron. In conclusion he says, "I am led to believe that of all hereditary qualities, cellular memory, of which so little has been heard hitherto in biology, has nevertheless played the most important part in organic (and especially human) differentiations."

H. J. MACEVOY.

4. *Ætiology of Insanity.*

Heredity and Insanity. (*Amer. Journ. Ins.*, 1897, vol. liv, p. 227.)
Stearns, H. P.

He takes exception to the teachings of Du Bois Raymond and Weismann regarding the transmission of acquired characters. According to Weismann unicellular organisms are propagated by a division

into two, each part inheriting perfectly the characters of its parent. With regard to multicellular organisms, during the process of evolution there has occurred a division of the cell into germ cell and somatic cell. The former cannot be influenced by the changes in the latter, which are due to decay or hyper-development, because the ovaries are so thoroughly isolated during both embryonic and mature life. If influenced at all, the effect must be very slight. In other words, the production of apparent acquired characters cannot, or only in a slight degree, be transmitted to a future generation. Dr. Stearns makes a grave assault on this doctrine; he points out the undoubted influence of heredity in the production of insanity. He claims that the ovaries depend absolutely upon their connection with the brain in discharging their function.

Many arguments are forthcoming; and from many considerations, anatomical and otherwise, it would appear that the germ plasm, containing elements which constitute the representatives of future organisms, must be influenced by the continuous stream of nerve stimuli radiating from the brain, and thereby by the characters of the latter.

J. R. I.ORD.

Relations between Neuralgia and Transitory Psychoses. (Alien. and Neurol., July, 1899.) V. Kraft-Ebbing.

Professor v. Kraft-Ebbing observes that neuralgia may simply co-exist with mental disturbance, or it may be related to it ætiologically. Pain as a cause may act psychically, producing a state of acute excitement or delirium; or it may act organically, *i. e.* by strong centripetal stimulation of the cortex, which results in a state of morbid excitability characterised by hallucinations, incoherence, and amnesia. Illustrative cases are given.

W. F. PENFOLD.

5. Clinical Neurology and Psychiatry.

The Clinical Position of Melancholia [Die klinische Stellung der Melancholie]. (Monats. f. Psych. u. Neur., November, 1899.) Kraepelin.

Professor Kraepelin first points out how the term melancholia has become narrowed in its use by the exclusion of certain forms of depression. He believes ordinary melancholia is distinguishable from the depression of cyclical insanity. In his opinion, if a melancholia show great intellectual and volitional circumscription and no great affective disturbance, and occur before the thirtieth year, it is probably a cyclical melancholia. He believes that melancholia which is going to end in dementia præcox is more or less characteristic. Professor Kraepelin closes his paper lamenting the imperfect methods of psychical research at our disposal.

W. F. PENFOLD.

Recurrent Insanity: an Analysis of Relapsed Cases. (Glas. Med. Journ., December, 1899.) Kerr, H.

A medical, psychological, and statistical inquiry into the causes, nature, symptoms, and results of "recurrent cases" of insanity.

The statistics are compiled from 450 cases, and deal with—1st, the percentage of recoveries in such cases as compared with other curable cases of insanity; 2nd, the various factors in causation—heredity, epoch of life, extrinsic causes; 3rd, the termination.

The medical and psychological examination discusses—1st, the nature of the heredity; 2nd, bearings of predisposing and exciting causes; 3rd, the mental features; 4th, the mode of termination.

In conclusion, the opinions formed are tabulated, and the material relations of medical and statistical facts formulated. G. A. WELSH.

Two Cases of Ephemeral Mania. (*Rpt. Ann. Meet. Queb. Med.-Psych. Soc., October, 1899.*) By Dr. Burgess.

A record of two interesting cases of severe acute mania, lasting in one case less than forty-eight hours, and in the other twenty-two hours. In neither was there any factor like epilepsy, alcohol, or parturition. In the first case the attack began with a sudden fear while in a railway restaurant. The other case had insane heredity, and developed during the attack, visual and auditory hallucinations, and apparently was the result of fright. No evil results followed in either case, and both were treated by a single dose of hyoscine hypobromate hypodermically.

J. R. LORD.

Two Cases of Auditory Peripheral Hallucinations. (*Rept. Ann. Meet. Queb. Med.-Psych. Soc., October, 1899.*) By Dr. Chagnon.

The special point about these cases was that it was absolutely necessary for them to undergo auditory or tactile impressions to experience auditory hallucinations. Both apparently had abnormal mental histories, the one having marked loss of will power (aboulia), the other showing but slight intelligence. Any sound, such as that produced by the patient or some other person walking, the pouring of water in a glass, or the rumpling of paper, etc., awoke voices.

J. R. LORD.

Acute Delirious Mania. (*Journ. Nerv. Ment. Dis., Dec., 1899.*)
Mann, F. J.

The subject is approached from a purely clinical aspect. It contains a full exposition of its claim to be recognised as a specific entity, of its origin, course, symptoms, termination, and treatment.

Pathology deals chiefly with its origin, describing its bacteriological connections, but there is a short paragraph on the actual changes produced in the nervous system.

The onset, course, and symptoms are illustrated by cases, and allied conditions from which it must be differentiated are described, as are also useful points to aid a prognosis. The author gives statistics of his experience regarding the termination.

General lines of treatment are indicated.

G. A. WELSH.

States of Over-excitability, Hypersensitiveness, and Mental Explosiveness in Children, and their Treatment by the Bromides. (*Scot. Med. Surg. J., June, 1899.*) Clouston, T. S.

A clinical description of "Nervous States" which are liable to occur in children with a neurotic predisposition during the earlier stages of

mental development, with special reference to the action of bromides in reducing the explosive tendency.

Pathology.—Locus: Cortex cerebri. Condition: (1) an explosive tendency in various cells; (2) a diminution of the influence of inhibitory cells. Consolidation of centres with development of connecting strands (Flechsig) is discussed.

Clinical.—The common feature of the various states is exaggerated action; the symptoms vary with the function of the cells affected. Treatment: dose and administration of bromides, auxiliary medical, dietetic, and motor régime.

G. A. WELSH.

A Case of Epilepsy coming on after Ovariectomy [Epilepsie convulsive survenue après une ovariectomie]. (Rev. de Psych., Sept., 1899.)
Marchand, L.

A woman, æt. 43 years, was admitted into Villejuif asylum suffering from epilepsy with melancholia.

The history was that, having previously had good health and of good family history (except that her mother had paraplegia), she had double ovariectomy performed at the age of twenty-two years for cysts. During the months following, she felt flushes and heats in the face. Two months after the operation she had her first epileptic fit, and has suffered from them ever since. At first, the fits seemed to be monthly and periodical. At the present time, she has about four per month; they are typical of epilepsy, and she once burned herself during an attack (scars seen). Occasionally she has trembling of the head and a hot feeling in the face before the fit.

H. J. MACEVOY.

Atheromatous or "Arthritic" Pseudo-General Paralysis [La pseudo-paralysie générale arthritique]. (Rev. de Psych., Dec., 1899.)
Klippel.

While relying especially on the accompanying symptoms referred to other organs (*i. e.* outside the brain) in differentiating the atheromatous form of pseudo-general paralysis from true general paralysis, the author draws attention to the differences in the signs and evolution of the two diseases, which often, though not always, exist (cf. more frequent association of early slight hemiplegia; less marked delusions due to more marked dementia; absence of infection; infrequency of febrile attacks; closer relation to senile dementia; less marked trophic affections in the terminal period; death more frequently the result of arterial lesion). The pathological lesions in the brain are quite different.

The notes of a typical case of atheromatous pseudo-general paralysis recently observed are given. A shoemaker, æt. 43, admitted under Klippel in April, 1899. At age of 35: syphilis; in 1895: slight temporary R. hemiplegia; in June, 1898: slight L. hemiplegia; progressive loss of memory and general enfeeblement; affection of speech characteristic of general paralysis; slightly unequal pupils; dementia. The associated symptoms were: signs of aortic atheroma and aortic regurgitation. Atheroma of peripheral arteries. Signs of interstitial nephritis (albumen, etc.).

Death was due to cerebral hæmorrhage on Oct. 13th, 1899, and the autopsy revealed cerebral hæmorrhage from atheroma of cerebral

arteries and of pia mater. No lesion or inflammatory encephalitis. Degeneration of arterioles and nervous elements without signs of diapedesis. Negative bacteriological examination.

H. J. MACEVOY.

A Case of Post-operative Mental Confusion [*Relation d'un cas de confusion mentale post-opératoire*]. (*Arch. de Neur.*, Oct., 1899.) Fenayron.

In view of the great divergence in opinions concerning the ætiology and characteristics of post-operative insanity, the author gives full notes of an interesting case occurring in a pedlar, aged 60 years, born of an unstable and alcoholic stock, and himself at one time addicted to drink. Eight days after ligation of his left axillary artery for aneurysm—the operation being complicated with septicæmia and high fever—he became incoherent, excited, confused, and went through an attack of mental confusion, with periods of excitement and depression, and a morbid dream-like state (“*délire onirique*”). As the confusion of ideas disappeared, some intellectual impairment and slow ideation persisted. After nine months, recovery took place with mental enfeeblement. Infection here seems to have been the determining cause of insanity in a predisposed subject; but the author does not admit that there is any special type of psychosis which can be termed post-operative.

H. J. MACEVOY.

Fixed Idea [*L'idée fixe*]. (*Arch. de Neur.*, Aug., 1889.) Keraval, P.

Notes of fifteen cases are given, exhibiting the presence of fixed or dominant ideas in various forms of insanity, with their characteristics and the part they may play in the evolution of the disease. Two are cases of melancholia. In eight cases the fixed idea occurs in degenerates; often for a time this apparently constitutes the sole delusion, but sooner or later there are added delusions, and chronic delusional insanity is the result. The others are cases of chronic delusional insanity. Here, the fixed idea is a picture at the base of an edifice of errors, although the execution in its architecture appears correct. Many of the cases correspond to what has been called monomania or partial insanity. Some hallucinations may be the starting-point; more commonly the disorder is in the intellectual sphere, and the fixed idea is the primary initial pathological phenomenon. The fixed idea—unreasonable, insane, sudden,—is, as a rule, related to the patient's own self, who is victimised or about to be. Hallucinations frequently follow. Wernicke's cases of *prevailing* idea culminating in systematisation belong to this class.

H. J. MACEVOY.

Psycho-motor Hallucinations (Verbal) in Alcoholism [*Les hallucinations psycho-motrices verbales dans l'alcoolisme*]. (*Arch. de Neur.*, Nov., 1899.) Cololian, P.

The notes of four cases are recorded presenting this symptom (rare in alcoholism) in association with hallucinations of hearing and sight. In one case it is a voice, inarticulate, without quality, which is nevertheless heard by the patient, and which answers the questions put by the voices heard from outside—thus constituting a singular

dialogue between the internal voice and the voices outside. At one time this internal voice is thought by the patient to be her own automatic voice.

In the second case the voice is inarticulate but well understood, and speaks in the patient's stomach; it has no quality, but is clear in expression; while these motor hallucinations are going on, the patient's tongue moves and becomes dry; there is also a certain oppression in the chest.

In the third case the patient hears a blowing, a *fluid* in the chest, throat, and head, but does not hear it through the ears; it is not an articulate voice; it is a divine fluid, and she understands it. At the same time, in this case also, the tongue moves in her mouth.

In the fourth case the patient says "One speaks in my head; I cannot say whether it is the voice of a man or of a woman; it has no quality." The voice also speaks at times in the chest, and at the same time there is a kind of pang in the gastric region.

The author discusses the production of verbal motor hallucinations—probably the reproduction of sensory, motor, and verbal images with morbid intensity. The erethism of the cortical centre for language extends to neighbouring centres—hence the association of certain tactile and muscular sensations, etc.

H. J. MACEVOY.

A Case of Morphino-dipsomania [Un cas de dipsomanie morphinique].
(*Rev. de Psych.*, Nov., 1899.) *Anthecaume and Leroy.*

The interest of this case lies in its being the only one which the authors call true morphinomania or morphinic dipsomania, characterised by anxious irresistible impulses to morphia-taking in a degenerate patient subject to other obsessions, alcoholic dipsomania, wandering, etc.

Estelle B—, æt. 32 years, admitted at Sainte-Anne Asylum under Dr. Magnan, February 11th, 1895. From the early age of eleven subject to obsessions; at sixteen years takes a lover; has morphia injected to soothe neuralgia at the age of nineteen years, which leads to her becoming a chronic morphinomaniac. During eight years she gets through a daily dose of over thirty grains, and her history is one of gradual mental, moral, and physical degradation, fairly typical of such cases. After the death of her lover (also a morphinomaniac) in 1892 she halves her daily allowance of morphia, but is soon compelled to sell her belongings to satisfy her craving, and after an attempt at suicide is taken to Sainte-Anne Asylum. During the treatment by rapid gradual suppression she goes through the usual tortures (hallucinations, insomnia, sensation of cold, diarrhoea, etc.), but rapidly improves. The catamenia, absent for five years, reappear within a month of admission (on March 3rd). Subject to frequent impulses and cravings for morphia, on June 25th she breaks open a poison-cupboard and injects herself with morphia. In July her obsessions return at the sight of another patient who is injected twice daily, and a little later she satisfies her craving by swallowing some morphia, which she obtains after stealing an attendant's keys. In November she is discharged, but within a month she relapses again, and is readmitted at Sainte-Anne on January 16th; under treatment (sudden suppression of injection with a little opium *per os*) she rapidly improves, but never loses her obsessions. After her

second discharge on June 26th, she had within the author's knowledge two attacks of morphinomania of short duration (obsessive) without relapsing into habitual morphinisation.

H. J. MACEVOY.

Dreams related to Attacks in Epileptics [*Les songes d'attaques des épileptiques*]. (*Journ. de Méd. de Bord.*, Nov. 26th, Dec. 3rd, 1899.)
Ducosté, M.

Certain epileptics, from the characters of their dreams, can tell when they have had fits during the night. This is the point which the author studies in this paper, fully convinced of its importance in the early diagnosis of epilepsy, and convinced also that, if dreams were more scientifically investigated, many cases of epilepsy would be detected early, and perhaps cured.

Four cases presenting "attack dreams" are given; these dreams are painful and terrifying. Their characteristics are—*a*. They occur only when the patients have attacks. *β*. They do not occur outside the attacks. *γ*. They occur during the attack (not before or after), so that the first conclusion is that there are special dreams—always the same in the same patient—which overwhelm consciousness during an epileptic attack. An examination of these dreams shows that in the crisis itself there appear to be four marked phases. Another characteristic is the predominance of red in the dreams (blood, fire, sun, etc.).

Such characteristics are not met with in the dreams of non-epileptic individuals; hence their importance as regards the diagnosis of epilepsy. The author believes also that they may be of help in prognosis and treatment. In this connection he refers to the question of the part said by certain alienists to be played by dreams in the production of insanity ("post-oniric psychosis"). Is it not possible that the incriminated dream is an "attack dream," and the oniric psychosis in reality post-paroxysmal?

H. J. MACEVOY.

Recovery from Insanity after Operation on the Uterus [*Heilung einer Psychose bei Uterusmyom nach Totalexstirpation*]. (*Wiener kl. Wochensch.*, Nr. 29, 1898.)
Elzholz, A.

An unmarried woman of forty, with neurotic heredity, had suffered since June of 1894 with profuse menstrual discharges followed by weakness, emaciation, palpitation, dyspnoea, loss of appetite, and troubles of digestion. There was a great failing in mental vigour with melancholy, which culminated in an attempt at suicide. This was followed by recovery, which lasted for a year, after which the symptoms again returned. A residence in the country restored her health, but in the autumn of 1895 profuse and continued discharges of blood were followed by severe pains in the lower abdomen, mental depression, with occasional paroxysms of distress and hallucinations. In July, 1896, there was a second attempt at suicide, and later, outbursts of fury following severe pains. On examination there was found endometritis glandularis, metritis, and a myoma at the fundus. In March, 1897, total extirpation of the genitals was performed. This was followed by speedy bodily and mental recovery.

W. W. IRELAND.

Brain Bankruptcy of Business Men. (Alien. and Neur., July, 1899.)
Hughes, C. H.

A consideration of the early symptoms of brain exhaustion, with a practical discussion on the follies of mismanagement as regards treatment, frequently seen in the termination of such cases.

G. A. WELSH.

Alcoholic Epilepsy [Alkohol und Epilepsie]. (Allgem. Zeitsch. f. Psych., B. lvi, H. 3.) Bratz.

In this long article of fifty-one pages, he arranges his cases, sixty-seven in number, into three groups:—1. Patients who before the beginning of the habit of drunkenness have had some epileptic attacks. 2. Patients who before drunkenness had an unhealthy nervous system or mental weakness. 3. Patients who before drunkenness were quite healthy. A heredity neurosis of one kind or another was noted in 88 per cent. of Bratz's cases of alcoholic epilepsy. In most instances of epilepsy directly caused by the misuse of alcohol, the tendency to convulsions passes away with the drunkenness, or returns with it. The first epileptic attack generally occurs about the end of a bout of drinking, but it is commoner amongst steady soakers than amongst those who only get drunk occasionally. In those affected with alcoholic epilepsy there are other nervous disorders, such as a feeling of pressure upon the nerve-trunks, dulness of touch or hyperæsthesia, a low or over-great sense of pain, cramps, tremors, and startings of the muscles. The vision was impaired in nine cases out of thirty-one. Headaches and sleeplessness were frequent. There was much mental dulness in those admitted to the hospital, but this wore off in part in a few days. Most of them, however, continued to suffer from general listlessness, weakness of memory, and obtuseness of the moral sense, similar to that which is observed in habitual drunkards who are not epileptic. Dr. Bratz observes that the weakening of the mental faculties in alcoholic epilepsy is generally not so marked as in cases of ordinary epilepsy coming on between the twentieth and fortieth years of life. Some of those affected with alcoholic epilepsy have little toleration of alcohol and suffer severely from the after effects of indulgence, though incapable of abstaining from drink. He tells us that alcoholic epileptics are a very low class, outcasts from their families, beggars and vagabonds, or have fallen into the hands of the police. In those cases in which the epilepsy has become fixed and outlasts the indulgence in liquor, the pathological lesion has been found to be arterial sclerosis, especially affecting the walls of the finest vessels of the brain.

W. W. IRELAND.

Mongolian Imbecility in Infants. (Pract. Dec., 1899.) Sutherland,
G. A.

This paper embodies the result of the writer's observations upon Mongolian imbecility in infants. In this variety, he tells us that the ligaments of the large and small joints are loosely strung, so that on lifting a foot one can rattle the bones of the knee and hip-joints, hyperextend the knee, and find the ankle and toe-joints abnormally mobile.

In the cases examined after death, he has found the thymus, the thyroid, and the supra-renal glands to be healthy. Treatment by the thymus and thyroid extracts has been found useless. W. W. IRELAND.

Trophadème chronique héréditaire. (*Nouv. Icon. de la Salpt., Nov.—Dec., 1899.*) *Meige, H.*

He describes two young women who had tumefaction confined to the right leg. Some instances of this perversion of nutrition have also been described by Drs. Melroy, of New York, Vigouroux, and Falcome. From cases published of this rare affection, it is clear that it runs in families. In the cases described it seems to have descended from the maternal side. Engravings are given of eight members of the same family so affected in some parts of the lower extremities.

W. W. IRELAND.

Chronic Thyroidal Fibrosis [*L'Hypothyroïdie bénigne chronique, ou Myxœdème fruste*]. (*Nouv. Icon. de la Salpt., July—Aug., 1899.*) *Hertoghe, E.*

This is a long article on an affection which has been already described by Dr. George Murray, under the title of the *Diagnosis of Early Thyroidal Fibrosis*. Dr. Hertoghe remarks that there is an infinity of degrees between the perfect health of the thyroid gland and pronounced myxœdema. In some cases where the gland is insufficient there is still much intellectual activity and tolerable health. Generally, however, there is habitual apathy with a tendency to corpulence. In children so affected the growth is retarded, puberty is delayed, and even when they grow up they retain an infantile appearance. Dr. Hertoghe's descriptions are illustrated by numerous engravings, which are very clear and striking. In this disease the use of the thyroid by the mouth is almost always attended with benefit.

W. W. IRELAND.

Folie à Trois. (*Neur. Cbl., No. 12, 1899.*) *Bouman, L.*

He records the case of three brothers who were received at the same time into the asylum at Bloemendal on March 7th, 1897. The youngest of them was first affected. At the beginning of the year it was noticed that his character was changed. He lost the desire to work and complained of lasting weariness. On February 21st he began to have maniacal attacks. Eight days later he disturbed the worship in a church, and when turned out began to take off his clothes in the streets. They put him into a strait jacket. The second brother, who had to look after him, was much excited, and on February 28th became restless and unmanageable. The day after the oldest brother also became maniacal. On admission the three brothers were violent; sometimes their fury ceased and they blessed one another, always using the same words. The youngest brother was unquiet, incoherent, destructive, resistive, and refused food. He improved slowly, so that he could be discharged on July 21st; from later accounts it appeared that the recovery continued. The second brother remained quiet for a while after being separated from the others. He was dismissed on September 14th, almost completely recovered. The oldest brother also showed incoherent speech, with ideas of grandeur and religious notions.

He said that he must do what his youngest brother wished. He improved gradually, and was allowed to return home on May 17th. The father of these three brothers was also restless and excited, spoke much, and showed abnormal religious ideas. During the fits of excitement, he believed that he was driven about by spirits; but the attacks passed away in a fortnight and he became well. W. W. IRELAND.

On Injuries to Peripheral Nerves. (*Pract., Aug., 1899.*) Horsley, V.

He classifies injury to nerves in four classes, viz.: 1st, division; 2nd, contusion; 3rd, compression; 4th, stretching. He discusses their diagnosis, prognosis, and treatment, and gives illustrative cases. He further discusses the influence of such lesions in the production of neurasthenia, and the consequent difficulty of determining the value of pain, peculiar sensations, loss of power, and similar symptoms.

W. F. PENFOLD.

Amnesic Aphasia [*Aphasie amnésique*]. (*Nouv. Icon. de la Salpt., Nov.—Dec., 1899.*) Trénel.

He records the notes of two cases, in one of which there is an account of the autopsy (with plates showing lesion). The predominant symptom is amnesia of nouns, visual perception and psychical vision being intact. A large subcortical hæmorrhage, the lesion found in the first case, supports Pitre's view that these cases of subcortical aphasia—aphasia of conductivity is perhaps a better term—arise from rupture of the commissural fibres which connect the differentiated centres for verbal images to those parts of the cortex which preside over the higher functions. Clinically we observe in these cases amnesic aphasia. The possibility of some lesion existing in the cortical cells belonging to the system of the association fibres destroyed, and which might explain the symptom, is not excluded in Trénel's case, as only macroscopical evidence is given.

H. J. MACEVOY.

Post-epileptic Hemiplegia of Short Duration. (*Glas. Med. Journ., December, 1899.*) Gibb-Dunn, W.

Although such cases are not uncommon, yet the case recorded presents peculiar features. The fit was of the slightest description, and resulted in paralysis of left arm and leg, right side of face, and loss of articulation. Condition lasted under half an hour. J. R. LORD.

Anomia and Paranomia. (*Journ. Nerv. Ment. Dis., December, 1899.*) Mill, C. K.

A peculiar form of aphasia in which the patient could recognise objects by sight, hearing, touch, taste, smell, but was unable to give names. There was no other symptom of focal lesion. There was limited spontaneous speech (without concrete nouns), no agraphia, word or letter blindness. He had also a marked form of paralexia or paranomia.

J. R. LORD.

Hereditary Syphilis in an Infant resembling Cretinism, cured by Mercury. (*Dub. Journ. Med. Sc.*, December, 1899.) Wallace, J. R.

A record of a child presenting symptoms of inherited syphilis and cretinism, who developed fits, evidently the result of hydrocephalus. Child became quite well after a course of mercury and iodide of potash. Two cases of undoubted cretinism, with suspicions of hereditary syphilitic taint, who did well on mercury, are mentioned.

J. R. LORD.

On Cases of Myopathy. (*Pract.*, June, 1899.) Beevor, C. E.

This is a clinical lecture on cases of idiopathic progressive muscular atrophy, an affection of the muscles themselves, and not of the spinal cord or peripheral nerves. He divides his cases into: 1st, pseudo-hypertrophic paralysis. Of this variety he describes three cases. 2nd, a juvenile form of muscular atrophy, first described by Erb. 3rd, facio-scapulo-humeral type, first described by Landouzy and Déjérine. A pure case of the latter is given, and also a mixed case. The points helping in diagnosis are: 1st, the distribution of the affected muscles; 2nd, the absence of fibrillary contractions, and 3rd, the electrical reactions. The prognosis is regarded as more hopeful than in spinal cord lesions, excepting the pseudo-hypertrophic cases. The prognosis is better in adults than in early life. Pathologically there occurs a fatty and fibrous change in muscle, and then a granular degeneration. Indications for treatment are scarce.

J. R. LORD.

Astasia-Abasia. (*Amer. Journ. Med. Sc.*, July, 1899.) Wilson, J. C.

The history of this curious syndrome is given with complete references, and in addition a new case is contributed in detail, in which the patient had to be taught systematically how to stand and walk. Motion, co-ordination, and sensation were unaffected.

J. R. LORD.

Strümpell's Paralysis (Polio-encephalitis) combined with Infantile Paralysis. (*Lanc.*, July 1st, 1899.) Williams, E. C.

The clinical details of a case are given, and its ætiology discussed. The lesion was a double one, both upper and lower motor segments being affected; the suggested cause being the same toxic poison which as a rule produces polio-myelitis alone.

J. R. LORD.

Periodic Paralysis: a Study of a Case of Family. (*Amer. Journ. Med. Sc.*, Nov., 1899.) Mitchell, J. K.

A carefully detailed account, giving the electrical reaction of muscles and chemical examination of the urine. Reference made to a paper by E. W. Taylor (*Journ. Nerv. Ment. Dis.*, September and October, 1898) containing complete bibliography of previous work and analysis of recorded cases.

Hæmorrhage into the Ventricles of the Brain: Clinical Details and Necropsy. (*Scot. Med. Surg. Journ.*, Feb. 18th, 1899.) Adamson, R. O.

Convulsive attacks of unusual character brought on by hæmorrhage into the left cerebral hemisphere, and subsequent effusion into the ventricles.

Kernig's Sign in Meningitis. (*Amer. Journ. Med. Sc., Nov., 1899.*)
Herrick, J. B.

If the patient assumes the sitting posture with the thigh at right angles to the trunk, or if, lying upon the side or, better, upon the back, the thigh be flexed to a right angle with the body, then, if meningitis be present, it will be found that extension of the leg at the knee is strongly resisted; this is Kernig's sign, and the investigations of Bull, Henoeh, Friss, Blümm, and more recently Netter, confirm its value. Dr. Herrick adds nineteen cases of meningitis, in seventeen of which the sign was present, *i. e.* a percentage of 89.4. Rise of intra-cranial pressure does not appear to be the cause, as Bull has suggested.

HARRINGTON SAINSBURY.

Diagnosis of Locomotor Ataxia. (*Medecine, Nov., 1899.*)
Patrick, H. T.

The typical case of this disease with pronounced inco-ordination is recognised at a glance, but inco-ordination may delay many years, hence the importance of diagnosing the disease manifesting itself by such symptoms as "pains, uneasiness, or numbness in the legs or elsewhere, failure of vision, ocular paralysis, bladder trouble, refractory constipation or rectal tenesmus, 'bilious attacks,' or attacks of gastralgia, diminished sexual power, anæsthesia of the face, indolent ulcer of the foot." Dr. Hugh Patrick discusses this problem in short compass but very clearly.

HARRINGTON SAINSBURY.

A Case of Mental Torticollis [*Un cas de torticollis mental*]. (*Novv. Icon. de la Salpt., Nov.—Dec., 1899.*)
Noquès and Sirol.

Drs. Noquès and Sirol report a case of this particular form of spasmodic wry-neck described by Brissaud. Under the influence of the will the spasm would momentarily cease, and a pressure on the side of the nose, cheek, or chin, wholly inadequate to overcome the spasm, would abolish it. The patient showed evidence of a neurotic taint as a stutterer by inheritance.

HARRINGTON SAINSBURY.

Two Cases of Hemiplegia with Hemianæsthesia. (*Arch. de Neur., Oct., 1899.*)
Mongour and Gentes.

(1) Female, æt. 65 years, was seized suddenly with apoplexy and complete left hemiplegia with left hemianæsthesia. About a month later the anæsthesia was replaced by hyperæsthesia. At the autopsy (death two months after seizure) a cerebral hæmorrhage was found which had destroyed the posterior third of the lenticular nucleus and optic thalamus, and the posterior third of the lenticulo-optic segment of the internal capsule.

(2) Male, æt. 68 years, was seized with sudden right hemiplegia (complete) and progressive right hemianæsthesia. The post-mortem (death occurring nine days after the seizure) revealed old cerebral softening, with a cerebral hæmorrhage having destroyed especially the posterior part of the lenticular nucleus and the posterior third of the lenticulo-optic segment of the internal capsule. The nature of the hemianæsthesia in these cases is discussed.

H. J. MACEVOY.

Suppurative Meningitis simulating the Syndroma of Weber supervening in an Alcoholic in the Course of Facial Erysipelas. (Rev. de Psych., Sept., 1899.) *Vigouroux and Vignier.*

Male, æt. 23 years, was admitted into hospital suffering with erysipelas of the face, fever, etc. On the fourth day he developed complete *left* hemiplegia with some ptosis, and deviation of the *right* eyeball downwards and outwards. Abdomen swollen; constipation.

Nausea and vomiting appeared with convulsions (generalised, but predominating on the left side). From the fourth to eighth day less fever, but convulsions and torpor persist. On the ninth day fresh spread of erysipelas. After the fifteenth day the erysipelas improved, but the cerebral symptoms persisted; the pulse was slow and feeble (fifty-four per minute). The left hemiplegia, though persistent, varied; the ptosis and ocular paralysis were present, and later both pupils were noticed to be dilated and inactive. Atrophic retino-choroiditis was present; occipital pain was complained of; knee-jerks absent. The patient gradually sank.

At the autopsy the paralytic symptoms were found to be due to suppurative pachymeningitis with purulent cysts compressing the cortex. *Crura cerebri* quite normal (a diagnosis of some lesion of the inferior part of the right crus had naturally been made). H. J. MACEVOY.

Contribution to the Study of Isolated Paralysis of the Serratus Magnus [*Contribution à l'étude de la paralysie isolée du muscle grand dentelé*]. (Nouv. Icon. de la Salpt., *Mav—June*, 1899.) *Sougues and Castaigne.*

Isolated paralysis of the serratus magnus is clinically rare. The case mentioned by the authors concerns C. T—, male æt. 29 years, a groom, admitted at Cochin Hospital with pneumonia, which proved to be typhoid in origin, and who, during convalescence, on the fortieth day of his illness, noticed impairment in the movements of the right arm (paralysis of the serratus magnus due to neuritis of the posterior thoracic nerve of Ball). Reviewing the literature of the subject, attention is drawn to this accident occurring generally in men following laborious occupations, and to its affecting the right side. The characteristic deformity is discussed at length (plates shown). With the arms hanging by the side, there is a very slight displacement of the scapula; the arm on the affected side cannot be raised beyond a horizontal level; there is asymmetry of the thorax evidenced in the axillary region and the thoracic wall (winged scapula) when the arm is raised.

H. J. MACEVOY.

6. Pathology of Insanity.

Pathological Observations in Delirium Tremens. (Arch. f. Psych., B. xxxi, H. 3.) *Trömner.*

Dr. Trömner has availed himself of the opportunity of examining the bodies of seven patients who died of delirium tremens in the city asylum of Dresden.

Pathological changes were found, even in uncomplicated cases of delirium tremens, which affected all the anatomical elements of the central nervous system. The cells of the cerebral cortex were found more affected than the Purkinje's cells in the cerebellum, and the foreparts of the cerebrum, including the insula, were more affected than the posterior parts. The region of the cuneus was least affected of all. The cerebral vessels were also more degenerated than those in the cerebellum and spinal cord. The arteries were more affected than the veins. The intima was puckered, the connective tissue of the media thickened, the lymph spaces widened and obstructed, and scattered extravasations of blood could be seen under the microscope. The veins were seen to have become varicose.

The fibres of the neuroglia were more conspicuous and augmented in number and the spider-cells also increased in all the cases examined. This was especially noted in the median and temporal convolutions. The spider-cells were increased in the spinal cord, though not the glia fibres. There was an increase of the free nuclei of the glia in the cerebrum.

In the cortex there was, in all cases, a thinning of the tangential fibres in the anterior and middle parts of the brain. This implicated the fibres of both the projection and association systems.

In the brain-cortex there were found well-marked alterations in the nerve-cells of the second and fourth layer, the nuclei contracted and of a bluish hue, the outline indistinct, the processes withered, and the plasma poorer in cell-chromatin, with other symptoms of degeneration, which want of space forbids us to detail. Other cells were noticed apparently healthy.

The degeneration of the brain-cells in its different stages was of the same character as that observed in animals poisoned with alcohol. In the diseased brains there was a mingling of the chronic alterations following habitual drunkenness and the more recent lesions of delirium tremens.

W. W. IRELAND.

Some Lesions of the Supra-renal in the Insane. (*Trans. Path. Soc.*, 1899.) *Beadles, C. F.*

This is an instructive record of some fourteen cases of definite supra-renal disease. In five cases hæmorrhage had occurred. As a rule these cases were much collapsed before death. In three cases new growth was the lesion. Only four cases developed true Addison's disease, the lesion being limited to a chronic fibrotic condition or old tubercular disease. Atrophy and cystic disease formed the two remaining cases.

J. R. LORD.

7. Treatment of Insanity.

Subcutaneous Serous Transfusion in the Acute Psychoses with Auto-intoxication [*De la transfusion séreuse sous-cutanée dans le psychoses aiguës avec auto-intoxication*]. (*Prog. Méd.*, Sept. 30th, 1899.)
Cullerre, A.

Dr. Cullerre's experience is limited to six cases, but they are carefully observed and are most suggestive. The psychoses have belonged to the class of melancholia, acute delirious mania, and confusional insanity. The stage has been that of extreme vital depression marked by emaciation, profound anæmia, proneness to bedsores, diminished secretions (in particular obstinate constipation), sordes on the lips, thready pulse, and, in fact, all the symptoms of the typhoid state. The injections have consisted of a 7 per 1000 sodium chloride solution, sterilised at the time of the injection, and at the body temperature. The quantities have varied between 60 and 1000 grms. (2 oz. to 35 oz. about), the larger quantities being essential when it is desired to rouse the circulation, the smaller sufficing, often, when a stimulant nervine action is sought. The results obtained call strongly for further investigation, and, indeed, they raise the question of the applicability of this treatment to the typhoid condition however brought about.

HARRINGTON SAINSBURY.

Methylene blue as an Hypnotic [*Le bleu de méthylène comme hypnotique*].
(*Prog. Méd.*, Oct. 21st, 1899.) Vallon and Wahl.

They confirm the hypnotic powers of the drug, but they do not recognise any striking advantages. The blue staining of the urine is a great drawback where the habits are dirty, and, moreover, it may cause delusions. The dosage was 25 cgrms. (about 4 grs.) in capsules, repeated twice, *vespere*.

HARRINGTON SAINSBURY.

Eosinate of Sodium in Epilepsy and its Toxic Effects [*De l'éosinate de sodium dans le traitement de l'épilepsie et des accidents qu'il produit*].
(*Prog. Méd.*, Dec. 30th, 1899.) Bourneville and Chapotin.

They report upon twenty-three cases. The administration was in 4-grain capsules, the dose being advanced to twelve and sixteen capsules in the course of nine weeks. The drug is rich in bromine, hence its selection. Red staining of the stools, fluorescence of the urine, slight reddening of the skin, especially of the face, with swelling and various trophic changes are all recorded, but for the most part these manifestations were not very persisting. The beneficial influence upon the epilepsy (whether idiopathic or sympathetic) is by no means apparent.

HARRINGTON SAINSBURY.

Sulphonal Poisoning. (*Scot. Med. Surg. Journ.*, March, 1899.)
Lovell Gulland, G.

Dr. Lovell Gulland records a fatal case in a man, an alcoholic, who for about six weeks took nightly thirty grains of sulphonal. Slight staggering, thickness of speech, hæmatoporphyria, lassitude, and heaviness were observed during the last week; death occurred from

sudden heart failure. Dr. Gulland contrasts acute poisoning from the massive dose, a narcosis, with chronic poisoning from the repeated dose. Cumulative action appears to be the cause of the latter, and even moderate doses, fifteen grains, may bring it about. The chief symptoms of chronic poisoning are: vomiting and constipation, citæmia, depression, a heaviness tending to coma, albuminuria and hæmatoporphyrinuria. The last-named rarely appears in acute poisoning. Fatty changes are usually found in the heart in chronic poisoning, but the most constant change is a spoiling of the secreting cells of the kidney. Dr. Gulland advises that the maximum daily dose of sulphonal should be thirty grains for a man, fifteen to twenty grains for a woman, "and it should never be given continuously, but pauses of at least three to four days should be allowed from time to time to permit of elimination."

HARRINGTON SAINSBURY.

Treatment of Herpes Zoster [Zür Therapie des Herpes zoster]. (Neur. Cbl., No. 22, Nov., 1899.) Bleuler.

The writer records the remarkable curative effect of cocaine ointment on herpes zoster, in addition to a distinct sedative action. He employs a 1 per cent. strength, the constituents being equal parts of lanolin and vaseline.

HARRINGTON SAINSBURY.

Treatment of Locomotor Ataxia by Exercises. (Pract., March, 1899.) Campbell Thomson, H.

Dr. Campbell Thomson, following the teaching of Dr. Frenkel and others, cites a case of ataxy treated by planned exercises. He claims some improvement in the finer co-ordinations—*e. g.* of the hand, as in writing. Only time and extensive trials can, as he says, prove the value of the method.

HARRINGTON SAINSBURY.

8. Sociology.

(1) *Offence against Morals. Plea of Insanity and Epilepsy set aside by Medical Examination.* (2) *Absence of Moral Sense. Third Arrest. Committed to an Asylum. (Rpt. Ann. Meet. Queb. Med.-Psych. Soc., October, 1899.) Villeneuve.*

Two cases showing the importance of a thorough examination where there is the least doubt as to the mental condition of those accused of crime. In the first case, a Belgian was charged with offering for sale three pictures of an obscene nature. The plea of irresponsibility on account of undoubted insane heredity, and actual insanity and epilepsy, was raised by the brother and wife of the accused. M. Villeneuve states the steps of his examination, and came to the conclusion that the prisoner was not insane, and that the supposed epilepsy would not account for the crime. The prisoner was condemned. In the second case the prisoner had been convicted twice before, and had spent part of his career in a reform school and penitentiary. He was accused of theft, but was committed to an asylum on M. Villeneuve showing the presence of congenital non-development of moral sense.

J. R. LORD.

The Rôle of Science in the Material and Moral Education of the People.
(*Rev. Scient.*, November 18th, 1899.) *Berthelot.*

This is a presidential address at the opening of the session of the Philotechnic Association. Two periods—two phases seemingly opposed—have occurred in the practical applications of science; in the first, mechanical inventions have led to the enslaving of the workman by making him practically subordinate to some complicated machinery, of which he ignored the workings or laws; in the second period the object is to enfranchise him, to develop him by scientific education, so that he may in his turn dominate over the machine. Berthelot shows also that the goal of science is not only utilitarian, but that it fulfils an ideal educating rôle. The double knowledge of the facts and laws of the moral world as well as of the physical world is indispensable for the amelioration of humanity. H. J. MACEVOY.

9. Asylum Reports.

Report of the Secretary and Registrar of the Province of Quebec.
June, 1898.

This report contains some very interesting figures with regard to the three great asylums of this province, two of which (Quebec and St. Jean de Dieu) are for the exclusive use of Catholics, and one (Verdun) for Protestants. There was a *percentage* of cures of 31·23 on the admissions, which was most satisfactory considering that 46 *per cent.* of the admissions were considered incurable. The *percentage* of deaths was 9·49 *per cent.* Phthisis was the most frequent cause, senile debility coming next, and then general paralysis. A severe epidemic of influenzal pneumonia raged in one asylum, resulting in death in 36·67 *per cent.* of those affected. There has been established in the Protestant Hospital for the Insane a perfectly equipped laboratory, the gift of one of its Governors, M. G. B. Burland, Esq. This is the only laboratory of its kind in the province. At St. Jean de Dieu the work of reconstruction of the asylum is in progress, which will take several years to complete. E. P. CHAGNON.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

GENERAL MEETING.

A General Meeting was held at the West Sussex County Asylum, Chichester, on Thursday, February 15th, 1900, at 3.30 p.m.; Dr. J. Beveridge Spence, President,

in the chair. The other members present were H. Hayes Newington, Charles Mercier, R. Percy Smith, D. M. Cassidy, P. W. MacDonald, Fletcher Beach, H. T. S. Aveline, James Chambers, Harry A. Benham, H. Gardiner Hill, A. Helen Boyle, D. G. Thomson, C. K. Hitchcock, T. S. Adair, Harold A. Kidd, A. N. Boycott, Elliot Daunt, Robert H. Steen, Alfred Miller, Lancelot W. Rolleston, R. C. Stewart, J. Turner, F. Perceval, J. E. Finch, William Bubb, and Robert Jones (Secretary).

Visitors: Drs. H. C. L. Morris, Tidcombe, G. Bely, and Rev. E. Lopresti.

Letters of apology for non-attendance were received from Drs. W. R. Watson, T. G. Soutar, Crochley Clapham, E. B. Whitcombe, J. Carlyle Johnstone, G. Stanley Elliot, A. R. Urquhart, G. Braine-Hartnell, David Bower, and T. W. McDowall.

The minutes of the previous meeting were read and confirmed.

The following candidates for election as ordinary members were duly elected:—Gregor, E. W., M.R.C.S., L.R.C.P., Assistant Medical Officer, Derby County Asylum (proposed by Drs. Legge, Macphail, and Elkins); Shera, J. E. P., L.R.C.P.I., Assistant Medical Officer, Norfolk County Asylum (proposed by Drs. Thomson, Gardiner Hill, and Rolleston); Shoyer, Arthur F., M.B., B.C., B.A.Cantab., Assistant Medical Officer and Pathologist, County Asylum, Lancaster (proposed by Drs. Cassidy, David Blair, and Robert Jones); Watson, Wm. Muir Crawford, M.D., C.M.Edin., Hon. Medical Officer, Northern Police Orphanage and Convalescent Home, Beechville, Ripon Road, Harrogate (proposed by Drs. Crochley Clapham, W. B. Ray, and T. Stewart Adair); Worth, Reginald, M.R.C.S., L.R.C.P., Assistant Medical Officer, Middlesex County Asylum, Tooting (proposed by Drs. Gardiner Hill, Rolleston, and Robert Jones).

A letter was read from Mrs. Casberd-Boteler, presenting the Society with an engraving of her late father, Dr. J. H. Paul.

The PRESIDENT said that while they did not require a picture to keep Dr. Paul's memory green, they were exceedingly pleased to have it. Those who came after, and heard how hard he had worked for the Association, would find it most interesting to connect Dr. Paul's name with the portrait on their walls. He was in favour of often publishing portraits of their leading members in the JOURNAL, and hoped that the Treasurer and the Editors would do what was possible in that direction. The President concluded by moving that the thanks of the Association be sent to Mrs. Casberd-Boteler for her gift, and that they assure her how much her kindness is appreciated.

LANTERN DEMONSTRATION.

Dr. TURNER showed lantern slide pictures illustrating—

1. The appearance of the infiltration seen in the pia and around the cortical vessels in chronic and acute cases of general paralysis. He holds that the "round-cell infiltration" in this disease is largely composed of the segmented and extruded nuclei of leucocytes which have escaped by diapedesis. Then followed several pictures showing sections of nerve-cells with invading bodies, in all respects similar to those which make up the infiltration in general paralysis, lying completely within the substance of the nerve-cell, and surrounded by a clear space. It was suggested that the size of this space varied probably with the length of time the invading nucleus had been in the cell. An entire cell was shown with an invading body within it, surrounded by a paler zone, and he inferred that this paler zone was of a more fluid nature, and hence in tissues subjected to dehydrating agents and then cut it appears as a clear space or vacuole. The action of other bodies (endothelial and adventitial nuclei) on nerve-cells was also referred to and illustrated.

2. Some morbid nerve-cells (both sections and entire cells) were shown, met with in the brain of the insane in certain cases of dementia. These present the characters which are seen in nerve-cells after section of their axon.

Dr. Turner mentioned that a short account of the clinical and pathological appearances of these cases was published by him in the winter number of *Brain*, 1899, and that since then Dr. Wigglesworth had drawn his attention to two similar cases with, in all probability, similar changes in the nerve-cells (allowing for differences of technique), which had been described by Dr. Wigglesworth in this JOURNAL in 1883.

3. A series of surface sections showing the tangential system of medullated nerve-fibres of the first layer of the cortex from different regions of the cerebrum were shown on the screen.

He mentioned that he had examined sections from the second frontal, the top of the ascending frontal, and from the occipital cortex in over sixty cases of insanity of all sorts and ages.

In 64 per cent. of the cases fibres were absent in the frontal sections examined; but this only applies to the part examined, and must not be taken to mean that they were absent from other parts of the frontal region. Very often where none are seen in one convolution many are found in an adjacent one. Whether this is so in ordinary hospital cases further investigation is needed to show.

The densest plexus of fibres he had yet met with in the frontal region was from a case of chronic alcoholic insanity in a woman aged fifty-four.

In 58 per cent. of the cases fibres were absent in the occipital region examined.

As a rule the calibre of the fibres in the frontal and occipital regions is finer than in the motor. He suggested that the diameter of the fibre was in relation to the size of the underlying large pyramidal nerve-cells. At any rate, the crowds of stout fibres from the region where the giant-cells are numerous seem to bear this out.

In the motor region the tangential fibres were only absent in 20 per cent., and nearly all these cases were general paralytics.

The cases classified as recent, chronic, and general paralytics gave the following results:—Tangential fibres *absent* in only 3 of 40 of the two former classes, but in 8 out of 14 of the general paralytics.

He was doubtful whether it is one of the earliest changes in general paralysis. In a case recently examined, where from the partial distribution of the lesion it was evident that the disease was of fairly recent origin, the fibres were very abundant in the motor and occipital regions of both sides, but absent from the frontal; but in this case they did not stain so darkly as usual, but appeared pale, and as though most of their myelin had been extracted or dissolved out, leaving only a faintly double-contoured fibre.

He mentioned that the densest plexus he had yet come across was from the motor region of a congenitally weak-minded woman suffering from melancholia, aged fifty.

The PRESIDENT congratulated Dr. Turner upon his demonstration and specimens, the SECRETARY referred to the "phagocytosis" exhibited in the specimens, and Dr. TURNER replied.

ASYLUM CONSTRUCTION.

Dr. R. H. STEEN (of Chichester) read an interesting paper on "Modern Asylum Construction," a subject which in his opinion demands the earnest attention of many of the local authorities in this country. Within the last five years six new asylums had been completed and opened; seven existing institutions had recently completed and eight others were at present making extensive additions; seven new asylums were now in process of construction, and preparations were being made for the construction of no less than ten new asylums. As to the question of what medical men had to do with asylum construction, Dr. Steen pointed out that suitable dwellings had an important influence upon their patients, either towards the amelioration of their symptoms or recovery from their disease. Moreover the administration of such buildings was entirely in medical hands. Lay committees naturally looked to their medical officers for advice when about to enlarge existing asylums or to build new ones. Dr. Steen having recounted the main requirements of an asylum, and given an historical survey of asylum architecture—speaking particularly as to the asylum-hospital system and the detached or villa or cottage system,—went on to discuss the comparative merits of the systems now in vogue, viz. the connected and the detached. He concluded by remarking that in preparing his paper he had been actuated by a desire to point to the great activity now prevailing in asylum construction, and to draw the attention of the members to the importance of the subject. There was little modern literature dealing with the question, but there were many of the members with expert knowledge, with a full acquaintance with the defects, and able to suggest an appropriate

alteration in the mode of asylum construction; but their rich stores of experience were in a great measure lost to those public bodies which most stood in need of them. He would therefore suggest that it was the duty of the Association to take the matter into official consideration, and if possible to formulate a statement, not only in regard to the main features in plan of asylums, but also in regard to the many important details in their internal construction.

The PRESIDENT complimented Dr. Steen upon the great value of his paper, coming at a time when new asylums were being built, and extensive enlargements were being made in so many parts of the country. The President stated that it would be interesting to hear Dr. Kidd's views upon points about which there might have been a diversity of opinion among members who had gone round the asylum that morning, and who had similar experience in the opening of new institutions.

Dr. HAYES NEWINGTON remarked that Dr. Steen had coupled the East Sussex Asylum with that at Alt Scherbitz, but he himself would not consider it to be in anything like the same category, although he congratulated Dr. Steen on his able and interesting paper. The East Sussex Asylum could not be called detached, composite, or of any particular style. The ideas they had in mind were not to follow a particular style, but to work out the details as they thought applicable to the various classes of patients. In no sense could it be called a detached asylum, for the main building held 840 patients—a good-sized county asylum in itself. They had only a few detached buildings for particular cases, such as a hospital for acute mental disease, and villas for thirty patients each for the farm, and so on. That was as far as they were prepared to go.

Dr. H. A. KIDD considered that Dr. Steen's paper contained an excellent suggestion in regard to the Association seriously taking up the question of the construction of asylums. When a new institution like that they were in was opened members of various committees came round with the desire of finding out the latest ideas upon asylum construction. It seemed to him that a great deal of useful knowledge of asylum construction was bottled up in the minds of members who had had special experience, and it would be a very good thing if it were possible for the Association to collect all that knowledge and publish it. The Commissioners in Lunacy published regulations as to superficial areas to be allotted to each patient in dormitories, day-rooms, etc., together with other requirements relating to the construction of asylums, and suggestions which were useful to public authorities building new asylums. He considered that it would be a good thing if the Association were to publish something in the same way dealing with debatable subjects, such as detached villas, hospital blocks, detached chapel and superintendent's house, etc., and also upon points of internal arrangement, such as heating and ventilating systems, lighting, etc. On going round that day with members he heard a variety of opinions on such points. He thought these could be very well collected by the Association. No decision need be made as to the relative merits of those points, but it would be of advantage to collect the pros and cons., so that anyone, reading up all the arguments upon any particular subject, would be able to frame his own opinion. He felt sure that such a paper would prove a valuable guide to public bodies.

The PRESIDENT said it would be very interesting if Dr. Kidd would state one or two of the points upon which there was a diversity of opinion. He (the President) went round the asylum that morning, and could see no reason to find fault or criticize.

Dr. KIDD.—I was not thinking of any particular criticism of this institution, but of general comments upon much-debated subjects, such as the detached chapel, the "open door" system, the general dining hall, etc. With reference to this last subject, it is said that we should make asylums as "homelike" as possible. I do not see how a large dining hall, where patients are all crowded together for dinner, contributes to this end. They are not used to it. People of the class from which we derive our cases are not in the habit of dining together in large numbers, and it is not in the least homelike. (The following notes regarding the West Sussex County Asylum may be inserted here.—Eds.)—It was designed by Sir Arthur Blomfield and Sons on the pavilion system, with the entrance on the north. There is a detached chapel and a farmhouse for fifteen patients. The estate extends to 245

acres, and occupies an elevated site on gravel soil near Chichester. The heating and ventilation are carried out on the Korting system, and electric lighting has been adopted. There is a private water-supply, but the drainage is connected with the town system. It is noteworthy that the building was begun in May, 1895, and opened for the reception of patients in July, 1897—perhaps the most expeditious erection on record. The asylum is now being enlarged, and will, when complete, accommodate 765 patients at an inclusive cost of £330 a bed. Calculated on the buildings alone, the cost is £220 a bed. There are no airing courts; the patients' gardens are laid out with gravel walks and surrounded by a light low fence. The unofficial name of the institution is Graylingwell Hospital, after the name of the estate, and it has been found that patients and their friends appreciate the less formidable title in writing and visiting. The dietary is made out for a month, and varies every month as regards dinners. The Commissioners visited on 24th February, and reported very favourably on the condition and management of the asylum. They remark that the day-rooms present a bright appearance, are well warmed, and in every way comfortable. The air in the rooms is quite fresh and sweet. The staff by day is in the proportion of one to every nine patients.

Dr. STEEN, in reply, thanked the members for the reception of his paper.

Dr. MERCIER afterwards read a paper upon "Memory," which we hope to publish in the next number of the JOURNAL.

The PRESIDENT congratulated Dr. Mercier upon his thoughtful and original contribution, and proposed a hearty vote of thanks to Dr. Kidd, which was unanimously carried.

After remarks by the Hon. Sec. (Dr. Robert Jones), to which Dr. Mercier replied; members met and dined at the Dolphin Hotel at 6.30 p.m.

SCOTTISH DIVISION.

A meeting of the Scottish Division was held in the Hall of the Faculty of Physicians and Surgeons, St. Vincent Street, Glasgow, on Thursday, March 8th, 1900. In the absence of the President, Dr. Rutherford (Dumfries) was called to the chair. There were also present: Sir William T. Gairdner, and Drs. Bruce, Campbell Clark, Clouston, Graham, Havelock, Hotchkis, Carlyle Johnstone, Middlemass, Alexander Robertson, G. M. Robertson, Rorie, Turnbull (Secretary), Urquhart, Watson, and Yellowlees.

The minutes of the previous meeting were read, approved, and signed by the Chairman.

The Divisional Secretary intimated apologies for absence from the President of the Association, Dr. Beveridge Spence, and from the General Secretary, Dr. Jones.

It was agreed unanimously to suggest to the Council the names of Dr. Havelock for election to the Council, Dr. G. M. Robertson for the Examinership, and Dr. Turnbull for the Divisional Secretaryship.

POSITION OF NURSES IN SCOTLAND.

On behalf of the Committee appointed at the previous meeting to consider the position of the Nursing Staffs in Scottish Asylums in regard to administrative questions, Dr. CAMPBELL CLARK made a preliminary report, mentioning that they had issued a schedule of inquiries, and proposed to collate the information given in the answers as soon as possible. He asked the meeting to say in what way it would be best to deal with the report when ready; and after discussion it was agreed to hold a special meeting of the Division in Edinburgh on Saturday, June 2nd, to consider the report, and thereafter to have it printed in the JOURNAL if found desirable.

Dr. HAVELOCK drew attention to the days fixed for the meetings of the Division, and moved that the Divisional Secretary be asked to make inquiry from the members whether Thursday continues to be the day most suitable for the majority, or if a change is desirable. This was unanimously agreed to, and the Secretary

was also instructed to mention the greater facilities for travelling at the end of the week, in the way of railway tickets being cheaper and available for longer periods, as a point to be kept in view in settling the matter.

TRAINING OF ATTENDANTS.

SYLLABUS OF PRACTICAL WORK AT ROXBURGH DISTRICT ASYLUM.

The Wards and Sick Rooms.

Ventilation. Warming and Cooling. Regulation of Temperature. Ward Thermometer. Lighting. Cleansing.

Beds and Bedding.

Bed Making. Changing Sheets. Lifting and Moving Helpless Patients. Draw Sheets. Waterproof Sheets. Water Beds. Prevention and Management of Bedsores. Bed Pans. Urine Bottles. Chamber Utensils. Foot Warmers. Bed Rests. Bed Cradles.

Food and Feeding.

Serving Food. Feeding Helpless and Paralysed Patients. Feeding Cups. Sick Room Cookery. Preparation of Gruel; Beef-tea; Boiled Bread and Milk; Milk Puddings; Custard; Broth; Lemonade, etc. Artificial Digestion of Food: Peptonised Milk, Gruel, Beef-tea. Arrangements for Forcible Feeding.

Washing and Bathing.

Bathing Regulations and Precautions. Bath Thermometer. Attention to Hair, Mouth, Eyes, Ears, Nails, etc. Washing the Sick and Bed-ridden Patients.

Clothing.

Dressing and undressing.

Observation and Recording of Symptoms.

Pulse. Respiration. Temperature. Excreta. Clinical Thermometer. Charts. Day and Night Records.

Administration of Medicines and Remedies.

Measure Glass. Mixtures; Oils; Pills; Powders. Gargles. Liniments; Ointments; Lotions.

Enemata: Laxative; Nutritive; Medicated. Suppositories. Douches. Eye Lotions and Drops. Ear Syringing. Inhalations. Bronchitis Kettle. Massage or Rubbing.

Use of Moist and Dry Heat; Cold; Counter-irritation.

Poultices: Linseed; Bread; Mustard; Starch; Antiseptic.

Fomentations: Simple; Antiseptic; Turpentine Stupe.

Warm Water Dressings: Simple; Medicated. Wet Compresses. Wet Packing, hot and cold.

Cold Water Dressings and Cooling Applications. Sponging. Irrigation. Application of Ice.

Dry Heat: Hot Water Bottles, Sand Bags, Bran, Brick. Cotton-wool Jacket.

Counter-irritation: Mustard Plaster and Leaves; Turpentine; Iodine; Blisters.

Bandaging.

The Triangular Bandage.—Preparation. Folding. Application. Fastening. (1) Unfolded. (2) Folded Broad. (3) Folded Narrow. Application to Wounds of Top of the Head; Forehead, Sides, or Back of Head; Lower Jaw or Side of Face; Eyes or Front of Face; Chest; Shoulder; Hip; Upper Arm and Forearm; Elbow; Hand; Thigh; Knee; Leg; Foot; Stump; to secure Splints; to improvise a Tourniquet. Large Arm Sling. Small Arm Sling.

The Roller Bandage.—Preparation. Rolling. Application. Fastening. Rules to be followed—(1) Fix the Bandage; (2) Bandage from Below Upwards, and from Within Outwards, over the Front of the Limb; (3) Use Equable Pressure throughout; (4) Let each succeeding turn overlap two-thirds of its predecessor; (5) Keep all the Margins parallel, and let the Crossings and Reverses be in one line and rather towards the outer aspect of the Limb; (6) End by

fixing the Bandage securely. The Spiral; the Reverse; the Figure of 8. Application to Hand and Arm; Foot and Leg; Elbow, Knee, Heel; Shoulder, Hip, Groin, Breast; Head. "T" Bandage.

Disinfection. Antiseptic Methods and Materials.

Prevention of Infection. Disinfection of Rooms, Furniture, Bedding, Clothing, Persons, Discharges, Utensils, Instruments, Catheters, etc. Use of Carbolic Acid; Sulphur Fumes; Chlorine; Condy's Fluid (Permanganate of Potash); Heat.

Antiseptic Treatment of Wounds and Sores. Surgical Dressings, Solutions, etc. Nurses' Requisites. Carbolic Acid; Boracic Acid; Corrosive Sublimate; Iodoform.

Accidents and Emergencies; First Aid and Immediate Treatment.

Insensibility.—Shock or Collapse. Fainting. Concussion and Compression of Brain. Epilepsy. Apoplexy. Sunstroke or Heat Apoplexy. Poisoning. Asphyxia.

Poisoning.—Simple and Safe Emetics. Poisoning by Acids and Alkalies; Opium; Alcohol; Carbolic Acid.

Asphyxia.—Drowning. Choking. Smothering. Strangulation and Hanging. Suffocation by Gases. Artificial Respiration.

Hæmorrhage. External Bleeding.—Arterial; Venous; Capillary. (1) Direct Pressure on Bleeding Spot. (2) Elevation of Wounded Part. (3) Compression of Main Artery by Fingers, Tourniquet, or Forcible Flexion. Removal of Constrictions. Use of Cold and Heat. Points where Arterial Circulation may be arrested by Pressure: Common Carotid Artery; Facial; Temporal; Subclavian; Brachial; Radial; Ulnar; Femoral; Popliteal.

Internal Bleeding.—From Nose; Lungs; Stomach; other Organs.

Extemporary Treatment of Wounds.—(1) Cleansing Wound. (2) Arrest of Bleeding. (3) Replacing Edges of Wound in Natural Position. (4) Dressing and Bandaging Wound.

Sprains. Strains. Contusions and Bruises.

Burns and Scalds.—What to do when the Dress catches fire. Burns from Corrosive Acids and Caustic Alkalies. Scalding of Mouth and Throat.

Fire.—Precautions. What to do when it breaks out.

Bites from animals. Insect Stings. Frost-bite.—Chilblains.

Foreign Bodies in Eye; Ear; Nose; Air-passages; Swallowed.

Fractures.—Simple and Compound. Prevention of further damage to the parts. Temporary Treatment of Fractures of Skull, Spine, Pelvis; Ribs; Lower Jaw; Upper Arm; Fore-Arm; Thigh; Leg; Knee-Cap. Improvised Splints, Bandages, and Pads.

Dislocations.—Prevention of Further Mischief.

Hernia or Rupture.

Laying out the Dead.

Helping, Lifting, and Carrying the Sick and Injured.

I. *One Helper.*—(a) To assist a Patient who can walk. (b) When Patient cannot walk: (1) in arms; (2) on back; (3) on shoulders.

II. *Two Helpers.*—(1) Two-handed Seat. (2) Three-handed Seat. (3) Four-handed Seat. (4) "Fore and Aft Carry."

III. *Lifting and Carrying the Sick and Injured on Stretchers or Litters.*—(1) Stretcher at Patient's Head. (2) Stretcher at Patient's Side. (3) In narrow Passages and Cuttings.

Improvised Stretchers and Seats. Use of Blanket, Rug, or Sheet.

Dr. CARLYLE JOHNSTONE, in submitting this syllabus of practical training for asylum nurses and attendants, said that it represented the scheme of practical

training for nurses and attendants which had been in use at the Melrose Asylum for some years. It must be clearly understood that it referred only to *practical* work, and was not intended to embrace those subjects which were more properly dealt with in lectures and exhortations or set forth by precept or example. It was, in brief, nothing more than a printed list of those matters which pertained to an *asylum nurse's handicraft*. As he had found it useful in more ways than one, he commended it to their favourable consideration. It would be admitted, he thought, that, if their people were to be regarded and designated as *nurses*, as distinguished from the *attendants* and *keepers* of old times, they were bound to do all they could to give them such a training in the *practice* of their profession as would make them *good general nurses* in deed as well as in name. He used the term *general nurse* for want of a better word. They could not, of course, attempt to give them the training of a first-class hospital nurse; they could not expect them to possess the special skill of a surgical, an obstetrical, or other special nurse; but they ought to be able, he thought, to give them a practical training in those methods and operations which were common to all nurses worthily so-called, and in addition to that they must, of course, give them that special training which was necessary in that special line of the nursing profession which they followed. The question was what subjects should be included within the scheme of such a practical training and what should be excluded. Probably no two asylum physicians would, if it were left to them to prepare a scheme, be in perfect agreement as to all its details; but he thought it would be found that those who had personally devoted much of their time and energies to this question would differ only on a few points, and these not serious ones. At any rate, he ventured to think that in the scheme which he now presented to them nearly everything that was necessary had been included, and that very few things had been put in which ought to have been left out. It was not claimed that the scheme was perfect or final. It was only claimed for it that it had been very carefully drawn up in the light of a considerable experience, and that in practice it had been found to work well. Any suggestions for its amendment would be gratefully received, and would be given effect to when the form was reprinted. He thought he might add that, if an asylum nurse was taught to do, and showed herself able to do, all the things enumerated in this syllabus, they need not be ashamed to designate her, within these limits, a *trained nurse*. It would be noticed that, as he had said, the syllabus was merely a list of subjects, a detailed list arranged in a convenient order, but free from any descriptions or explanations. It would be of no use to the nurse for "cramming" purposes. It would be of no use to the teacher who did not mean honestly to teach; but it might prove very useful as a reminder to the nurse of those things which she ought to know how to do, and it might prove of some use to the teacher as a reminder of those things which he ought to teach the nurse how to do. The general adoption of that or some similar scheme might be expected to result in further and perhaps equally important advantages. Most of them thought that our nurses should not only be trained, but that they should also be examined, and many of them desired that they should obtain the Certificate of the Medico-Psychological Association. Now, although the regulations of the Association were in many respects excellent, he feared it must be confessed that as regards the *practical training* and *practical examination* of candidates they were by no means thorough or satisfactory. It was not too much to say, he thought, that it was quite possible for a candidate to obtain the certificate on the strength of her possessing a sufficiently complete remembrance of the contents of the Association's Handbook and without her being required to demonstrate that she had received anything like a thorough practical training in nursing handicraft. The syllabus of the Association was so slight and so vague as regards practical requirements that, even though candidates might have been thoroughly well trained, examiners must either fix an arbitrary standard for themselves (and so run the risk of giving offence and of acting unfairly), or they must regard the practical training and examination as of secondary importance, with the result, he feared, that many of their certificated nurses must sooner or later bring discredit upon the Association by the exposure of their deplorable incapacity as *nurses*, as the term is understood by the public and by the medical and nursing professions. He suggested that a detailed scheme of practical instruction such as he had pre-

pared, should be laid down by their Association, and that the Association's examiners should be instructed to make use of it as their standard and guide in conducting the practical part of the examinations. If that was too much to expect of the Association, then he ventured to suggest that members should individually give his syllabus a trial.

The CHAIRMAN thought this was a most useful and important production by Dr. Carlyle Johnstone and a very useful guide in the training of nurses.

Dr. RORIE said that the Division was very much indebted to Dr. Carlyle Johnstone for having brought this before them, because in all cases where he had had an examination in connection with nurses and attendants he had found that practical experience was the weak point in their training. Dr. Carlyle Johnstone had kindly sent him a copy some time ago, and as imitation was the best compliment, he had borrowed very freely from it in the classes trained at the Dundee Royal Asylum. Some years ago, in the cookery class, he had issued a small syllabus of a similar nature, and it had been a great stimulant to the teaching. He thought this a very important matter, and would be very glad if the Division could see its way to adopt Dr. Carlyle Johnstone's syllabus, and if some such scheme were drawn out and fixed by the authority of the Association.

Dr. CAMPBELL CLARK said that he had often been in the minority in discussing the real nature of the training of attendants and nurses. He had tried time and again to get the Association in committee to realise that a practical examination was the all-important thing for the certificate of the Association. He thought it was deplorable that many had obtained their certificates who could not make a poultice. He had had one such nurse who came as a charge nurse, and had never given an enema in her life. He had got a copy of Dr. Carlyle Johnstone's syllabus some considerable time ago, and he had gone over it and had made a few excisions before putting it into use, but was not able to speak of the results yet, because it had only been in operation for a few months. Dr. Carlyle Johnstone was undoubtedly on the right lines. The only question was as to whether he was not going too far, for instance, in training a nurse to deal with insect stings and frost-bite. A nurse might never have occasion to treat a patient for insect stings and frost-bite. There were many things in the present training which he would call more ornamental than useful, and which might be left out. He would, however, be prepared to agree to make it a *sine quid non* that everyone who went in for training in asylums should go through this syllabus and be examined on the subjects contained in it.

Dr. HAVELOCK thought that this was a most admirable syllabus drawn up by Dr. Carlyle Johnstone. It comprised what they taught the attendants at Sunnyside before they were put forward for examination. It was so admirable that he would suggest that they should extend it and altogether abolish the Red Book, which was the greatest stumbling-block in the way of training. Those who had had the advantage of a fairly good education had to read it over a few times before they grasped the meaning of it. Like a certain book published by a certain learned professor, it was so crammed full of knowledge that they had to read every paragraph five or six times before they fully understood it. He thought that they had gone wrong in teaching attendants what they could not understand, and it was very discouraging to them when they sat down to answer the questions set. For instance, "What is sleep?" How could they expect anybody to answer that? It would puzzle most professional men. The invariable reply was, "Closing for repairs." He thought that the person who gave that answer should get full marks, for he had learned that from the Handbook. If they could leave out these difficulties, which they did not understand, and which he confessed he did not understand himself, they would do well.

Dr. CLOUSTON said he desired to add his emphatic testimony to the value of this practical syllabus. He remembered very well the first occasion on which Dr. Johnstone did him the favour of coming up as an examiner, and had been impressed by his thoroughness and by the practical way in which he took the candidates over their work. He did not think he had ever seen any one, in the great number of gentlemen who had assisted him, who was so practical and so very thorough. He was not going the length of Dr. Havelock in consigning the Red Book to perdition; he thought the Red Book was in itself valuable. It was like the Ten Commandments, an ideal of something to be aimed at, and it was well to

give nurses and attendants an opportunity of learning something about theory as well as about practice. It gave them an intellectual fillip and made them have more conceit of themselves, which was a good thing if not pushed too far. Anyone who had been teaching them, especially by clinical examples, and who had endeavoured to explain the higher department of medico-psychology, must have been very much pleased with the interest shown. Of course that was still on practical lines. He would never think of delivering a lecture on the more advanced topics in the Red Book without giving a clinical exposition in regard to the practical matters. He was prepared to join in a recommendation that this syllabus should be homologated in a general way by this meeting of the Division, and he would strongly urge that it should be added to the next edition of the Handbook, although it might be adopted before waiting for that event. They were infinitely indebted to Dr. Johnstone for the trouble he had taken, and he made certain that there was not a doctor in any asylum who would not heartily welcome such an addition to the Handbook, and who would not heartily thank Dr. Johnstone for having drawn up this syllabus.

Dr. WATSON said that the syllabus would be a help to medical officers. It was a matter of great difficulty to get many nurses to understand their teaching, their early education having been so defective. They were exceedingly indebted to Dr. Carlyle Johnstone for leading them in the way of practical teaching.

Dr. GRAHAM said that Dr. Johnstone's syllabus seemed to show practically what would be proper instruction to attendants to entitle them to be raised to the grade of nurses. He did not suppose that in an asylum the superintendent would always have clinical material at hand. He must take the cases as they came. There was far too much lecturing in medical education, and he thought that Dr. Johnstone's scheme could be applied by superintendents in the ordinary work of asylums.

Dr. CARLYLE JOHNSTONE, in reply, desired to emphasise the point that all the items in the syllabus were meant to be dealt with in a practical way. The theory was to be explained in each instance, but the teacher must see that the thing was actually performed. The subjects were divided into convenient groups, but the syllabus could be taken up at any point. At Melrose they generally began with bandaging, as being the simplest and most practical introduction to nursing handicraft, and they found that they could go over the whole syllabus in one year, or two years at most. While he had tried to make the syllabus comprehensive, it would not be found in practice, he thought, to present any serious difficulties, or to take up too much time. He devoted one or two hours in the evening once a week for about nine months in the year to teaching his staff, practical demonstrations alternating with systematic lectures. Much of the practical work was, of course, taken up in the wards as opportunity occurred. The training was compulsory, but the staff were not obliged to go in for the Certificate of the Association, though they were encouraged to do so. Each superintendent must arrange his course of instruction in the way most convenient to him. With a small staff of medical officers there would always be difficulties in regard to the division of nurses into seniors and juniors, overlapping of lectures, etc.; but by the systematic use of a suitable practical syllabus it could be secured in every institution that within a given time every nurse should receive a practical training and understanding of all those matters which were proper and necessary for her calling. He had always maintained that this practical training was of the first importance, and that mere lecturing was of quite secondary value. While he was of opinion that a syllabus such as he had prepared would be found most useful both to teacher and to pupil, he had no desire to impose it upon the Association as compulsory under the regulations. He would be quite satisfied if it were printed in the JOURNAL, and if the members individually would give it a trial. They might add to its contents or take from them what they chose; but he did not expect that they would find that it required much alteration.

Dr. URQUHART undertook that it would appear in the April number of the JOURNAL, and that copies could be got through Dr. Turnbull.

THE NEW SYSTEM OF NIGHT NURSING.

Dr. G. M. ROBERTSON read a paper on "The New System of Night Nursing," which was followed by a discussion.

LABORATORY OF THE SCOTTISH ASYLUMS.

Dr. CLOUSTON, on behalf of the Committee, made a statement regarding the work of the Pathological Laboratory. He mentioned that under the supervision of Dr. Ford Robertson the work is proceeding very satisfactorily, and that it is proposed to remove the laboratory from the buildings of the Royal College of Physicians to those of the Royal College of Surgeons in the course of the summer. He hoped that all the asylums of Scotland would be induced to join, on special efforts being made by those of their colleagues who had not as yet been successful in persuading their committees to support an institution of which they could not but approve.

A vote of thanks was given to Dr. Rutherford for presiding, and the meeting then closed.

PARLIAMENTARY NEWS.

LUNACY BILL.

The Bill to amend the Lunacy Acts, introduced by the Lord Chancellor and read a second time in the House of Lords on February 12th, is a measure consisting of 31 clauses and two schedules. It deals with such subjects as urgency orders, judicial authorities, and reception orders, the removal of lunatics to work-houses, disqualifications for signing medical certificates, visits to licensed houses, powers of dealing with the property of lunatics, the reception of boarders, the management of hospitals and their branch establishments, compensation to asylum officers for injury sustained in the discharge of their duties, the temporary care of incipient lunatics, and the jurisdiction of Masters in Lunacy. With regard to urgency orders the provisions are that the currency of the order shall be reduced from seven days to four, and that every order shall be accompanied by a statement, to be made and signed by the person who signs the order and by the medical practitioner who signs the medical certificate on which the order is founded, that it is necessary for the safety and proper treatment of the alleged lunatic or for the safety of others that he should be forthwith placed under care and treatment, and showing fully and specifically the reason why an order of this description is required. The disqualifications for signing medical certificates in support of a petition for a reception order are extended considerably. They are made to apply among others to persons in the employment of the licensee. Certain amendments have been introduced, as has been explained on p. 312, and the Bill has now been introduced into the House of Commons. Among the additions made in the House of Lords are a provision that the judicial authority shall in his report to the Commissioners state definitely whether in his opinion the detention is or is not proper, and another to the effect that the power of two or more local authorities to agree to unite in providing and maintaining a district asylum shall be construed as including a power to unite in providing and maintaining a laboratory for pathological research in connection with lunacy.

THE INEBRIATES ACT IN SCOTLAND.

There is in course of passage through the House of Lords a bill designed to strengthen the administration of the Inebriates Act in Scotland. It confers on the local authorities increased powers of assistance for the establishment and maintenance of inebriate reformatories, and it makes eligible for committal to these institutions persons convicted of drunkenness and disorderly conduct in a public place.

HOMES FOR INEBRIATES.

In answer to a question by Sir Charles Cameron, who called attention to the complaints of magistrates as to the want of homes except for Roman Catholics, the Home Secretary informed the House that the complaints were made under

some misapprehension as to the facts. In reality, 100 females and two males have been committed to, and received in, certified reformatories, and of these fifty-nine are Protestants. More accommodation is needed, and action is being taken by many local authorities with a view to providing it.

RECENT MEDICO-LEGAL CASES.

REPORTED BY DR. MERCIER.

[The editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Reg. v. Flower.

James Flower, 37, greengrocer, was indicted for the murder of his wife. Prisoner appears to have been a sober man until a month before the murder. He then lost a horse, which he said drove him to drink. About midnight on November 2nd the prisoner was found in his shirt and drawers in the street by a policeman, to whom he said, "I've murdered the missus. She has poisoned my life. I have killed her." The woman was found dead from a wound in her throat. It was proved that since he became addicted to drink he had had suspicions of his wife's fidelity, had persisted that there was a man in the cellar, and had become very strange. Three doctors deposed that a few days before the murder he had visited them, and was then bordering on delirium tremens, and to one of them he had stated that his wife was poisoning him. Dr. Hunt, medical officer at the county gaol, said that on the day after the murder the prisoner said that someone was trying to murder him; that his head had been examined, and that the man who examined it was offering large sums of money for it. Subsequently he had said that his wife was concerned in a plot against him, and had been offered a large sum to poison him. Dr. Spence, of Burntwood, said that at the time Flower killed his wife he might have known that he was doing a wrong act, but he might have believed that there was some conspiracy against him, and that he had to defend himself against his wife. He would not know that he was doing a wrong act in the same way that a sane man would know. The judge (to prosecuting counsel): "On this evidence is it possible to submit to the jury that this is a case of wilful murder?" Guilty but insane.—Stafford Autumn Assizes, Dec. 4th—Mr. Justice Mathew.—*Times*, Dec. 7th, and *Manchester Guardian*, Dec. 5th.

The brief period for which this prisoner had been drinking complicated the case. If the murder had been committed after a single day's debauch he must have been found guilty of murder. If he had been drinking for months the jury would have had no difficulty in finding him innocent. But the fact that his drunken habits had lasted for only about a month made it difficult to decide whether the act was the outcome of ordinary drunkenness or of alcoholic insanity. No doubt the well-marked delusions saved him from the gallows.

Reg. v. Beddoe.

John Beddoe, 24, gunner in the militia, was indicted for the murder of a comrade named Hammett. Prisoner was a recruit, and was somewhat lacking in intelligence. He was made a butt of by the other men in the regiment, and orders had been given that if anyone molested him he was to be put in the guard-room, and he had been put in a tent next the company sergeant-major, so that the latter could keep an eye upon him and see that he was not bullied. He was in a tent with five other men, one of whom (the deceased) began to sweep the floor at a time when the prisoner was standing near the tent pole, upon which hung the belts and bayonets of the men. As deceased was sweeping he came near the prisoner, and told him roughly to get out of the way, at the same time giving him a blow on the shin with the broom. The prisoner immediately snatched one of the bayonets from its scabbard and, with a back-handed blow, plunged it into the right side of the deceased, who died shortly afterwards. The prisoner appeared stupefied when he saw what he had done, and upon being asked what had happened said "I have stabbed him." Subsequently he said, "I was cleaning my bayonet and he fell upon

it; it was his own fault." In summing up the judge drew attention to the evidence as to the prisoner's lack of intelligence, and pointed out the provocation received might have affected him more strongly than it would a person of ordinary mental calibre. Guilty of manslaughter. Three years' penal servitude.—Carmarthen Assizes, Mr. Justice Bucknill.—*Times*, Nov. 11th.

This case is notable for the recognition, still too rare, although it is gradually increasing of the principle of partial or limited responsibility. It is natural, and it is pleasing to find this principle recommended by a judge so enlightened and so well grounded in psychology as Mr. Justice Bucknill.

Reg. v. Jennings.

Robt. Jennings, 60, labourer, was indicted for the murder of his wife. The jury was first impanelled to try whether he was fit to plead, and decided in the affirmative. Prisoner was seen holding his wife under water. The man who witnessed the occurrence got the woman out of the water and ran for assistance. Another man came up and prevented the prisoner from further injuring his wife, and there was a struggle between them. Other men came up and prisoner fetched a gun, which he pointed at them, and they ran away. Prisoner then took his daughter and carried her towards the water, but stumbled over the body of his wife, and the daughter escaped. He then jumped into the water and pulled his wife after him, and held her head under water. Guilty, but insane.—Cambridge Assizes, Mr. Justice Ridley.—*Times*, Jan. 1st, 1900.

Reg. v. O'Byrne.

Thomas O'Byrne, 29, labourer, was indicted for the murder of his brother-in-law, James Pullan. Prisoner and deceased had a trifling quarrel, in the course of which prisoner leaned over a table that stood between them and stabbed the deceased in the chest with a small knife, of which he died. Pullan said, "Oh! Jim, I did not think you would do that." Prisoner replied, "I am sorry; I should not have done what I did." Both were in drink at the time. His lordship's charge to the jury is well worthy of being recorded: A state of drunkenness deliberately produced was no defence for any crime whatever. When, however, the existence of a certain intent—that is of positive mental activity—was of the essence of an offence, and drunkenness disabled a prisoner from forming any intent at all, it clearly disabled him from commission of that particular offence, simply because a material element in it was lacking. It was for the jury to decide whether the prisoner was in such a condition as to intend to commit serious bodily harm on the deceased. It was worthy of notice that the police officer who arrested the prisoner did not charge him with the offence because of his drunken condition. Guilty of manslaughter. Liverpool Assizes.—Mr. Justice Kennedy.—*Times*, Dec. 4th.

The jury did not share the very humane and enlightened view of the judge, but found prisoner guilty. The problem of when, and under what circumstances, and how far drunkenness, or rather the effects of drink, are an excuse for crime, is an extremely difficult one. It is admitted that ordinary drunkenness is no excuse, and it is admitted that delirium tremens and the permanent insanity due to alcohol do form valid excuses. The difficulty arises in cases of brief debauchery, which occupy an intermediate position. In dealing with these cases the charge of the judge in this case will be of great assistance.

A curious case has occurred at Manchester, in which a man was indicted for the murder of his wife and acquitted. Subsequently he confessed the crime, but of course he could not be again tried. He was, however, brought before the magistrates by his own physician, and while under arrest he appeared to be insane. Having been already acquitted of the crime the magistrates had no jurisdiction over him, and he was discharged and re-arrested at once as a lunatic wandering at large.—*Manchester Guardian*, Feb. 13th.

Charleston v. Steward.

Jessie Charleston sued David Steward for breach of promise of marriage. Among other grounds of defence was that several relatives, both on the father's and mother's side, had suffered from insanity. There was no suggestion of insanity

in the lady herself, but only in members of her family. The Sheriff Substitute had held that these averments were irrelevant, and that the defender had no case. The defender appealed. The procedure of the Scottish courts is a little difficult to follow. The appeal was allowed and the case sent for trial, but at the same time the Court of Appeal abstained from saying whether the plea was relevant or no.—Court of Session, June 8th.—*Scotsman*, Jan. 10th.

Redfern v. Gough.

Joseph Lamb, the testator, was admitted into Cheadle Asylum in 1891, and was discharged therefrom in March, 1892. Shortly afterwards, finding that his mind was again becoming affected, he voluntarily returned to the Asylum, where he remained. In March, 1894, he was desirous of making a will, and Drs. Rayner and Scowcroft were of opinion that he was competent to do so. The will was correctly made and executed in the Asylum. It was now admitted to probate by Mr. Justice Barnes.—*Manchester Guardian*, Nov. 18th.

REPORTED BY DR. PERCY SMITH.

Bedford v. Jackson.

The following case, in which a will made by a patient while insane was upset and probate of an earlier will was granted, seems worthy of record, if only for the fact that at the formal trial in the Probate Division of the High Court no attempt was made to dispute the evidence of insanity or to uphold the will made while the patient was insane.

H. B—, æt. 86, was said to have been "eccentric" for years; to have been in the habit of going out always with an umbrella up, so that people should not see him, and on one occasion to have wired to his brother, asking him if he were of sound mind, when there was no reason to doubt this.

He had some property, which he managed jointly with his brother and nephew (a solicitor), but which the latter managed for him from 1892 to 1896. During this period the "eccentricity" continued. He used to keep the blinds down in the front of his house and the front door permanently shut. He used to keep one part of the house entirely to himself, only allowing the servant in for cleaning purposes, and then locking himself in. People used to call him "the old lunatic," and at one time he spoke of complaining to the justices about this.

By a will made June 22nd, 1892, he benefited his relatives, and there was nothing unreasonable in its contents.

In 1896 he changed in his manner to his nephew, who, on visiting him, found that he locked himself in his rooms, and that it was very difficult to obtain access to him. He asked his nephew if he was "better," and said, "You have been mentally afflicted," though there was no reason for this. He ceased to pay the share of rents received to his nephew, on the ground that the latter could not give a valid receipt, and this continued for three years.

In March, 1899, his nephew visited him at the express request of the rector of the parish, as his condition was becoming notorious. When his nephew appeared he called him an "impostor," and on his nephew's visiting-card, which was afterwards found among his effects, he had written "from an impostor, March, 1899." He also called his nephew and the latter's brother "thieves and lunatics," and then shut himself up in his room.

On July 2nd he is said to have stood in the road shouting out that the passers-by were "lunatics." He had a hammer in his hand, with which he was striking the doors and fences. He is said also to have called ladies "whores and prostitutes." About this time he also violently assaulted an old man, and had to be forcibly removed from him.

On July 3rd he went to a new solicitor, having quarrelled with the one who had acted for him before, and made a new will, ignoring his relatives and leaving his property to charities.

On July 12th, having become more excited and violent, he was certified, and was sent to the Holloway Sanatorium. While there the excitement passed off, but he continued to be insane; did not realise the nature of the institution, nor that he was under medical care; continued to believe that his brother and his nephew

were insane, and when the latter visited him said he was an impostor. He also said that the person who visited him there (the nephew) was not the same individual who had visited him at his home; that he could with difficulty recognise that his doctor who visited him there was the man he really knew; and that the house of a neighbour was an asylum. He acknowledged that he had made a fresh will, and said that it had now received the sanction of the Lord Chancellor, "or whoever was the proper authority." He died in the institution on October 18th, having become demented.

A "caveat" was entered against the will made in July, 1899, and another was also entered by the executors of the will of 1899. The money having been left to charities and not to individuals, it became the function of the Attorney-General, as representing the public, to consider the facts on behalf of the charitable bodies to whom the property was left. On consideration of the proofs which could be produced of the patient's insanity during the previous three years, the evidence of insanity shown in the medical certificates and in my report of his condition on my visit to him at the Holloway Sanatorium, on July 26th, 1899, the Attorney-General concluded that the evidence of insanity at the time when the will of July 3rd, 1899, was made was so strong that there would be no likelihood of its being successfully upheld, and therefore he decided not to oppose probate of the will made in 1892.

The case was brought before the Probate Division on February 12th, 1900. Evidence was given by the clerk to the firm of solicitors who prepared the will of 1892 as to due execution of such will; by the nephew as to the deceased's insanity in March, 1899, and in July before his admission to the Holloway Sanatorium; and by me as to his insanity at my visit. No evidence was brought forward in favour of his being of sound disposing mind in July, 1899, and the judge found that he was insane at the time of execution of the second will, that of 1892 being allowed to stand.

In this case the evidence of such insanity as to vitiate the will of 1899 was so strong that there was no case on the other side. The patient's mind was so possessed by the delusion that his relatives were insane that he was unable to take their claims into consideration. It will be noted that there was evidence of "eccentricity," not improbably amounting to insanity, existing at the time of execution of the first will; but apparently the testamentary capacity had not been affected by it.

APHASIA AND WILL-MAKING.

An interesting case, lately heard in the Probate Court before the President, Sir Francis Jeune, is noticed as an occasional article on p. 320.—Ed.

ASYLUM NEWS.

THE COST OF ASYLUMS.

The London County Council lately considered a report by the General Purposes Committee upon the increased cost over the estimates of the Bexley and Horton Asylums. It appears from the discussion that the "estimates" were rather of the nature of a sum which, at the time, it was hoped might prove sufficient, and was rather intended as a check upon extravagance than as a figure arrived at by measuring up of quantities and the careful analysis of specifications. The Committee of Inquiry assert that there has been good value for money, and that the urgent demand for accommodation, and the excessive cost of boarding cases out of London, justified the pressing forward of the erections with as little delay as possible. Comparing the cost per head at the Bexley Asylum with that at other recently constructed asylums, it is clear that the actual cost has not been excessive. At Claybury the cost per bed was £236, at the new West Somerset Asylum £377, while the projected North Stafford Asylum is estimated to cost for the building alone £280 per bed. It is stated that the Asylums Committee is considering the propriety of varying the stereotyped plan of erecting huge palatial buildings for the insane in favour of detached residences.

THE PRIVATE CLASS OF INSANE.

The London County Council has recently announced to medical practitioners that it has provided accommodation for about sixty female patients having a legal settlement in the county of London at the Manor House, Horton, Epsom, at a weekly charge, as at present fixed, of 15s., exclusive of clothing and special luxuries. Full particulars can be obtained from Mr. R. W. Partridge, clerk of the Asylums Committee. At the Claybury Asylum provision is also made for private patients who can claim a settlement in the county of London at a charge of 30s. a week, and for others at a charge of £2. This action of the London County Council has our hearty approval. Similar arrangements have been made in other counties, and the results have proved satisfactory in affording most needful accommodation to the poorer class of the private insane.

HOURS OF DUTY OF ASYLUM ATTENDANTS.

Another report brought before the London County Council by the Asylums Committee, dealt with the hours of duty of the nursing staff. It recommended that no reduction should at present be made. Day attendants are on duty fourteen hours (6 a.m. to 8 p.m.) for six days a week. One day a week is allowed off duty, and twelve days annual leave is granted. Night attendants are on duty for ten hours per diem. Any attempt to introduce a system of three shifts of eight hours each is regarded as impracticable, and the superintendents are unanimous against the reduction of the daily hours of duty. To allow two days off a week would cost £17,600 per annum, and would mean the enhanced weekly cost for each patient of 10s. 5d., instead of 9s. 11d., as at present. The Chairman of the Committee, after defending the report, concluded by offering to take it back for further consideration. The general opinion appeared to be against fourteen hours duty a day—at any rate in some of the most exacting wards,—and the Council seemed to doubt whether all possible methods of effecting reduction had received due consideration at the hands of the Asylums Committee.

We do not learn, however, that any suggestion of a way out of the difficulty was made. A committee of the Scottish Division is at present considering this and similar matters of importance in regard to administrative details, and a special meeting will be called to receive their report on Saturday, the 2nd June. We trust that there will be a full attendance when these questions come up for debate.

DEFICIENT ASYLUM ACCOMMODATION IN LANCASHIRE.

At the meeting of the Bolton Board of Guardians on November 23rd the Chairman called attention to the provision for lunatics in the Bolton Union. At the present time, he said, the asylums in Lancashire were full, and it was necessary to send imbeciles into other counties. There were 611 lunatics in the Bolton Union, and of these 557 were in Lancashire at the asylums of Prestwich, Whittingham, Lancaster, Rainhill, and Winwick, and 54 were outside, including 20 in Hull, 6 in Birmingham, and others in Ipswich, Carmarthen, Derby, Northampton, and elsewhere. Not only was the inconvenience entailed by the distance very great to the officials of the Board and the relatives of the lunatics, but the question of cost was very important. The expense at Prestwich, for example, was 8s. 0d. per week for each lunatic, whereas at the asylums in other counties something like 25s. was the charge imposed. He moved—"That the Bolton Board of Guardians respectfully suggests that the Lancashire Joint Asylums Board should make provision, either temporary or otherwise, for lunatics belonging to this Union at present placed in asylums outside the county." The new asylum at Winwick would on its completion be entirely filled. They ought to build another large asylum, but so far as he knew they had not commenced. It took about five years to build an asylum, and therefore for several years to come they in Bolton would be under the necessity of sending lunatics all over the country. That some temporary accommodation, at least, should be provided, was a very reasonable request. The resolution was adopted.

At the quarterly meeting of the Lancashire Asylums Board held on August 24th, letters were read from the guardians of the Prestwich, Rochdale, Stockport, and

Chorlton Unions complaining of the lack of accommodation in the asylums of the Board. The Chairman said that the letters pointed to the fact that before long they would have to look out for a site for a sixth asylum. The Winwick asylum would not be finished for eighteen months or so. The provision made for epileptics and harmless cases differs much in different unions. Blackburn deserves commendation, for with 908 inmates in the workhouse provision has been made for 187 of these cases. The Bolton guardians "were, perhaps, the worst offenders in this respect, for with 1156 inmates in their workhouse they provided for 18."

At the meeting of the Chorlton Union Board on September 1st, the Chairman, Dr. J. M. Rhodes, stated that the proportion of paupers in that union was 1 in 52 persons, the average for Lancashire being 1 in 53, while that for England and Wales was 1 in 39. He thought the figures showed that there was a large amount of thrift, and that the people in the district were improving in social position, but those statistics relating to lunacy were a matter for regret. In the Lancashire workhouses they had only an increase of 220, but the number in the asylums had risen from 7930 to 8561. The Chorlton Board provide for their own harmless imbeciles and epileptics, and there are 306 in their own workhouse. He was sorry that some unions did not make similar provision, for it was unjust to such unions as Chorlton, Blackburn, Prestwich, Manchester, and Salford, and though they had been asking for justice on this question for many years "the Local Government Board turned a deaf ear to all they had to say." One of the guardians said that the question of providing temporary accommodation for lunatics should be constantly impressed on the Lancashire Asylums Board. Dr. Rhodes stated that the increase of insanity was such that according to some of the best authorities they ought to be building a new asylum every year.

A similar difficulty exists in Cheshire. Although £90,000 were lately spent in enlarging the Upton asylum at Chester, proposals have been recently made to grant £70,000 for the enlargement at Annet. The plan consists of a detached infirmary for 206 patients, an epileptic ward for 50 patients, and a nurses' home.

LANCASHIRE ASYLUMS BOARD RATE.

In the Court of Appeal, 22nd January last, judgment was given in the case of the Lancashire Asylums Board *v.* the Manchester Corporation as to whether the Lancashire Asylums Board in estimating the amount required by them annually from the county of Lancashire and the county boroughs therein, should divide it between them in proportion (1) to their assessable value, or (2) according to their rateable value under the Agricultural Rates Act, 1896. The Asylums Board contended that it was now their duty to take as the basis of the division to be made by them the assessable value of the county and county boroughs as specified by the Rating Act of 1896, in place of the rateable values as calculated under the Local Government Act, 1888. The Corporation of Manchester, however, contended that these assessable values have no operation except for the levying of rates, and that as the Asylums Board was not an authority for levying rates they ought to base their calculations on the rateable values found as they were before the passing of the Rating Act, 1896, which, as they contended, operated on the amount so apportioned to each council after it was so apportioned and not before. The Court answered question one in the negative and question two in the affirmative. The appeal of the Corporation was therefore allowed.

IMBECILE CHILDREN IN LONDON.

It would seem from a complaint by the Shoreditch and St. Saviour's Board of Guardians of the "grave inconvenience and annoyance" caused by the lack of accommodation for imbecile children, communicated to the Metropolitan Asylums Board, that further provision for this class is required. It is to be hoped that the educable imbeciles at Darenth (about 400 in number) will be separated by removal to a distinct establishment. The operation of the new Act relating to defective children will have an effect upon this question, and more time should not be lost in setting to work.

OPERATIONS ON THE INSANE IN ASYLUMS.

The Paris correspondent of the *Lancet* reports that this question has been under discussion at the Society of Legal Medicine, the subject having been introduced

some six months ago in an important paper by M. Picqué and M. Briand. They came to the conclusion that the surgeon should only interfere in cases of absolute urgency. M. Leredu, a barrister, sent in a report to the Society on the question formulated as follows:—"Is a surgeon within his rights in performing a surgical operation upon a lunatic without the consent of the patient's relatives?" He answered in the negative, except in a case of absolute urgency. A lunatic is unable to give consent; it is his relatives who must give consent to the operation. But the relatives may refuse consent, possibly from fear of an unsuccessful result, or, on the other hand, with the deliberate wish to deprive a person who is a disgrace and expense to them of a chance of life. Again, the relatives may not choose to answer, or the lunatic may have no relatives. It is, then, the legislature that must be asked to supply an answer to the question. It would be easy to settle it by an enactment drawn in some such terms as these: "When a surgeon is of opinion that surgical interference is called for in the case of a person who is an inmate of a lunatic asylum, he shall obtain leave to operate from the relatives of the patient. In case the relatives refuse, the director of the asylum shall at once inform the Procureur of the Republic. This official shall put the tribunal in possession of the facts, whereupon it may rule the case to be one of urgency and the proposed operation to be a last resource, making the order in the *Chambre de Conseil*, after having referred the matter, should it think fit, to medico-legal experts for an opinion as to the propriety of surgical intervention." M. Picqué, in supporting the opinion of M. Leredu, showed how difficult it was to obtain a really valid consent from relatives. In twenty cases where he applied for leave he received but one answer. The disagreeable consequences (which may arise to a surgeon through operating without consent) being taken for granted, M. Picqué would only dispense with such consent in the three following instances: suffocation, strangulated hernia, and arterial hæmorrhage. There might be others, such as metrorrhagia and conditions associated with the urinary organs, but so long as the matter was not settled, either by statute or by a resolution of the Society, he would not interfere, unless he had some authorisation in writing, for fear of incurring both moral and material responsibilities, which in France were very grave. If the patient were to die his relatives, who had shown themselves absolutely indifferent when permission was asked of them, would not hesitate to claim damages and to attack the surgeon in the public prints. Even if the operation were successful the surgeon would not be free from the risk of disagreeable consequences. In the discussion which followed, without any conclusion being then arrived at, it was curious to see the legal members, among whom was M. Jacobi, the Advocate-General, giving their opinion that it was right for the surgeon to operate if he thought it necessary, even against the wishes of the relatives, while the medical members were less bold and demanded some legal protection to cover their responsibility. As a matter of fact, despite the philanthropic and philosophic views of individual members of the magistracy, the medical profession know only too well how of late these very magistrates have, when sitting in court, shown themselves both severe and unfair towards medical men, and how ready they are to entertain complaints from the relatives of patients against their medical advisers.

WOUNDED SOLDIERS IN SCOTLAND.

We note that the Board of Directors of the Crichton Royal Institution, Dumfries, have offered to accommodate ten wounded soldiers from South Africa, preferably men suffering from nervous disorders.

AFTER-CARE ASSOCIATION.

The annual meeting was held on February 19th, at the house of Dr. Blandford, who presided. The Chairman, in his introductory remarks, pointed out that the main object of the Association was to help those who had left asylums recovered from an attack of insanity to make a fresh start in life; and this was the more necessary as mental illnesses were often matters of months, not days or weeks, and consequently situations could not be kept open for the sufferers, as they were some-

times for hospital patients. The Secretary (Mr. Thornhill Rexby) then read the annual report, from which it appeared that, during 1899, 222 cases had been before the council, the largest annual number ever dealt with. Cases had been assisted, as in the past, by being boarded out in cottages in the country, by grants of money, and by finding occupation. The investigations involved had been of an onerous character. The failures had been comparatively few. Boards of guardians had availed themselves largely of the help of the Association, and in some few cases they had subscribed to its funds. The total amount of subscriptions, donations, and contributions for maintenance was £549 8s. 1d., a falling-off from the previous year, when they amounted to £652. In moving the adoption of the report, Dr. G. H. Savage remarked on the difference between hospital and asylum patients, and the usefulness of such a society to bridge the gulf (too often exaggerated by popular prejudice) between "alienism" and the ordinary conditions of social life. The Association had done valuable work in two directions—in confirming health, and in preventing relapse. The resolution was seconded by the Rev. Dr. Springett (Vicar of Brixton), who bore personal testimony to the admirable character of the agencies employed by the Association, and having been supported by the Rev. W. St. Hill Bourne and by Dr. Shuttleworth, was carried unanimously. Dr. Percy Smith moved, and Mr. Deputy White seconded, the reappointment of the council and officers of the Association, and the meeting concluded with a vote of thanks to the Chairman, moved by the Rev. Henry Hawkins, and seconded by Dr. Rayner. The offices of the Association are at Church House, Dean's Yard, Westminster, S.W.

HABITUAL DRUNKENNESS.

The Inebriates Act of 1899 was passed just before the close of the session to remedy a defect of the Act of the previous year. But, although it has been remedied in regard to the expenses of prosecution, complaints are made by magistrates that it is practically a dead letter, and the Home Secretary has admitted that the accommodation provided is insufficient.

NEW SOUTH WALES BILL.

The New South Wales Bill, introduced by the Hon. Dr. J. M. Creed, passed the Legislature Council, and has been presented to the Legislature Assembly. The main provisions show an advance upon what has been done in this country. Under this Bill it is lawful for a judge or magistrate or the master in lunacy, and after the evidence of a medical practitioner and on inspection, to make an order as to the control of an inebriate.

On the application of—

(a) An inebriate or any person authorised in writing on that behalf by an inebriate while sober;

(b) The husband, or wife, or a parent, or a brother, sister, son, or daughter of full age, or a partner in business of an inebriate; or

(c) a member of the police force of or above the rank of sub-inspector acting on the request of a duly qualified medical practitioner in professional attendance on the inebriate, or on the request of a relative of the inebriate, or at the instance of a justice of the peace—

to order that the inebriate be placed under private or public treatment for a period not exceeding twenty-eight days; or be placed in a licensed institution for such period not exceeding twelve months, as may be mentioned in the order; or that the inebriate be placed for any period not exceeding twelve months, to be mentioned in the order, under the care and charge of an attendant or attendants to be named in the order, and who shall be under the control of the judge, master in lunacy, or magistrate making the order. . . .

Where an inebriate has thrice within the preceding twelve months been convicted for an offence of which drunkenness is a necessary ingredient, it shall be lawful for any Court of Petty Sessions to order that the inebriate be placed for such period of not less than six or more than twelve months, as may be mentioned in the order, in any institution which may be established by the Government for

the reception, control, and treatment of inebriates so convicted; and on the order of a Judge of the Supreme Court, or of a District Court Judge, or of the Master in Lunacy, such period may from time to time be extended for further periods not exceeding twelve months each.

Power is given to place these inebriates under immediate medical treatment in any convenient hospital, gaol, or private house, and to direct that the expense of the care, charge, and maintenance of the inebriate be paid out of any property of the inebriate, and to fix the amounts to be so paid, and the amounts so fixed may be recovered in any court of competent jurisdiction.

These directions may be given on orders varied, renewed, or rescinded, as those making the order may think fit.

A notable feature in the Bill is that the attendant shall be authorised to prevent the supply of intoxicants to any inebriate under his charge. Further, any such attendant who neglects to comply with any such direction shall be liable to a penalty not exceeding £5.

LANCASHIRE INEBRIATES ACTS BOARD BILL.

Sir J. T. Hibbert presided over an important conference of representatives of county and non-county boroughs held in Preston, on 29th January, for the purpose of considering a Bill for the establishment of a board for carrying out the provisions of the Inebriates Act in Lancashire.

In opening the proceedings, the Chairman said he experienced great regret that some time had elapsed in dealing with this subject. They were all acquainted with the difficulties of carrying out the plans which had been put forward for having a combination of the authorities of the county and non-county boroughs, and possibly the delay which had unavoidably arisen might in the end place them in a position to do more good—and that very likely with equal speed—than if they had been left to themselves under the present law, fighting the various central authorities in London in the effort to overcome the difficulties of their position. It would be remembered that at the last meeting resolutions had been adopted in regard to the course of procedure. He trusted that they would find it a successful endeavour to carry out the objects they had in view. He regretted to say that one county borough (Oldham) had declined to join in the movement. He trusted that if the Bill to constitute an Inebriates Acts Board for the County Palatine of Lancaster went through the House successfully—and he did not anticipate opposition from any person or authority; indeed, he hoped the measure would receive the support of the Home Secretary—it would be placed on the Statute Book before many months had passed. Granted that they were successful, it had been suggested that the first meeting of the board to be constituted under the Act should be held in November, but he looked forward to a gathering being held not later than August.

After discussion upon several clauses of the Bill, the following resolution was adopted:—"That this conference approves of the Bill as directed to be amended, and that the County Council proceed to the promotion of the Bill in Parliament." On the suggestion of the Town Clerk of Manchester it was decided to summon the conference after the Bill had left the House of Commons, in order that there might be a further discussion of its clauses if necessary.

The representation of the various authorities interested will, as provided by the Bill, be as follows:—Barrow, Bootle, Burnley, Bury, Rochdale, St. Helens, Stockport, and Wigan, one each; Blackburn, Bolton, Preston, and Salford, two; Liverpool, five; and Manchester, four.

The Bill says the Board will or may require to borrow £50,000 for the purposes of the Bill. It is provided that the term "entire county" shall mean the geographical county of Lancaster, and "county" the administrative county. There shall be in and for the entire county an Inebriates Acts Board, consisting of eighteen representatives of the county and twenty-five representatives of the contributory boroughs, and the Board shall be a body corporate. The eighteen representatives of the county are to be elected at the County Council's quarterly meeting in November, and representatives of contributory boroughs (who may or

may not be members of the Council) shall be elected at the corresponding meeting of the councils of the contributory boroughs. Members of the Board will hold office for twelve months. There is the usual provision as to members being interested in contracts, and a member of the Board elected by the County Council who ceases to be a member of the County Council also ceases to be a member of the Board. Resignation is effected by notification in writing to the clerk of the Board, and casual vacancies are to be filled by the Council by whom the vacating member was originally chosen. A member so chosen shall retain his office only so long as the vacating member would have done. Chairman and vice-chairman are to be elected annually, and the Board has full power in the appointment and payment of clerk and officers. Subject to the provisions of this Act, the Board shall have and may exercise all the powers of a local authority under the Inebriates Acts, 1879 and 1888, for granting, renewing, transferring, and revoking licenses to keep retreats under those Acts, and the Board shall be the sole local authority for the purposes of those Acts in and for the entire county exclusive of any county borough not at the time a contributory borough, and of any non-county borough which has established a separate inebriate reformatory. The Board may apply to a Secretary of State to certify a reformatory under the Inebriates Act of 1898, and may themselves undertake and contribute to the establishment and maintenance of such institution or institutions, and may acquire lands, erect or provide and maintain and furnish buildings, and generally may do all acts and things necessary or proper for the purpose. The Board may defray the whole or any part of the expenses of detention of any person in any certified inebriate reformatory, and may contribute to retreats to the same extent as the council of a county or borough may under the 1898 Act. The proceeds of the sale of any land acquired by the Board shall go to capital account. All expenses incurred by the Board in the execution of their duties shall be paid out of a fund to be called the Inebriates Board Fund, and all sums acquired by the Board shall be carried to that fund. Should such receipts be insufficient, the deficiency shall be raised by the county, and by each of the contributory boroughs. Before March 1st in each year the Board is to estimate the total amount required to be raised by contributions for the ensuing year, and that amount is to be divided between the county and contributory boroughs in proportion to rateable values. Contributions may be made retrospective, and any difference arising concerning the precept shall be referred to a single arbitrator. The financial year will end on March 31st each year, and a return of receipts and expenditure is to be forwarded annually to the Local Government Board. The Board will have borrowing powers for sums not exceeding in the whole £50,000, repayable as follows:—(1) Money borrowed for the purchase of lands, fifty years; (2) money borrowed for the erection of buildings, thirty years; (3) money borrowed for furniture and fittings, fifteen years; and (4) money borrowed with the sanction of the Local Government Board in such periods as that Board may prescribe.

In 1905 and every subsequent fifth year it shall be lawful for the County Council or for the council of any contributory borough to apply to the Board to increase or diminish its number of representatives, and if the Board fail to settle the number to the satisfaction of the council applying, the matter shall be applied to the Home Secretary. The council of any contributory borough may withdraw itself and its borough from the operation of the Act on six months' notice, and an adjustment of property and debts shall be made within twelve months of the notice of withdrawal by agreement or arbitration. Section 30 provides that nothing in the Act shall affect the right of any non-county borough to establish an independent inebriate reformatory, and in the event of that being done such borough shall not be liable to contribute towards any expenditure incurred by the County Council under the Act of 1898, or by the Board under this Act, so long as the reformatory established by the borough is certified and open for the reception of inebriates, and the rateable value of such non-county borough shall, during such exemption, be deducted from the rateable value of the county, and there shall be reserved to the council of the borough all the powers of a local authority under the Acts of 1879 and 1888. The council of any county borough for the time being not represented on the Board may apply to the Board to be admitted to representation, and the Board may thereupon make an order assigning a representative or representatives to the applicant council on such terms and conditions

as they deem fit. If the applicant borough accept the order the Act shall apply to them and to their borough as if the borough were a contributory borough subject to the order, and the number of representatives on the Board shall be altered accordingly. If the applicant council does not accept the order, then application shall be deemed to have failed, but without prejudice to a future application.

INEBRIATE REFORMATION IN IRELAND.

We learn from the *Dublin Express* that Ennis Gaol has been set apart for the purpose of a State Reformatory in Ireland, and that the Irish Women's Temperance Union is taking steps to establish an Inebriate Home for Women. It is further stated that the Irish Association for the Prevention of Intemperance is moving the County Councils in this matter.

INEBRIATES IN FRANCE.

Dr. Legrain, of the Ville Evrard Asylum, with Dr. Antheaume, has lately published a report dealing with the treatment of habitual drunkards. "Their opinion of the drunkard is that he is a moral invalid whose cure depends upon hospital rather than prison treatment. Three essential principles should enter into and govern this treatment. They are (1) that the patient should abstain from all intoxicants; (2) that he should be provided with suitable labour; and (3) that he should be subjected to influences conducive to moral reform. In order to secure as far as possible the realisation of the third principle, the report strongly urges that an inebriates' home should never under any circumstances be built to accommodate more than 200 patients, and in a letter addressed to a correspondent, Dr. Legrain expresses his condemnation of large establishments in very definite terms. It is also suggested in the report that the reformatory should be situated in the open country, far away from centres of population, so as to preserve the patients from the temptation to drink. The home itself should realise the conception of an agricultural and industrial colony. Special emphasis is laid upon the physical and moral value of work performed in the open air. The summer months are to be spent in agricultural and gardening operations; in winter the patients are to be trained in various occupations, such as brush-making, locksmiths' work, carpentry, bookbinding, basket-making, smithy work, leather work, etc. This labour should be obligatory upon the inmates. Dr. Legrain and Dr. Antheaume are of opinion that, next to the practice of total abstinence, muscular exercise is the most important factor in the process of mental and physical reform. Each hour of the day should be occupied; and in the evenings lectures, games, etc., should be enjoyed. A central hall should be provided for the realisation of the latter object. The entire separation of the sexes is held to be necessary, but the buildings in which they are to be severally housed ought not to be so placed as to be entirely independent the one of the other. It is suggested that the distance between them might be anything from four to six thousand yards, and that they should be connected by tram lines. By this means the work of the men would supplement that of the women, and *vice versa*. The men would grow garden and field produce, and the women do the washing, cooking, mending, etc., of the home for men. As for the buildings themselves, they should be of small size. An inebriates' colony should be a series of pavilions, and no one of them ought to accommodate more than sixty patients. They should also be designed and placed so as to produce a pleasing effect upon the inmates. Gardens should separate them from each other. Large dormitories are condemned. The general oversight of an inebriates' home should be entrusted to an experienced medical specialist who is not only capable of classifying the patients properly, but who also has the entire work at heart. It is also considered to be essential that total abstinence should be rigorously practised by the officials as well as by the patients. The treatment of an inebriate should be continued for from six to twelve months, and, on his release, it is recommended that he should ally himself with a temperance organisation, so as to assure the continuance of the good influences of the reformatory."

RESPONSIBILITY IN THE CARE OF INEBRIATES.

We have received copies of a New Zealand newspaper (*The Press* of November last), giving an account of the case of *McFarland v. Stewart*, tried before Mr. Justice Denmiston. The defendant had received the plaintiff's husband into his home for inebriates at Opawa, while he was in a state of delirium tremens. Apparently he had made a rapid recovery from his mental troubles, but within a few days of his reception found a pea-rifle in the hall, got a cartridge in the lavatory, and shot himself in the absence of the defendant's son, who had been instructed to look after him. He had previously, while still mentally affected, tried to cut his throat with a knife. The action was brought under the Deaths by Accident Compensation Act, 1880, to recover damages on behalf of the widow, and it was admitted that seven guineas a week was to be paid, as the patient required two attendants. The judge gave his decision in favour of Dr. Stewart, on the ground that no such negligence had been shown as would have entitled the deceased man to recover damages if he had merely wounded himself. As he had so much improved, the defendant was justified in relaxing supervision in the patient's interests. Some of the medical witnesses gave their opinion that the patient was sane when he took his life, and this also influenced the judge. *The Press*, however, expresses the feeling that the state of matters disclosed by the evidence is unsatisfactory. It is not satisfied that inebriates should be placed in private homes not subject to Government inspection, and animadverts on the dangerous nature of the weapons within easy reach, and on the facility with which the patient got whisky when he asked for it. It would appear that the Government has done nothing to provide institutions for the reception of habitual drunkards under their Inebriate Institutions Act of 1898. This is much in accordance with our experience at home, and *The Press*, in urging for the due application of the existing law with reference to the insane in private houses, makes the same demand as we have repeatedly found necessary here. Apparently insane persons are being kept in private houses which are not licensed under the Lunatics Act, and of which the Government has no official cognizance. In a new country special difficulties exist in meeting the wants of the insane of all classes, and for that and other reasons it is desirable that facilities for proper treatment should exist; but while interposing no incapacitating difficulties in the way of developing public and private asylums and suitable houses for single care, the Government should insist on knowing where every person of unsound mind is kept for gain. We firmly believe that the best results for the patients and for the public are to be gained by a system of healthy competition under the inspection of capable physicians. The haphazard methods which permit of acute alcoholic cases having access to sharp knives and loaded firearms constitute a grave scandal. The suicidal tendencies of such patients are well known, and their treatment by whisky as reported, although not unknown in less remote localities, will hardly bear repetition in far Opawa. We sometimes hear of the blessed facility in law-making in new countries, in disparagement of a slower legislative coach elsewhere; but the duties and responsibilities of Parliament do not end with the eruption of brand-new Acts. The more onerous and the more important matter comes later in due enforcement by properly equipped executors.

ANTI-ALCOHOLIC SERUM.

The Paris Academy of Medicine is responsible for a newspaper sensation. At its meeting on the 26th December last, MM. Broca, Sapelier, and Thiébaud presented a paper on the discovery of an anti-alcoholic serum, and a committee has been appointed to investigate and report. The preliminary principle adopted by the authors is that in alcoholic intoxication, as in morphia intoxication, there is a period of gradual toleration, and of desire for the poison. Certain organic poisons form in the organism antitoxins representing elements of resistance to infection. These antitoxins injected into another organism place it in a position of similar resistance. The observers produced tolerance to alcohol in the horse by giving it by the mouth, and found that the serum of this horse injected into other animals rendered tolerant and fond of alcohol, produced in these animals a pronounced distaste to alcohol. M. Broca declares that the injections caused no

disorder in the patients experimented upon, and that each turned away in disgust from spirits which the stomach could no longer assimilate. The remedy, in addition, possesses powerful qualities of regeneration, due to an unknown substance called "stimulithe." M. Broca proposes that the serum should be named "Antiethylene," and is convinced that the committee will, by continuing the experiments, soon be able to define the new serum clearly. At present it seems to have no effect upon the organic changes consequent on chronic alcoholism; and the Academy has been informed that, while it abrogates the taste for brandy, the taste for wine is preserved unimpaired! Some of us are even yet unfashionable enough to prefer wine.

ASYLUM CONSTRUCTION.

Many new asylums have been built within the last few years, and by an interesting return obtained by the county of Worcester it would appear that great consideration has been given to the problems of construction by local authorities. Comparatively few invited competitive plans. Most of the architects were selected, either on account of their eminence and experience, or on account of their local connections. The general rate of remuneration would appear to have been 5 per cent. Not a few appointed committees of inspection, and it is to be regretted that this course is not more commonly adopted. We are strongly of opinion that the medical superintendent should be appointed in the first instance, and that he should so advise his committee that they would proceed to the formidable task before them in the light of his knowledge of special requirements, and with him to advise as to which of the existing institutions should be visited. Progress in this direction has been mainly on the initiative of the medical superintendents, and each should, in so far as possible, develop ideas in building and construction. We are glad to note that the acreage held by the committees of recently erected asylums is on the whole satisfactory, although there are still too many content with fifty or sixty acres. The cost per head calculated on the number of patients is stated at sums varying from £150 to £420. These calculations and returns, however, must be received with caution, for there are so many considerations entering into the question that economical management in one locality might be the very reverse in another.

COMPLIMENTARY.

PRESENTATION TO SIR JOHN SIBBALD.

At a meeting of Sir John Sibbald's friends in February of last year it was resolved to present him with his portrait, painted by the President of the Royal Scottish Academy. On the 22nd of December last the presentation was made in the Royal College of Physicians in Edinburgh. The Master of Polwarth occupied the chair, and before calling on Dr. Yellowlees made complimentary reference to Sir John Sibbald's work in connection with the Lunacy Board.

Dr. YELLOWLEES, who spoke in the unavoidable absence of Sir William Gairdner, in the course of his remarks said—I recall a great many memories in going back over Dr. Sibbald's career. I remember him long ago when he went to be resident physician at Perth Infirmary. Afterwards he went to be resident in Brompton Consumption Hospital. He was nearly settling down as a London practitioner. Happily he did not do so, but took to the line in which he distinguished himself. Of all the memories by far the most vivid are those associated with Morningside. I look back on that as the best period of my life. But if I once began with reminiscences I should not know where to stop, although we have scarcely ever met without recalling reminiscences of these days, and of our honoured chief, Dr. Skae. After that memorable time Dr. Sibbald went to Lochgilphead Asylum. That asylum was opened and organised by him. Sir John Sibbald, I am sure, will be the first to acknowledge and recognise that his experience there was invaluable in future administrative work. I remember him leaving that post to become deputy Commissioner, and the long years of earnest and unobtrusive work he did in that

capacity; and then I well remember twenty years ago, on the death of Sir James Coxe, he succeeded to be Commissioner along with Sir Arthur Mitchell. Of that work I have very intimate knowledge, and can speak with absolute certainty as to the admirable way in which it was discharged. I need not say more about Dr. Sibbald's work; it has been attested sufficiently by the Chairman of the Board to-day in your presence, and it was sealed by the knighthood which was so well earned and so worthily bestowed, and in which we all rejoice; but I think I know Sir John Sibbald well enough to say that the gathering to-day touches even a tender cord than that, and comes nearer than any public appreciation, and that he cares more for the appreciation of his personal friends, who know him best, than for official recognition. I would like to say something not only about the very admirable work of Dr. Sibbald, but also something about the spirit and the tone in which that work had been done, because I think that of the very utmost importance, and I think that spirit and tone which pervades the whole lunacy administration of Scotland has been of far greater significance than people know. To inspect the work of your professional brother honestly and truthfully, and fearlessly to say what is wrong and what is right, and to do that without giving offence, is no easy matter, and that very delicate duty was discharged by Dr. Sibbald most admirably. It is the distinction of Scotland compared with other countries that the Commissioners were always regarded as the friends of superintendents, that their visits have been an encouragement and a help, and the personal relations that have existed between the board and the superintendents have been a very important factor indeed in making the Scotch lunacy system what it is to-day. In that respect Sir John Sibbald fully sustained the traditions of his board. I speak not for the profession alone, but I speak in the name of this meeting and of subscribers to this picture. So I will do what you have given me the great honour of doing, and will address myself to Dr. Sibbald. In the name of this meeting and of all those represented by this meeting, I now ask your acceptance of this portrait, as a testimony of our high appreciation of your public work. May it long adorn your home, and may it tell to your children's children in future years what manner of man he was whom his friends thus delighted to honour.

Sir JOHN SIBBALD in reply said—Master of Polwarth, ladies and gentlemen, I thank you, Sir, very sincerely for the great honour you have conferred upon me of presiding upon this occasion, and for the very kind words you have used in regard to me. I have also to thank my distinguished friend, Dr. Yellowlees. He was my friend during the early period to which he has alluded, when we climbed together the hill which all youths must climb, my friend while we journeyed over the table-land of middle life, and now in my declining years my friend—true and kindly as ever. I have to thank all the ladies and gentlemen here present very expressly for the kindness which they show to me on this occasion. I have to thank all who have been associated with them in this presentation; especially I have to thank the committee and Dr. Philip, the Secretary, who must have had an immense amount of trouble in bringing to a conclusion the work which is finished to-day. With regard to the portrait, the kindness of which it is the token will always make it the most valued of my possessions. But apart from that, I value it as a work of art, which, in spite of the imperfections of the subject, is, I believe, worthy of the reputation of that prince of painters, Sir George Reid. Two feelings to which it is impossible I can give adequate expression arise in my mind in regard to this presentation. One of these feelings is the oppressive sense of my own unworthiness of so distinguished an honour; and the other is an overwhelming sense of the large-hearted kindness and magnanimous generosity of my friends who are associated in the presentation. I shall not dwell upon these things, for an attempt to enlarge upon them would tend rather to weaken than strengthen the expression of what I wish you to receive as the outpouring of a heart that is deeply moved.

On an occasion such as this it is scarcely possible to avoid glancing backward over the period of one's working life and thinking of those with whom one has been associated as a fellow-labourer. I have, as most of you know, been chiefly associated with those whose work has been to promote the curative treatment of insanity, and to ameliorate the condition of the insane. If, therefore, in a few words I have still to say, I take occasion to congratulate my fellow-labourers on the improvement that has been effected during the past half-century in the way that the insane have been treated and provided for, I trust that those of my friends who

have not been specially engaged in that work, but whom I have no less reason to thank on this occasion, will not deem me forgetful of their kindness.

There has been more or less improvement during the past fifty years in the condition of the insane in every quarter of the globe, but nowhere has it been more remarkable than in Scotland. Some of those who were leaders in the work have passed from their labours, but others who have been specially eminent are, I am glad to say, still with us, and are now in this room. It has not, however, been an affair of leaders alone. Some of the most effective work has consisted of the recognising and fostering of improvements inaugurated by less prominent, though equally devoted workers. The notable character of the change that has taken place may be measured if we bear in mind the deplorable condition of the insane, in Scotland and over the civilised world, up to the middle of the century that is now drawing to a close. Those who can remember, as I do, the publication in 1857 of the Report of the Royal Commission on the Condition of the Insane in Scotland, do not need to be reminded of the thrill of shame and horror produced by its revelations. A large number of the insane, both in and out of asylums, were found to be in a condition which Mr. Ellice, speaking in the House of Commons, truly characterised as "disgraceful to this or to any civilised country." With the legislation which followed that report, however, a new and happier day began to dawn. An efficient system of lunacy administration was established; and, since then, as time has rolled on, the lot of the insane has been more and more alleviated; and we may now claim that, though there is still room for improvement, they are now cared for in Scotland in a way that accords with the feeling of sympathetic kindness due to those who suffer from the most disastrous of all afflictions. We may claim, indeed, that, as regards the way in which the insane are provided for, Scotland stands as it ought to do, "second to none." Asylums have been transformed from gloomy prisons or cheerless barracks to well-appointed hospitals and comfortable homes, and the insane in private dwellings are under an organised system of supervision which secures, as far as possible, the detection and the correction of abuses whenever they arise. Grave abuses either in or out of asylums now, however, rarely occur. The persons entrusted with the care of the insane are as a whole well worthy of the confidence of the public. In saying this I have not only in view those occupying the higher professional positions, of whose eminent ability we are justly proud. I have also in mind those less widely known who are in more immediate and constant association with the insane, and I am glad of this opportunity of referring to those whom I have known (and I could make a long list of them) whose unselfish devotion to duty, whose capacity for exercising gentle yet effective control, and whose thoughtful tenderness in circumstances of difficulty and trial have again and again, and with increasing frequency in recent years, excited my admiration and commanded my respect. I need not say that I have felt it no small honour to have been a fellow-worker with men and women so distinguished for high and noble qualities.

Perhaps I ought to say before I sit down, that I do not forget how much the improvement that has been made in the condition of the insane has been promoted by influences independent of the efforts of those who have specially devoted themselves to the work. We must recognise that these efforts could not have been attended with great success had there not been much in the circumstances of the time to favour them. The improvement would, I fear, have advanced but slowly, if it had not been borne onward by the flowing tide of intellectual and moral progress which has been a distinguishing feature of the last half-century. That period indeed has been one of great enlightenment. Our knowledge of the world in which we live, and of man himself, has advanced by leaps and bounds, and we have been enabled to obtain truer views of much that was formerly shrouded in mystery. As a result of this, the superstitious ideas connected with insanity, which deprived the insane of the sympathy that was their due, have ceased to influence the public mind. And the flood of light which the researches of physiologists, pathologists, and psychologists have shed upon the functions of the brain, has made us realise, in a way that our fathers could not realise, that mental disorder is, as truly as bodily disorder, a state of disease, that is governed by the same laws and must be treated on the same principles. The mere increase of scientific knowledge has thus done much to benefit the insane. But they have benefited also by

movements which are more moral than intellectual. There has been during the past fifty years a great awakening of the public conscience to the responsibility of society for the welfare of its constituent members. There has been a general quickening of philanthropic movement. Benevolent action in every direction has been developed and made more efficient; and in such a movement the insane could not fail to be benefited. The era of that great reform in hospital administration, and in the nursing of the sufferers from bodily disease, with which the name of Florence Nightingale will ever be associated, must needs have been a favourable time for improving the treatment of sufferers from mental disease.

I have ventured on this occasion to refer to the improvement that has been made in the condition of the insane, because it has fallen to my lot to be one of those who have endeavoured to promote that improvement; and I am glad to have lived at the time when it and kindred triumphs of beneficence have been achieved. These triumphs have, no doubt, been mingled with much failure and imperfection. The benevolent work of the time has been often ineffective, often misdirected; and it leaves much misery and evil still untouched. Yet we may claim for the last half-century that in spite of tragic episodes, such as that which at present weighs upon our hearts, it has been the greatest period in the history of philanthropy. And I think that we may, not unfitly, while thinking of the past and hoping for the future, adopt the words of the apostle who, having reached the last stage of his journey to Rome, "thanked God and took courage,—*gratias agens Deo, accepti fiduciam.*"

Dr. CLOUSTON.—Master of Polwarth, ladies and gentlemen, this function is not quite over. We have yet something to do before we part. You, Sir, said you looked on it as a privilege and pleasure to preside here and speak of Sir John Sibbald. Now it is a still greater pleasure, if that is possible, for me to stand and speak in name of this meeting in regard to Lady Sibbald. Dr. Yellowlees has spoken entirely of Sir John. I give to Lady Sibbald a good deal of the credit which has been accorded to him. That being so, his friends have done me the great honour of making me their spokesman in asking Lady Sibbald if she would be good enough to accept at our hands those bowls, so that in her future life and at her own table when she sees them she will feel that she and her husband have had many friends, and by means of that little present she will remember us with kindness and affection, I hope. I now ask Lady Sibbald in your name to accept those bowls that stand on the table. (Applause.)

SIR JOHN SIBBALD having returned thanks for Lady Sibbald, and a vote of thanks having been accorded to the chairman, the meeting separated.

OBITUARY.

WILLIAM WHITNEY GODDING, M.D.

We regret to have to record the death of Dr. Godding, who was elected an honorary member of the Medico-Psychological Association in 1886. The following notes are taken from the memorial written by Dr. Witmer, his distinguished colleague and senior assistant physician.

With but a few days' illness, death came suddenly to Dr. William Whitney Godding, late Superintendent of the Government Hospital for the Insane at Washington, D.C.

He passed away quietly in the early morning of May 6th, in the midst of his labours, and within the walls of the institution over which he so zealously presided for twenty-two years. The best record of his splendid career as an alienist, and of the spotless integrity of his life, are embalmed in the annals of the great hospital which was but *in embryo* when he undertook its superintendency, and its development was still advancing when death removed him from that office.

An only child, he was born in Winchendon, May 5th, 1831. From early manhood with singleness of purpose he devoted himself to the study of mental diseases, both in theory and practice. His preparatory education was begun in Andover. His named is enrolled among the alumni of Dartmouth College. Crowned with the academic bays of his *alma mater*, Dr. Godding attended the medical school of Castleton and, after graduation, the College of Physicians and Surgeons in New

York, and in due time entered professional life. In June, 1859, he became assistant physician in the Concord (New Hampshire) Asylum for the Insane. Here were laid the foundations of his future study and work; and in September, 1863, he was called to Washington as a member of the medical staff of St. Elizabeth—the Government Hospital for the Insane—then under the superintendency of Dr. Charles H. Nichols, its builder and founder.

Called in April, 1870, to the superintendency of the asylum at Taunton, Mass., he for seven years managed its affairs with the same conscientious zeal and enlightened wisdom which afterwards characterised his matchless administration at Washington. When the late Dr. Nichols resigned, to become medical director of Bloomingdale Asylum, Dr. Godding was appointed his successor at St. Elizabeth. His recall found him in the full maturity of his intellectual and moral powers, and in a wider field of usefulness with which he was not unfamiliar.

In making this announcement of his death, it seems hardly proper that I should attempt any detailed account of Dr. Godding's splendid career at St. Elizabeth as superintendent. This has already been done in a careful memorandum prepared by the Board of Visitors, at a special meeting called in consequence of his death, the concluding words of which are as follows:

"Dr. Goddard was learned, wise and strong; a man of large cultivation and grasp of mind; earnest and patient; singularly free from bias and hasty judgment; a man of thorough integrity, conscientious and devoted to duty; he ceased from his labours only to obey the call which has taken him from us. No single incident of difference or disagreement occurred between the Superintendent and ourselves during all the years of our association. Courteous and attractive in personal intercourse, he exerted a strong influence in the communities in which he resided."

After twenty-two years daily intercourse, Dr. Godding comes before me now in all the freshness of his matured manhood, so admirably equipped for the work he had set before him. His was a completely rounded character, in which were united intellectual and moral forces not often found in the same man. He had the simplicity of heart of a child, the gentle tenderness of a woman, and the unyielding firmness of a strong man. Acts the result of mere impulse or caprice were certainly foreign to his nature. Practical in all the affairs of the important work committed to his charge, a realist in the conception and discharge of his high duties and responsibilities, Dr. Godding was, for all that, an idealist—he lived in a world of his own mental creation, which produced, when his work was done from day to day, the sweet flowerage of duty fulfilled, the solace of their nightly decline. This beautiful sentiment of our highest humanity pervaded his whole being, and, as some would say, had its origin in the altruistic spirit now dominating all great souls labouring for the betterment of their afflicted fellow-men. I prefer to think of it under another symbol of speech, and as taking its rise in the practical elucidation, or expansion if you please, into the daily routine of life of those great principles of conduct which the Divine Exemplar has embodied in the beatitudes recorded as part of His revelation to men.

Then, again, when I turn to the hard, dry details of common life, and the drudgery which his vocation entailed, I seem to see in clearer light the wonderful power enabling him to transform the veriest commonplaces into the sublimest duties. No routine ever became soulless to him, and the wear and tear of the flesh and spirit, which so lamentably exasperate the lives of men of all vocations, never tormented him. A pure soul like his, to use the language of Sainte-Beuve, "lives an invisible life; it is healed by its own balm, it is restored, it begins anew, it has not died out; it goes even to the tomb, and is there immortal."

From an intellectual point of view Dr. Godding was a strong man. The natural powers of his mind were refined with a literary culture which made him a peer even among men of letters who followed literary studies professionally. His pleasantries, his geniality, his sprightly fancy, made him when at leisure a charming man among men of his own and other professions; while his broad charity saw always the best in every character with whom he was brought in contact. In this respect he admirably illustrated the verses of Longfellow:

"We see but what we have the gift of seeing;
What we bring we find."

As I close this brief announcement of the departure of our beloved fellow-member, so worthy of this great name among his distinguished colleagues, there

crowd upon me the purest and tenderest recollections of happy association with him, and they shall only pass away when life itself shall be no more.

PROFESSOR LUDWIG MEYER.

Ludwig Meyer was the founder of the modern treatment of the insane in Germany. He was the first in Germany to initiate the non-restraint treatment, and that at a time, indeed, when a large number of the German alienists were directing their minds to devise very effectual means of restraint. His proposal was described then as foolhardy and impracticable; but to-day, after thirty years, the procedure has stood its trial with the most brilliant results. There are in Germany only a few asylums, and these certainly not the best, where the non-restraint method is not carried out.

In addition to his having done away with restraint, Meyer's constant effort was to treat the mentally ailing in the same way as other patients. This, according to his conviction, has also to be given expression to in the construction and management of asylums. A modern lunatic asylum, he asserted, requires to be constructed in no different way from any other hospital. Dominated by this idea, he has from the time specified endeavoured to allow the patients the utmost liberty, and has, with the courage necessary to carry out that object, never disclaimed the responsibility. Accordingly in Göttingen for more than thirty years the modern free method of treatment of the insane has been uniformly practised.

It was only with the commencement of this method of treatment that the scientific observation of the insane became possible, because struggling against means of coercion, which used to cause great exasperation in the patients, and restriction to a monotonous life, without work, behind closed and grated windows and doors, cause symptoms to appear and seem of importance although they have nothing to do with the psychoses in question. Meyer early recognised this. What the patients do of their own free will and what they say is of importance, but not the manner in which they react to an external coercive force.

With similar independence Meyer approached the scientific study of insanity, witness a long list of important publications, among which we specially mention his *Observations (researches) upon the Pathological Anatomy of Dementia Paralytica*, upon *Caput Progereum and the Scoliotic Skull*, upon the *Signification of Fatty Granules in the Brain and Spinal Cord*, upon the *Pathological Anatomy of the "Insane Ear,"* and upon the *Psychoses of Intention*.

Ludwig Meyer was born on the 29th of December, 1826, at Bielefeld. As a little child he came with his parents to Paderborn, and spent his youth in that city. He attended the school of the Jesuits, and passed the final examination at the age of seventeen years. His intention to become an architect caused him first to attend the technical school in Hagen, and then to turn his attention to land surveying. After these provisional attempts he approached the study of medicine, for which he was destined by his nature. In the spring of 1848 he entered the University of Bonn; but there he had little success. Like many of our most distinguished men he plunged with zeal into the political commotions of that restless year. He was arrested and kept five months in durance at Cologne. Virchow's star on the ascendant drew him next to Würzburg. There he became friendly with Tröltsch and Biermer, and assimilated with eagerness the epoch-making lectures of Virchow and v. Kölliker.

In the year 1851 he proceeded to Berlin, became amanuensis to Reinhart and Meckel, and worked diligently with Johannes Müller. In the winter of 1852-3 he passed the Government and Medical Examinations. Really against his will, as he himself asserted, he became assistant in the Psychiatric Department of the Charité Hospital, to be in a short time called as second physician to Schwetz. In the year 1857 he returned as head physician to the Psychiatric Department of the Charité—then under the care of Ideler—and delivered in the summer of 1858 his first lectures on Clinical Psychiatry. In the autumn of 1858 he was elected Reorganiser of the Hamburg Lunatic Asylum, and entered on the office of chief physician of the Psychiatric Division of the General Hospital. This department was situated in the basement story of the building. It was here that he caused to be sold by public auction the whole collection of strait-jackets, after having convinced himself by one

case to what consequences coercive means lead. For a very trustworthy attendant in the case of a female patient, who with great defiance was in the habit of divesting herself of her strait-jacket, had caused an iron collar like a dog's to be made for her. Another important point was brought to light, as Meyer himself related, by the experiences of the old lunacy department of the general hospital; namely, that the public need not be held aloof so anxiously from mental cases as used formerly to be thought necessary. On Sundays all the rooms of the lunacy department were filled with visitors, who did not stare at the patients with curious looks, but brought them a number of presents. There never occurred any disturbance from this; on the contrary, there was the advantage that the public did not harbour any suspicion against the institution. Meyer remained true to these convictions. At the present time in Göttingen such visits to the patients are allowed. By this means the public are educated, and the institution is divested of mystery, so that there subsists no difference in this particular between it and any other hospital.

That a man like Meyer, under the hygienic conditions that were prominent in the Hamburg Lunatic Department, entered into the design of a new building for the insane patients, goes without saying. Already in 1864 was he able to migrate with the patients committed to his care into an asylum built quite to his own mind, and arranged for the non-restraint treatment, at Friedrichsberg. In 1861 he had previously, in the course of a prolonged sojourn, carefully studied the immense progress of English treatment. But at Friedrichsberg he was not destined long to labour. In the year 1866 he accepted a call as Professor in the University and Director of the Lunatic Asylum of Göttingen, to open the first German clinic for Psychiatry in a building specially constructed for the purpose. In this position, despite of various inducements, he remained, equally beloved and valued as Clinical Teacher as well as Director and Officer in the Provincial Asylum.

In the year 1867 Meyer, in conjunction with Griesinger, established the *Archives of Psychiatry*. The works of Meyer range over the whole region of Psychiatry. In addition to works relating more to the social side of Psychiatry, the care of the insane, the management of asylums, and such like, we find exact pathologico-anatomical investigations and excellent clinical studies. These are to be found in great number—in *Virchow's Archives*, the *Charité Annals*, the *Archives of Psychiatry*, etc.

That the advice of a man so experienced and so rich in projects of reform was frequently claimed in the building of insane asylums, scarcely needs to be mentioned. Meyer drew up the programme of numerous institutions, or co-operated in their projection. Among these were Hamburg, St. Urban, and Marburg. He was elected an honorary member of the Medico-Psychological Association in 1867.

Professor Meyer died in October, 1899, in his seventy-third year, lamented by his colleagues throughout Germany. We are indebted to Dr. Cramer for the sketch of his life above presented.

DR. BOUCHEREAU.

Dr. Louis Gustave Bouchereau, who died the 22nd of February, was born the 20th of June, 1835, at Montrichard, in the mild and pleasant country of Touraine, the garden of France and cradle of such illustrious men as Georget, Bretonneau, Trousseau, Moreau de Tours, and Baillarger. He studied medicine in Paris. *Externe* of the hospitals in 1859, *interne* in 1863, he was the pupil of Jean Pierre Falret, Baillarger, Charcot, and Vulpian. He obtained the doctor's degree in 1866; the subject of his thesis being "*Hémiplégies anciennes*." In the same year he was elected, conjointly with Dr. Magnan, as *médecin du service de répartition* at the Ste. Anne asylum, and held this post till 1879, when he became superintendent of the female wards. During the war of 1870--71 he served in a field hospital, was wounded at the battle of Chatillon, and received, as a reward for his gallant conduct and devotedness, the badge of the Legion of Honour.

Bouchereau was elected as a member of the *Société Médico-Psychologique* of Paris, on the 27th of November, 1871, and became President in 1891. In 1866 he was elected secretary by the *Association mutuelle des médecins aliénistes de France*. The object of that association, which was recognised *d'utilité publique*

by an Imperial decree in 1866, is to help those members who might be in distress, and to aid the widows and orphans of alienists. Since its foundation the presidents have been Baillarger, Blanche, Armand, Semelaigne and Meuriot; the treasurers have been Lunier and Mitevié (a great-nephew of Esquirol), Legrand du Saulle; the first secretary was succeeded by Briere de Boismon, Mitivié and Bouchereau.

Bouchereau was frank, sincere and modest. Every one who came into contact with this kind and loyal gentleman rapidly formed a deep affection for him. His patients were so devotedly attached to the good doctor, that a palsied woman earnestly prayed to be carried into the death chamber to view his features once more.

Bouchereau entertained great friendship with the late Dr. Hack Tuke, who, during his holidays in 1893, was his guest at Montrichard.

It may be said of Bouchereau, as of Tuke, that he left a wide circle of sorrowing friends and no enemies.

RENÉ SEMELAIGNE.

NOTICES BY THE REGISTRAR.

CERTIFICATE OF PROFICIENCY IN MENTAL NURSING.

The next examination will be held on Monday, the 7th day of May, 1900, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association, not later than Monday, the 9th day of April, 1900, as this is the last day upon which, under the rules, applications for examination can be received.

CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

The next examination will be held on July 19th, 1900.
The examination for the Gaskell prize will take place at Bethlem Hospital on the 20th of the same month.

THE PRIZE DISSERTATION.

Although the subjects for the essay in competition for the Bronze Medal of the Association are not limited to the following, in accordance with custom the President suggests—

1. Developmental general paralysis.
2. The surgical treatment of epilepsy and epileptiform seizures.
3. The effect of influenza on the production of states of mental unsoundness.

The dissertation for the Association and prize of Ten Guineas must be delivered to the Registrar, Dr. Benham, City of Bristol Asylum, before May 30th, 1900, from whom all particulars may be obtained.

By the rules of the Association the Medal and Prize are awarded to the author (if the Dissertation be of sufficient merit) being an Assistant Medical Officer of any Lunatic Asylum (public or private), or of any Lunatic Hospital in the United Kingdom. The author need not necessarily be a member of the Medico-Psychological Association. Due notice of the exact dates will appear in the medical papers. Further particulars respecting the various examinations of the Association may be obtained from the Registrar, Dr. Benham, City Asylum, Fishponds, Bristol.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION:

General Meeting.—The next General Meeting will be held on Thursday, 10th May, 1900, in the Rooms of the Association, 11, Chandos Street, W., at 4 p.m.

At this meeting the following papers will be read:

1. "The New Psychology," by H. Maudsley, M.D., F.R.C.P.Lond.

2. "Pupillary Anomalies in Paralysed and Non-paralysed Idiotic Children" (to be read in English), by Dr. Koenig, of Dalldorf Asylum, Berlin.

3. "The Arrangement of Nerve-fibres and Nerve-cells in the Cerebral Cortex of a Series of Idiots' Brains" (a demonstration by lantern photographs, microscopic specimens, and drawings to scale), by A. W. Campbell, M.D., Rainhill Asylum.

The sub-committee for the investigation and collection of evidence, and for practical suggestions as to the isolation of phthisical patients in asylums, will be appointed at the Council meeting.

South-Eastern Division.—The Spring Meeting of this division will be held at the City of London Asylum, near Dartford, on Wednesday, April 25th. Dr. White will read a paper upon "The Remodelling of an Old Asylum," and Dr. A. E. Patterson one upon "An Analysis of 1000 Admissions into the City of London Asylum since 1892." Luncheon will be provided at 1 p.m., and in the evening members will dine together at the Café Monaco, Piccadilly Circus, W.

South-Western Division.—The Spring Meeting is to be held at Bailbrook House, Bath, on Tuesday, 24th April. Business Meeting at 3 p.m.

Northern Division.—The Spring Meeting will be held at Whittingham Asylum on the 18th April.

Scottish Division.—A Special Meeting will be held in Edinburgh, on Saturday, 2nd June, to consider the report by the Committee on the position of the nursing staffs in Scottish asylums in reference to administrative questions.

Irish Division.—The next meeting will be held on April 10th, at noon, in the College of Physicians, Dublin.

INTERNATIONAL MEDICAL CONGRESS OF 1900.

The section of Psychiatry will meet from the 2nd till the 9th August. The names of the Committee of Organisation are—

MM. Magnan, President; Joffroy, Gilbert-Ballet, Pierret (Lyon) and Cullere (La-Roche-sur-Yon), Vice-Presidents; Ritti (Charenton), Secretary; Bouchereau, Bourneville, Albert Carrier (Lyon), Christian (Charenton), Doutrebente (Blois), Jules Falret, Ch. Féré, Febvre (Ville-Evrard), P. Garnier, Giraud (Saint-Yon), Mairet (Montpellier), Meuriot, Motet, Parant (Toulouse), Régis (Bordeaux), Seglas, Taguet (Maison-Blanche), Vallon (Villejuif), Jules Voisin.

The section will meet at the Sorbonne, and will not deal with neurology. Arrangements will be made for the display of lantern slides.

The following subjects have been chosen for discussion, but separate papers will also be received:

1. *Mental Pathology.*—"Psychoses of Puberty." Introduced by Drs. Ziehen, Marro, and J. Voisin.

2. *Pathological Anatomy.*—"Idiocy." Introduced by Drs. Shuttleworth, Fletcher Beach, Mierzejewski, and Bourneville.

3. *Therapeutics.*—"Rest in Bed in the Treatment of Acute Insanity and the Modification of Arrangements which are Necessary in Asylums for the Insane." Introduced by Drs. Neisser, Korsakoff, and Jules Morel.

4. *Legal Medicine.*—"Sexual Perversions." Introduced by Drs. Krafft-Ebing, Morselli, and Paul Garnier.

A *résumé* of these papers will be sent to each member of the section on an early date. Other papers must be sent to Dr. Ant. Ritti, Maison nationale de Charenton, Saint Maurice, Seine, before 1st June. They must not have been presented to any Society or published before the opening of the Congress, and must not exceed fifteen minutes in delivery.

Regarding the special reductions on railway fares, etc., inquiries should be addressed Bureaux, 21, Rue de l'École de Médecine, Paris. The subscription of 25 francs should be sent, together with full name and address, to Dr. Duflocq, 64, Rue Miromesnil, Paris.

Dr. Ritti, in sending the circular from which this information has been obtained for publication in the JOURNAL, in order to bring it prominently before our members, expresses the hope that they will attend the Congress in full strength. After a reference to that distinction which is to be drawn between the irresponsible

journalists of the Boulevards and the French Government, which has dealt with difficult questions with tact and decision, Dr. Ritti expresses the hope that the compatriots of Harvey, Hunter, and Lister will be well represented. He says, "We should consider our section of psychiatry incomplete without the disciples of Tuke, of Conolly, and of Bucknill, without those men of distinction who have cast a lustre on psychological medicine in Great Britain. We hope that Dr. Shuttleworth and Dr. Fletcher Beach will not come alone, but that they will be accompanied by a great number of their colleagues, communications from whom we shall gladly receive. I assure them that France will not fail in the duty of free and cordial hospitality. We shall be glad to have the opportunity of exchanging opinions on those scientific and professional questions which are the objects of our specialty."

We lay Dr. Ritti's kindly and cordial invitation before our colleagues with every confidence that it will meet with due appreciation and wide-spread acceptance. It is expected that the annual meeting of the Medico-Psychological Association will be arranged on dates which will permit of members proceeding to Paris in time for the Congress, as our President-Elect is to take a prominent part in the proceedings there.

APPOINTMENT.

George A. Rorie, M.B., Ch.B., appointed Senior Assistant Medical Officer at Cumberland and Westmoreland Asylum, in place of J. W. Leitch, M.B., M.A., resigned.

THE JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Medico-Psychological Association:
of Great Britain and Ireland.]

No. 194 [NEW SERIES
No. 158.]

JULY, 1900.

VOL. XLVI.

Part I.—Original Articles.

The New Psychology. An Address delivered by HENRY MAUDSLEY, M.D., at the General Meeting of the Medico-Psychological Association, London, 10th May, 1900.

My choice of subject for this address has not been altogether fortunate, and what I have to say will need your indulgence. Having fixed the subject hastily when I had the honour to receive your secretary's invitation, I soon found, on taking stock of my knowledge, that I had no clear idea what the new psychology was, what it had done, and on what the claim sometimes made for it to supersede an old and effete system was grounded. A new method of study making large promises was evident enough, but of the new conquests which are to revolutionize psychology I must confess ignorance. My remarks, then, will be critically interrogative, on purpose made to elicit definite information. If that light be forthcoming it will prove how little mere theoretical criticism is worth.

One effect of growing old is to be less sure of anything, and certainly the older I grow the less sure I am what the old psychology is. A list of examiners to be appointed by the London University specifies an examiner in *mental science* and an examiner in the separate subject of *mental physiology*. From which it appears that mental physiology, although it means literally the science of the nature of mind, is not mental science, and that mental science on its part stands aloft and aloof from a knowledge of the nature of mind—at all events from a know-

ledge of the exquisitely fine network of nervous organisation which is the indispensable condition of mind's being, which grows in complexity with its growth, and on the integrity of which its every function depends. Then, again, it does not seem to be quite certain always that *psychology* is synonymous with mental science ; for although it means literally the science of mind, we constantly hear talk of a science of psychology, that is a science of a science of mind. Lastly, above all towers *mental philosophy*, a kind of holy of holies into which high priests only may enter. Thus we have four formidable systems dealing with one and the same subject, yet having different names, pursuing separate paths, speaking different and mutually unintelligible languages, often hostile in attitude towards one another, almost as averse to meet as parallel lines. Is not that an odd and rather sad state of things? And is it not wonderful where the hapless student gets the information enabling him to answer the questions put to him—that is, if his examiner does not chance to be a professor whose lectures he can attend, or to have written a book which he can buy and learn by rote? It is no great breach of charity, I hope, to doubt whether the examinee always understands really what the examiner means, or the examiner really understands what the examinee means, or either really understands what he himself means.

Another consequence of growing old is to see plainly how the evil that one does lives after one ; and I sometimes feel a pang of penitence when I recollect that it was at my instigation many years ago that the Senate of the London University established an examination in mental physiology and pathology instead of its former examination in such set books as Bacon's *Advancement of Learning* and Mill's *System of Logic*, books which at any rate were calculated to inform definitely, not sadly to bewilder, the student's mind. To complete which bewilderment now, lest haply it might fail otherwise, a psychologist who probably knows nothing of physiology is yoked as co-examiner with a mental physiologist or pathologist who perhaps knows little or nothing of psychology.

Leaving this subject, on which a good deal more might be said, I go on to comment on two late methods of research which, vaunting in their youthful zeal, promise so largely. They are (a) the systematic study of the child's mind ; (b) the so-called psycho-physical research.

1. *Psychology of Children.*

Much diligent pains has lately been given to the observation and interpretation of the mental operations of infants and young children, in the praiseworthy hope of helping to lay the foundations of a positive psychology. How far then are the results of scientific worth? Interpretation presupposes an interpreter who must not only understand the language which he interprets but also the language into which he translates. Now can the student of the child's mind possibly understand and rightly construe by the light of his ripe thought and feeling, his formed and conscious thought, that which is only forming and scarce conscious in its immature mind? Can he translate the one correctly into the other? It is obvious that he may easily, almost certain that he will, read into its mind that which is in his mind and so misread that which is there actually. All the greater, too, is the risk of fallacy when it is the proud parent himself who, oscillating and perhaps osculating between inquiry and admiration, studies the mind of his own wonderful child. After all is said the only way to know really what goes on in the child's mind would be to get inside the child's brain without being the child: an impracticable feat even for a metaphysical philosopher.

It is natural to think that the child's utterance of a thought or feeling means the same as the like utterance of a like thought or feeling by an adult who is trying to imagine himself in its situation. But that is not so; no feeling nor thought, however much the same in look, can possibly have the same meaning in the forming and in the formed mind. In the immature mind the word, like the underlying idea or feeling, is simple, single, without associations, almost detached, naked, so to speak, whereas in the mature mind it is involute, containing layers on layers of experience; intimately and intricately connected, too, having manifold associations which are aroused into more or less conscious thrills, emotional or intellectual, by every use of it. The man cannot speak the word himself nor hear it spoken by the child without a stirring, obscure or clear, of these associations in him; he must think what he says in terms of himself, which is thought that the child cannot possibly have—in terms, that is, of his own character and all which that implies in regard of bodily organisation and mental formation, conscious and un-

conscious. Can he, however, as is sometimes alleged, allow for the necessary correction? Can he, in fact, strip off so much of the structure of his own mind as to reduce it to the simplicity of the child-mind (without a standard, too, to tell what the requisite subtraction must be), and then use his so mutilated mind to observe and interpret as if it were its sound and whole self? He would find it easier, I think, to walk the walk and talk the talk of his infant.

Let me give an illustration of what I mean. When the child asks its astonished father, "Daddy, why does not God kill the devil?" it puts as simple, direct, and natural a question as it would do were it to ask "Why does not daddy kill the rat?" The extraordinary question is not a whit more wonderful than the ordinary question. The child has been taught ever since it learnt to kneel to pray on its mother's knee with uplifted hands and eyes looking heavenwards that God is a big strong Being living out of sight high up above, who can do whatever He will, loving to do good and those who are good, angry with those who are naughty and do wrong—to picture Him mentally, in fact, as a kind of bigger and stronger father, who will help it in trouble if it is good, just as its father helps it out of a difficulty and seems to it all-powerful to do so; reasoning, then, from the particular to the particular, as incipient intelligence cannot choose but do, it naturally wonders why God does not kill the devil, who is always going wickedly about to do wrong to everybody by making everybody do wrong. How can the little creature so instructed treat its simple, direct, and positive idea or image of a sort of magnified man doing real work everywhere as vaguely as if this were an abstract and general notion shrouded in solemn obscurity and consecrated by immemorial reverence? The ideas no more mean the same than the vice of five means the vice of fifty years old.

The truth is that the simplicity, directness, and innocence of a young child's mind signify the absence of mind. A direct, single, and confident reaction to the impression is not trammelled by modifying associations, nor vitiated by conventional errors and prejudices; therefore its utterance is sometimes singularly fresh, startling, and suggestive. As to the latent intuitions and trailing clouds of glory from afar which sentimental adorers detect and dote on in its innocent simplicities,

it is they, the enraptured gazers, who project them into it out of their own feelings ; they bestow the glory which they see in the show ; not otherwise than as the fond mother, watching the flicker of a smile across her sleeping baby's face, projects a heavenly meaning into the purely reflex movement excited by a pleasant visceral stimulus. Such actual mind as the infant has is surely more vicious and ugly than innocent and beautiful. What is there to admire in its squalling passions of temper when it is uneasy and wants something, and in the furious bodily contortions which, did it possess power equal to its passion, would make it the most dangerous wild beast alive. Passionately selfish, prompted solely by the instinct of self-conservation, quintessential embodiment of the colossal egoism and self-idolatry of man from the beginning of his despotic reign on earth, it exacts tyrannically all the services which, happily for it, maternal devotion likes instinctively to give, and feels rewarded for giving by the kitten-like playfulness and affection which it shows when it is pleased. Howbeit neither child nor kitten feels much, if any, of the attributed affection, the show of which is but its purposive and glad placement of itself in the fit situation and attitude to receive and to respond to caresses. Is there in sober truth any other living creature's offspring which is so passionate, so selfish, so noisy, so troublesome, so exacting, so offensive in some respects as the human baby ?

These are the positive qualities of the real baby, the concrete creature, not the supposititious qualities of the ideal baby ; and it owes them to the fact that it is the product of the most powerful, tyrannical, and selfish animal in the world. For as man, ever since he brought things to a bad end in the Garden of Eden, has rigorously and ruthlessly used the dominion there given him over all living creatures, thrust like him out of the garden, though they had not like him sinned by eating forbidden food, and has counted their lives and happiness of no account in comparison with his rights to do with them as he pleases for his sport and profit, his infant in the cradle naturally exhibits a monstrously masterful and clamorous egoism. Heir to all the ages of human selfishness and self-worship, it shows the distinctive marks of its descent ; and it is by positive observation of what it does and is, not by imaginary intuition of what it feels and thinks, that we shall best know its real

mind-stuff and mode of mental growth—not by prying into its mind, but by watching its performances.

Now as natural sentiment is not likely to suffer the philosopher thus to study his own baby, or perhaps any human baby, impartially in the dry light of reason, there is an incalculable weight of bias to be added to the inherent and inevitable imperfection of the method of psychological inquiry ; not only an incapable method, but also an observer incapacitated to use it properly. No wonder, then, if he, trying to make a baby-mind of his mind in order to feel and think like his baby, runs the risk of making a baby of himself in another sense. And what shall be said of the latest development of this line of inquiry in the person of the lady psychologist who in mature years sets forth elaborately all the wonderful thoughts, feelings, and imaginations which she had as a child from the time she left the cradle and presents them as a contribution to psychology ?

I might, did time allow, extend the range of these criticisms by applying them to some of the observations and experiments made to discover the mental operations of chickens, ducks, hens, cats, puppies, and the like. The descriptive terms necessarily used in such cases are imbued with meanings which as necessarily involve misinterpretations of the simplicities of mind they are used to describe. Moreover, no precise definition is made of that which the terms used shall mean, though that is an indispensable preliminary in order to avoid vagueness and ambiguity if any good is to come of discussion. What profit is there in disputing whether animals can reason or talk without previously defining exactly what reason and talk shall mean, and thereafter using the words in that precise sense. It is obviously easy to communicate intelligence by other movements than those of articulate speech ; every busy little ant will teach us that. Nor is the mute eloquence of two lovers who understand not a word of one another's articulate language inadequate to teach them what they mean when they go through all the performance of love from its first gleam to its final ecstatic rapture. Is there a single intelligent action, again performed by an animal, whether acquired by itself or taught to it, which does not then signify implicit reason? Or a sensible shepherd who knows not well that he speaks intelligently to his dog and is understood by it, owing his rational use of it to

its responsive reason, and values it because of and in proportion to its intelligence? Ask him why he is loth to sell it at any price, and his answer may, if its full import be well considered, render superfluous much discussion and experimentation to prove or disprove that which an experimental psychology, in daily and immemorial practice, has proved long since—that is to say, assuming a clear and distinct definition of what words are to mean and that the facts shall govern the words instead of the words governing the facts.

But this is too large a subject to go into now, and I will conclude the first part of what I have to say by venturing a conjecture that an insight into the origin, growth, and primitive workings of the child's mind will be best obtained, not by the method of psychological intuition, but—first, by the biological method of tracing the development of mind gradually from its first beginnings—that is to say, the development of life into and in mind, for mind is life and its faculties signify the workings of life in mind—upwards through the progressive complications of the reflex structure and action of the nervous system in the ascending scale of animal organisation; secondly, by direct observation of the successive formations and associations of the child's movements in their definite relations to objects and its feelings. For mental apprehensions are based on motor apprehensions, mental grasps on the grasp of the object by hand, of its image by sight, of its sound by hearing.

2. *Psychophysics.*

I pass on now to the second part of my subject, the method of psycho-physical research and the inquiry what it does, what it expects to do, and what it cannot expect to do. That is to say if there be a limit to its expectations; for some of those who vaunt its value have spoken of it as if its expectation was limitless and there was no sun in the psychological sky before the sun of its day arose.

Beneath all mental acts there are most subtle currents or undulations of nervous energy of yet unknown nature—physio-chemical, electric, electro-vital, or what not—along definite tracts of physical organisation; they are necessarily therefore affected by the physical conditions which affect all physical motions. Sensation has always been known and said to be

blunt or keen, emotion to be dull or lively, thought quick or sluggish, and if one reflects on the derivation of the terms of psychology—such words, for example, as emotion, reflection, deliberation, and the like—it is manifest that their origin and primal meaning was essentially physical; the words bespeak a material origin, are imbued with sense-experience, and signify in the concrete properties that are material. Nor have variations of mental properties in different persons, or in the same person at different times, been overlooked. Quickness and slowness of perception of thought, ranging from the swift flash of cerebral excitement to the slowness or almost standstill of thought in the oppressed or decayed brain, have attested the positive effects of changing physical conditions on its rate of speed. It is well known, too, that causes outside the body, as well as causes within it, affect the speed of thought and the quality of feeling. A thunderstorm will clear or a snowcloud darken the mental as it will the physical atmosphere, nor is the actual experiment necessary to prove that it would be as hard for one half frozen on the top of an iceberg to think nimbly as it would be for him to thread a needle deftly. Grasp of thought can be just as much benumbed as grasp of hand, and by the same physical agency, mental apprehension being, as I have said, a corresponding process to motor apprehension at a higher cerebral remove and subject to like physical conditions.

Although these are familiar facts of common experience embodied by it in common speech, they were quite ignored by psychologists and their scientific lesson unlearned, because it seemed an insult to the majesty of mind to think of it otherwise than as immaterial, indivisible, invulnerable, outside natural law of cause and effect, not subject to conditions of space and time. Descartes, having postulated an absolute separation of mind and body, because he could conceive a clear idea of their distinction, and declared mind to be the only reality, and its study therefore the supreme study of reality, started philosophy triumphantly on the tack of a pure self-introspective study of abstract mind which it has pursued since. His second meditation he actually devotes to showing that it is more easy to know the mind than the body: a hardly conceivable proposition to those who cannot think of any actual human mind except as containing essentially and representing

the individual body, or imagine how a knowledge of it without this content could be other than disembodied knowledge. Now, however, things are changing fast. The exact experiments made to measure and determine the physical conditions of sensation and thought inevitably drag psychology down from the abstract heights of speculation to the positive methods of observation and experiment ruling in every domain of true scientific inquiry. Its professors, roused thereby to see what they had cultivated a stubborn blindness to, show a quite febrile and almost pathetic haste to set up so-called psychological laboratories, and some of them proclaim the avatar of a new science. That is to go fast. A little more knowledge and a little wider reflection might perhaps teach that the physiology of the senses, as treated by Müller in his great work on *Physiology*, was in large part psychological, and that the so-called psychological experiments of to-day are in most part physiological; that pain and sensation have always meant laws not of life only, but of consciousness; that physiology and psychology are not actual separations in nature, but convenient divisions in human thought; and, lastly, that the sun does not rise for the first time when the last born infant beholds it.

Undoubtedly the demonstrative experiment appealing directly to touch or sight will teach that which reflection founded on simple observation fails to teach; for the experiment strikes the senses forcibly and provokes reactive apprehension, whereas a process of sustained reflection or logical reasoning appeals in vain to minds the large majority of which cannot see beyond one link in a chain of thought. To see any fact intelligently there must be fit intelligence behind the eye; when that is there the observation may be small, but the teaching of it will be great; when it is not there the observation will be overlooked and its lesson not learnt. Now to weigh, measure, count, manipulate, and to express the results in arithmetical numbers or algebraic formulas, is a method of demonstration which cannot fail to impress the general mind, to bring psychology into touch with realities, and to put positive meaning into its language.

All this may be admitted without thereupon incontinently concluding that nothing which has been done hitherto has been well done, and ignoring the difficulties that lie in the path of the new method. In the end these psycho-physical experiments

are physiological rather than psychological. Let it be possible to fix exactly the time-rates of a mental process apparently the same in two persons by noting the exact instants of its beginning and ending in each, it would not then be certain that it was the same process; for the same end might have been reached by different mental paths, and certainly would have been so reached if the two minds represented two different cultures. Many trains leave London for Edinburgh daily, two or more of which might chance to start at the same moment and to arrive at the same moment, yet they may not have traversed the same route. Even if the thought-waves of two minds did follow the same lines from start to terminus at the same rate of speed, the one might be later in arrival than the other, not because its actual speed when moving was less, but because it was delayed at a junction; some inhibitive idea in the one mind, of which the other was destitute, happening to give a temporary check to the current and so delay it. Experimental measurement must reckon the result in terms of speed-rate simply; how can it do otherwise, since it cannot analyse or throw any light on the intermediate process between start and finish?

Even more important and less calculable than the complexity of the mental train-system is the *personal equation*. Once this unknown quantity was styled *Idiosyncrasy*, but the big word fell into disrepute because, although importing plainly that every self was a special self, it explained nothing, yet was apt to be taken for explanation,—as imposing words always are, especially when spelt with an initial capital letter. Nevertheless it was a good word as a denotation, when not misused as an interpretation. For after all a definition need not be an interpretation; it may be quite arbitrary, and is good for its purpose if it distinguish clearly that which it is intended to mark. Has there been much gain thus far by the substitution of the term “personal equation,” which, though it sounds more algebraic, does not really teach more? It hardly, perhaps, connotes as much, since it applies to degrees of stimulation and to quickness or slowness of reaction only, taking no account of *quality*, as the old word did when, noting quality, it tried by its doctrine of temperaments to make some classification of individual qualities. Here, then, we have an arithmetic working to do exact sums with an inconstant and unknown number

among the figures. How devise an experiment to measure why one person faints if a cat be in the room, though he did not know otherwise that it was there ; why another is poisoned by a strawberry ; why a third " if he hears the sound of a bag-pipe cannot contain his urine."

Many painstaking experiments have, I believe, been made to measure exactly the effects of a dose of opium on sensibility and motor reaction. Yet it is notorious that an equal dose of opium, which has little or no narcotic effect on one person, will act powerfully on another, and in different degrees and even in different ways on the same person at different times ; nay, that in one it may cause its usual narcotism, and in another a violent sickness along with a delirium which I have known to be mistaken for acute mania. All this without anybody being able to foretell what will happen, or to give the least reason why it happens. With such subtle and unknown factors in the constitution of nerve-element in the background, it is hard to see how multiplication of mechanical measurements can add much to knowledge. Though these be multiplied and accumulated world without end, yet if they remain scattered, incoherent, fragmentary heaps, they will be only monuments of sterile industry—monumental mockeries of knowledge.

It may be said, of course, that risk of fallacy and failure is lessened when the experiments are made on the same person and averages taken. No doubt if the same person were always the same person from day to day,—which he never is,—and if averages taught us anything more than the general direction in which we ought to search for the concrete knowledge we are in want of. The opium-instance I have given is comparatively gross ; far finer problems, of course, are the exquisite subtleties of individual feeling which, thus far being outside any knowledge we have, much more any manipulation we can make, of nervous structure and function, import incalculable possibilities of fallacy into all minute physical measurements. Set a man down in the chair of a psychological laboratory with all appliances and means to boot, in order himself to make, or to have made on him, an exact experiment with respect to a particular mental process, the measured result might differ on different occasions according to the then quality of feeling in him, of which he himself was perhaps unconscious and the observer certainly could not take account. An atom gone

astray in metabolism may notably precipitate him from a heaven of joy into a hell of dismal despair; and the same impression striking in one mood will produce as different an effect from that which it produces in another mood as a quite different impression would do. Add to this obstacle, moreover, the possibilities of fallacy inherent not only in the constant personal equation of the experimenter, but also in his variable moods; all the more confounding when it is a self-experimenter who, triune being, tries to be at the same time agent, patient, and impartial judge.

The eager psycho-physical experimenter hardly stays to consider calmly what it is that he does actually, or what it is that he does not nor can do. When all is said, it is the physical substrata only, not the mental state, which the most ingenious and delicate measurements can attack. To find out and formulate in arithmetical numbers or algebraic symbols what degree of stimulus will excite a sensation, pleasant or painful, or what mixture of stimuli to senses, and in what proportion, will produce an agreeable or disagreeable perception—useful work as it may be—is not to measure the mental processes. An impassable gulf lies between the measurement of the perceived energy—that is the objective energy which can be handled, and for which all the world can agree on a common unit of measurement—and the subjective state, which is intangible, and for which no common unit of measurement is possible. How measure the thrill of a pang of grief? The heat of a flash of rage? The corrosion of an envy? The vibration of a ray of hope? The leap of an inspiration? How sound the depths of a sympathy? or estimate in millimetres the height of a vaulting ambition?

No doubt the several feelings have their special underlying and precedent or concomitant nervous processes, and the different kinds and degrees of passion their respective measures of physical commotion, and such underlying activities may be theoretically measurable; but, having regard to the extreme subtleties and intricacies of these motions, is it probable that any instrument will be invented sensitive enough to catch and measure them quantitatively, even if it be possible to get effectively at them? And as to the all-important quality of the feeling, which goes before in origin and lies deeper in nature than thought—which is the essential man,—it is obvious, as I

have said, that such method of research can say nothing. Is it liver-feeling? Is it heart-feeling? Is it spleen-feeling? Is it genital feeling? For it is pretty certain that these several organs do play their essential parts in the constitution of the present mood, whatever it be. When there is a discordant note of gloom in the grand physiological orchestra which organ or instrument is it that is at fault? The body is not simply a complex physical machine; it is a grand organic complex of exquisitely subtle, rapid, and intricately ordered motions, of which mind is, or ought to be, the supreme harmony; it was no mere idle fable of the Greeks, therefore, which made Apollo the god of medicine as well as of music, and his son Æsculapius the healing restorer of a lost bodily harmony.

If I dared to speak of music—in doing which I should be no better than a blind man talking of colours—I should venture a surmise that Paganini's violin was a better psychometer than has been, or is likely to be, invented in any psychological laboratory. At any rate I judge so if it were capable of expressing what Heine rapturously declares that it did express: "sounds from whose bottomless depths gleamed no ray of hope or comfort melting sensuously languishing notes of bliss! Tones that kissed one another, then poutingly fled from one another, and again languishingly embraced and became one and died away in the ecstasy of the union." Now these enravishing sounds are the subjective correspondents or correlates of the varieties and combinations of the vibrations of fiddle-strings under the magic touches of a master's fingers; objective motions which are, I suppose, theoretically measurable, and in that case infinitely more easily so than the psychophysics of the human organism.

In the result then, I conclude that man as a whole is a larger affair, a grander and more mysterious complex, than any single method of minute inquiry—be it chemical, physical, pathological, microscopical, or psycho-physical—will ever unfold, and that there are still abundant room and work for old methods of observation. The pity of it is that these are not pursued more steadily and systematically. How little has been done yet to note accurately the mental symptoms of different bodily diseases, and the qualities of feeling marking the different stages of the same disease as it goes on either to recovery or death; symptoms which differ and are almost as constant in

relation to the vital changes as the physical symptoms of which such exact daily note is taken. Then, again, what a light might not a diligent and systematic observation of dreams in relation to bodily states throw on mental processes, not in relation to diverse bodily states of transient disorder only, but also in relation to diverse diseases. Lastly, there is the vast field of mental pathology hardly yet seriously explored, in which nature is continually making and obtruding, and we are continually neglecting, experiments for our instruction. These paths of inquiry I mention, not because they are exhaustive, but as being of some special interest to this Association, and at all events as serving to show that the methods of the old psychology are not quite spent, nor it necessarily doomed because of the invasion of its "impious younger world." There is work enough for as many methods of study of mind as are rationally based; have the definite aim of a concrete mental organisation to be studied, and work definitely and progressively for it by observation of facts; exclude not one another, but know that in the end they must bring and, knowing, strive to bring their results into harmony.

DISCUSSION.

At the General Meeting, May 10th, 1900.

Dr. MERCIER spoke appreciatively of the eloquent form of Dr. Maudsley's address, but criticised the matter of it as inconsistent, and unduly depreciative of the labours of others.

Dr. RIVERS thought that the study of mental science was not in so deplorable a condition as Dr. Maudsley seemed to think. Professors of mental philosophy, of whom Dr. Maudsley had spoken so contemptuously, had often, in the present day, a very wide acquaintance with the physiological aspect of their subject. In his remarks on child study, Dr. Maudsley had been unfortunate in drawing his examples from the wild amateur work which the subject had a tendency to produce. He had said that the observer "must inevitably read into the mind of the child what is in his own mind," but the tendency to do this, which constituted a recognised danger of all comparative psychology, could be controlled. One of the most hopeful lines of psychological investigation was that dealing with mind in its development in the animal, the child, and the savage, and it was very deplorable that Dr. Maudsley should lend the weight of his authority to discourage the study of genetic psychology.

In his remarks on psycho-physical research Dr. Maudsley had unfortunately not given any indication of the sources from which he had drawn his ideas of the present condition of the subject. He had eloquently pointed out a large number of difficulties with which every serious worker was perfectly familiar. The presence of difficulties was, however, no reason for discarding any branch of scientific work, and the "new psychology" only differed from the old in working under well-defined conditions, and in making its methods as exact and systematic as possible.

Dr. HYSLOP.—I came here hoping to learn what the "new psychology" is, but I am afraid that even now we are far from obtaining a satisfactory answer or

solution of the difficulty. I appreciate Dr. Maudsley thoroughly; we have all been students of his writings, and we know what a tower of strength he is in the domain of mental physiology, but dealing with the question of sociology is another matter. I have no doubt that most of us disagree with his ideas of sociological problems, and when he deals with mental physiology I think he departs from the subject of pure physiology. He marshals his facts with the master's hand, and one regards him not as being merely a brain physiologist, but as one who deals with the metaphysical side of the question. As to the new psychology, it seems to me that at present it cannot explain the whole. We are mixing up a new psychology and a new physiology. It seems to me to be an attempt to explain physiological and psychological events which are really beyond explanation. Dr. Maudsley has himself stated definitely that there are certain brain problems which we cannot explain; so that, whether new or not, we shall only reach a certain length and no further. No matter how much we speak of brain events in physical terms, we shall never be able to explain fully the ordinary workings of life. At first Dr. Maudsley was rather inclined to define psychology, and he spoke in terms that almost made us begin to wonder whether we had minds or not; and then in the second half of his paper he seemed to think that there was only one thing definite to deal with, and that was the human mind, and that the brain events were purely hypothetical. Although he spoke in these definite terms, he said that of these things we knew absolutely nothing; but, at any rate, apart from his sociological views I am quite in accord with him, and I do not think that the new psychology or new physiology, if it is to be restricted to terms of measurement, will lead to any explanation of the phenomena of life or mind.

Mr. LANGHORNE ORCHARD thought all would agree with Dr. Maudsley and the last speaker in considering that one cannot give an account of psychology in terms of physiology. He maintained that the data were not sufficient. He then, at considerable length, pointed out fallacies which the seeker after truth must avoid.

Mr. SHADWORTH H. HODGSON.—The words metaphysic and metaphysician have been heard in this room this afternoon. I am glad to see that they have called forth some defence on the part of one or two of the speakers who have spoken on the occasion of Dr. Maudsley's address. I profess myself to be a metaphysician, and by that word I mean one who attempts the analysis of facts of experience from the subjective side, that is, of our knowledge of what we call reality. Understanding it in that analytical sense, I was very glad to hear the speaker who addressed us next after Dr. Maudsley pointing out that even measurements were mental states. In fact, the only knowledge that we have of this real physical world about us is knowledge, and knowledge is a state or complex of states of consciousness. We have no immediate knowledge of physical reality; it is an inference, and I would also add that the mind is an inference in exactly the same way. I would therefore, for my own part, begin the subject of psychology by putting aside such words as mind and soul, and I would draw the distinction between mind and matter, or mind and what it knows, between consciousness and its objects. There you have a distinction which is wide enough to embrace all distinctions which are fundamental in any positive sense. I consider that psychology is a positive psychology, and by psychology I mean what Dr. Maudsley, I think, means by the new psychology; the bringing of states of consciousness into direct connection with their physical conditions. Instead of speaking about the mind as a single power having faculties—that I call the old psychology—we now speak, or ought to speak, of consciousness in relation to its physical conditions or whatever conditions research and experiment may discover to be the real conditions of its arising, and of the order in which the states succeed, accompany, and are combined with one another. There are therefore, to my mind, besides the old psychology of an entity with its faculties, two new psychologies. There is, first, the psychology which connects the physics of the brain (physiology that is) with concomitant states of consciousness, placing them as two parallel series of phenomena that are concomitant one to the other, the last of which concomitants you can trace, but without venturing upon any hypothesis as to the relation of dependence which may exist between them. That I would call the middle or second psychology. The newest psychology, which I consider is now entering on its trial, is one which bases itself on some distinct hypothesis as to the relation of dependence which exists between the physiological and physical action of the

brain and consciousness, and that hypothesis can only be that the states of consciousness depend upon, rise, and succeed one another only in consequence of changes in the brain, and that changes in the brain are in no way influenced by changes in the series or complexus of states of consciousness. I simply state that theory which I consider to be the veritable new psychology, and I think that for my part, if I were to name among those to whom I owe the reflections, which finally ended in my adopting for my own humble part that view of the matter, I should name pre-eminently Dr. Maudsley himself in his earlier writings. I therefore consider I owe a great debt to Dr. Maudsley, but I think that in all these subjects the large view must be the dominant one, and I believe that what I term the philosophical, or as it has been called this afternoon, the metaphysical view—considering what the foundation of all knowledge must be—must in all essentials be considered the dominant point of view. I think that metaphysical philosophy has the largest scope and is the most fundamental of all inquiries that any man can possibly undertake.

THE PRESIDENT.—Before I call upon Dr. Maudsley to reply, I think I may say that whatever difference of opinion there may be as to the teaching of Dr. Maudsley's paper, there can be only one opinion as to the charming way in which he has presented that teaching. I have myself listened to it with the greatest pleasure, and I am sure that pleasure has been shared by everyone present. I could only wish that Dr. Maudsley would come more frequently amongst us. He has done excellent work for the Association, and I daresay he thinks it is time for the young men to do their share, but the young men like the presence and approbation of the older ones, and if he could find time and opportunity to come among us I am sure he would receive as hearty a welcome as we have given him to-day.

DR. MAUDSLEY.—I think I shall be suiting your convenience best if I make what remarks I have to make very brief. In the first place I must be allowed to express my disappointment that I have not received the illumination which I asked for. I asked what were the conquests of the new psychology, but while I have been told of the value of its methods, I have heard nothing of the fulfilment of them. My paper was critically interrogative, and I described it so on purpose to elicit such information. Having taken that critical attitude, its remarks may have sounded depreciative. They were not intended to be so, but intended only to elicit definitely what the new psychology was expected to do and could do. But my critics, immediately rushing to the conclusion that I was denouncing the method, when I was only asking to have it defined and its results set forth, have treated the matter as if I wished to exclude it, which was by no means my intention. Of course by laying so much stress on the defects, this may have led to a misunderstanding of my object. With regard to what has been said as to my quotation of Descartes—that I might have gone further back—I might have gone back to the Infinite. I quoted him specially because he said that the study of mind was the only reality, and that mind was something absolutely and entirely distinct from body, and he devoted his second meditation entirely to prove that it is easier to understand the mind than the body. I did not wish to throw scorn upon the method of introspection, but to point out this: that the mind contains the whole body, and that, in fact, you must combine all the methods of physiology and introspection. So long as you ignore the body you cannot satisfactorily study the mind introspectively. Mind, in fact, contains and essentially represents the body, and, if I might be allowed to say so, in the presence of one who is far more deeply instructed in Aristotle than I, I should say that that was the fundamental conception of Aristotle, namely, that mind was vital structure, function by adaptation making structure. That, I should say, was at the bottom of the whole system of Aristotle's Psychology, Ethics, and Politics. I should be prepared to maintain, perhaps wrongly, that consciousness must necessarily be a thoroughly inefficient instrument for investigation. Consciousness at its best but reaches surface, penetrates only slightly into the mind. Coleridge said long ago that consciousness leaves most part of the mind unconscious, and it is that unconscious mind which is essentially physiological; which is, in fact, built up through the ages by successive adaptations of function to changing conditions and a corresponding growth of mental organisation.

On Pupillary Anomalies in Paralysed and Non-paralysed Idiot Children, and their Relation to Hereditary Syphilis. A Paper read before the Medico-Psychological Association at the General Meeting, London, 10th May, 1900, by W. J. KOENIG, M.D., Dalldorf, Berlin.

I DESIRE in this paper to focus your attention upon certain pupillary anomalies as observed in a class of patients who in this respect have not been the recipients of that amount of attention which to my mind is their due.

The eye-symptoms in insanity and other forms of cerebral disorder have for many years past been an object of assiduous study on the part of alienists and neurologists of all countries, and though their researches have by no means been confined to adult subjects, but have embraced juvenile cases as well, more especially the category which Dr. Clouston has termed "Developmental General Paralysis," idiot children, and in particular those of the paralysed type, have not come in for their share of consideration.

A few years since, I published a communication "On the State of the Cranial Nerves in Infantile Cerebral Paralysis,"⁽¹⁾ and discussing the oculo-motor symptoms I remarked on the striking paucity of clinical information extant on that point, this being singularly true with respect to the motor derangements of the intrinsic muscles.

My search through literature resulted in the discovery of three very incomplete and aphoristic instances quoted by Freud in his well-known monograph.⁽²⁾ I adduced several examples from my personal observation, and while pointing out that sluggishness or failure of pupillary action in children was taken by various authors, notably Oppenheim and Uthhoff, as fairly conclusive of syphilitic heredity, I gave the opinion, based on my own, if limited, experience, that before laying down a hard and fast rule it would be expedient to wait for a greater number of cases. In some instances, I suggested, the predisposing cause might be a complex, or a different one altogether. In a second publication⁽³⁾ I drew attention to the clinical bond uniting cases of uncomplicated idiocy and such associated with paralyzes, the link being represented by a series of "concomi-

tant symptoms" which could be seen alike in infantile paralysis and in examples of simple idiocy. As such "concomitant symptoms" I regarded epileptiform and hysterical seizures, involuntary disordered movements of an athetoid, choreiform or myoclonic type, and finally disturbance of the oculo-motor apparatus, viz., nystagmoid movements, paresis of the intra- and extra-ocular adjustments, neuritis, and atrophy of the optic nerve.

Since publishing the above-mentioned paper I have added considerably to my experience. On this occasion, however, I propose to limit myself to the discussion of the pathology of the internal ocular muscles as the dominant feature in thirteen cases of idiocy, and shall promiscuously deal with paralysed and non-paralysed subjects.

Among so many hundred cases of children, I have been engaged in during the last ten years, thirteen observations of pupillary anomaly represent a very small minority. Their sparse occurrence is explanatory of the small number of references met with in medical literature.⁽⁴⁾ Fuchs⁽⁵⁾ in a recent work giving notes of a hundred cases of infantile cerebral paralysis does not in one instance mention any deficiency of pupillary reaction; and only in one he reports inequality of pupils, in my experience a feature by no means uncommon, and comparatively insignificant as long as there is readiness of reaction.

For practical reasons I shall divide my material into three groups, the first two including one case each.

The first instance has been fully reported by me in a previous writing,⁽⁶⁾ and I therefore intend restricting myself to an outline account setting forth the main points. This case is unexampled, and distinguished from all the rest by the manifestation of a pupillary phenomenon the rarity of which is unanimously acknowledged by neurologists and oculists on the Continent. The essence of this symptom is a more or less frequent alternate dilatation of the right and left pupil. This "alternate mydriasis," as we may translate the German term "Springende Mydriasis," has chiefly, and for a very long time exclusively, been observed in general paralytics and tabetics (by Hirschberg, Mendel, Oppenheim, Siemerling, v. Strumpell, and others), and fourteen years since, when last the prognostic value of this symptom formed the topic of an animated discussion in the

Berlin Medical Society,⁽⁷⁾ the common teaching was to regard alternate mydriasis as a sign of distinctly evil foreboding. Notably Mendel and Hirschberg urged its ominous import on the strength of two observations in which they had noticed the phenomenon precede the actual onset of general paralysis by five and twelve years respectively. Later on examples of alternate mydriasis in patients suffering from functional nervous disorder were reported by various authors. Pelizaeus⁽⁸⁾ records notes of six cases of neurasthenia in which the symptom was observed. The value of this communication had not been adequately appreciated until I drew attention to it, and urged that these observations compelled us to somewhat qualify the unfavourable prognosis alternate mydriasis had hitherto seemed to imply.

Now it is a well-known fact that progressive paralysis in its initial stages not infrequently resembles neurasthenia, and, bearing in mind the above-mentioned observations of Mendel and Hirschberg, the question arises whether these cases of Pelizaeus have been followed up long enough as to be absolutely conclusive in respect to their functional nature. One case at all events will satisfy the most sceptical critic. It is of a well-known member of the medical profession in Berlin, still in practice, who as long as seventeen years ago placed himself under Dr. Pelizaeus's care exhibiting unmistakable symptoms of neurasthenia and alternate mydriasis. Pupillary action, as in all Pelizaeus's cases, was brisk. This gentleman has never quite got rid of his nervous complaints, but up to the present day there has been no indication of organic mischief.

This instance is of fundamental importance, affording proof conclusive that under certain circumstances alternate mydriasis and a favourable forecast of the case are not mutually exclusive.

Before entering into a discussion of the special nature of these circumstances, allow me to put before you the broad facts of my only observation of alternate mydriasis in normally reacting pupils.

H. V—, male, æt. 17, admitted on January 3rd, 1898. According to information given by patient's mother, his father died of some pulmonary affection. Mother enjoyed good health all through her life, and there was no neuropathic heredity in either parent. Complete ignorance was professed as regards syphilitic antecedents. There were nine

pregnancies, the third and ninth being miscarriages at third month; the rest were full-time children, two of whom died in infancy, one from lock-jaw and the other from general debility; three children are doing well, mentally and physically. Of the four survivors, patient is the second child. Pregnancy natural; infant not asphyxiated; was suckled by mother. Patient was congenitally weak-minded. He did not attempt to talk or stand on his feet till more than three years old. He never spoke properly, and was always clumsy in walking. During his first year he was twice attacked with fits, which have not since recurred. At the age of ten he contracted an illness, the exact nature of which could not be elicited; informant only remembers the patient lost consciousness for the space of a week.

On examination, patient is mentally dull and slow: there is a very bad stammer and slowness of speech, and he frequently drops the final syllables; in repeating difficult test-words his language is next to incomprehensible. There is, however, no nasal twang in his voice, and his speech on the whole does not resemble that of a general paralytic.

Patient is undersized, cranium fairly symmetrical, gait somewhat spastic; now and then his knees will suddenly give way, but he never falls. *Genua valga*; marked rigidity on attempting passive movements at knee- and hip-joints. Knee-jerks increased; double ankle-clonus; no evidence of ataxia, double club-foot, athetoid movements in oral muscles and toes. Condition of upper limbs presents nothing noteworthy; circulatory, respiratory, urino-genital systems unaffected. Sensations all over the body good. Fields of vision roughly examined are of natural extent; no oculo-motor anomalies save slight insufficiency of the internal recti; central vision uncorrected, R. V. $\frac{2}{5}$, L. V. $\frac{1}{5}$, Snellen.

Oculist's report.—Slight post-neuritic optic atrophy, extreme pallor of discs, arteries small and tortuous; pupillary reflexes lively; pupils of medium size, the left slightly the larger.

The next day the right pupil was noticed to exceed the left in width, and this fact prompted us to subject patient to continuous observation for a period of three months. The result of our effort, briefly summarised, was that the exchange of the mydriatic condition from one eye to the other frequently occurred as often as three or four times a day; then at other times the same pupillary state was maintained up to three days. At various times there was equality of pupils, and it was not infrequently noticed that after a period of pupillary equality the previous condition was re-established instead of being reversed (*e. g.* R. > L., R. = L., R. > L., and not L. > R.). Since the last notes were taken the clinical aspect of the case has been unaltered.

Summing up, we have alternate mydriasis associated with normal pupillary reaction in a young subject affected with presumably congenital organic disease of the brain, the clinical symptoms of which consisted in mental reduction of a non-progressive character, spastic paraparesis, athetoid movements of oral muscles and toes, and post-neuritic optic atrophy.

This is the first instance on record of alternate mydriasis in

a case of organic cerebral disorder where normal pupillary sensibility to light has not only been present but retained for quite a number of years.

We are not aware as to when the alternate mydriasis first put in an appearance ; it might be congenital or acquired ; and it will be a matter of some importance and great interest to watch the further progress of the case.

Three courses of development are conceivable. Either the present condition will be maintained to the end, or the symptom of alternate mydriasis, being of a transitory character, will disappear, or lastly the final issue will consist in loss of pupillary mobility.

The case goes to show that alternate mydriasis and normal reactionary activity of pupils may for a period of many years co-exist with organic disturbance of the brain.

Viewed in the light of the above observations presented to you, we come to the following conclusions with regard to the prognostic significance of alternate mydriasis :

(1) The symptom of alternate mydriasis is of particular import only when associated with normal pupillary sensibility, the presence of even slight impairment of light-reflex, with or without alternate mydriasis, being sufficient to put us on our guard against taking a sanguine view of the case.

(2) In cases of natural pupillary reflex, other indications of organic trouble being absent, the appearance of alternate mydriasis is not necessarily a sign of *evil* omen. We will, however, carefully exercise a wise discretion in estimating the significance of the symptom, with regard to the fact that general paralysis in making its approach frequently simulates neurasthenia ; and bearing in mind this, as the foregoing example proves, normal pupillary action, combined with alternate mydriasis, may persist for years in spite of organic changes in the brain.

Prior to proceeding to the next case let me call your attention to another phenomenon, self-evident, and not at all remarkable in itself, but which by the uninitiated, and on a cursory examination, may be mistaken for alternate mydriasis, and which I have suggested to denominate "Pseudo-Alternate Mydriasis." This mock-symptom is seen in pupils of unequal width and reflex-irritability, when under the influence of light varying in its brightness. Hence it follows that pseudo-alternate

mydriasis will be seen at its best in instances of unocular loss of light-reflex.

Supposing $L. > R.$, $L.$ being fixed to light, the width of $R.$, with accommodation at rest, will vary with the increase or decrease of daylight, and present a more myotic or mydriatic condition accordingly. With advancing darkness dilatation will ensue, $R.$ equalling $L.$, and finally exceeding it, the result being $R. > L.$, apparently an instance of alternate mydriasis, while in point of fact no actual exchange of the mydriatic condition has obtained, the size of $R.$ not having undergone any alteration. Increase of daylight will re-establish the first state.

I have myself been temporarily deceived in a case of a general paralytic confined to her bed and facing the window, the varying intensity of light thus having free play.

The second case I have to narrate is likewise a solitary observation, it is one of transitory pupillary sluggishness, associated, it is true, with external ophthalmoparesis and consequently not strictly within the limits of this paper, but interesting enough to justify my making brief mention of it.

M. W—, female, æt. 8. Patient's family and personal history could not be procured.

Condition on first examination (November 11th, 1897).—Patient is a complete idiot. Circumference of head 47.5 cm. Traces of hypertonia in lower limbs on trying abrupt passive movements; knee-jerk markedly exaggerated on both sides. State of other systems healthy.

On October 3rd patient became ill, with an acute attack of diarrhoea; two days later she manifested complete right ptosis; the drooping eyelid cannot be raised; no conspicuous over-action in the corresponding half of the frontalis, and pupils contracted readily to light. No chance of testing accommodative reflex. Both eyes could be freely moved in all directions. Ophthalmoscopic appearance natural.

On October 8th there was an extremely marked divergent paralytic squint of right eye; state of levator unchanged; there is distinct insufficient mobility of the eye in all directions, the upward and downward movements being particularly affected. External rectus acts well; there is slight prominence of eyeball (paralytic exophthalmos). Right pupil of moderate size, larger than its fellow, responding sluggishly to direct and indirect light stimulation. No retinal changes; condition of left eye healthy.

On the 11th there was indication of beginning recovery, the internal muscles and the levator being the first to regain activity. By the 30th, about three weeks after the onset of the trouble, all the symptoms had disappeared. There has been no second attack. The question naturally arises as to the causation of this transient ophthalmoplegia.

We know of the frequent occurrence of passing oculo-motor affections in luetic subjects. About the antecedents of the above case we are entirely in the dark; no perceptible stigmata of venereal disease were seen on the body, but this negative finding naturally does not authorise us to exclude hereditary syphilis with anything like confidence. Perhaps toxins produced by the micro-organisms of the intestinal catarrh affected the oculi-motor cells, or vascular irregularities within the ocular nuclei may have had a similar effect. Anyhow we are not in a position to make any definite assertion on this point.

The third group comprises eleven cases presenting a chronic state of irregular pupillary activity.

I propose to first give a brief clinical history of each instance, adding a short account of the pathological changes where a post-mortem examination has been made.

CASE 1.—P. B—, male æt. 9.

Family history and previous health.—Mother single, father has been lost sight of; there is a probable history of maternal syphilitic heredity, but no definite proof can be adduced. Patient born at full term; labour not instrumental, and of normal duration. When eleven months old patient was seized with convulsive attacks and subsequent right hemiplegia: after a free interval of five years he had a second convulsive period.

Condition on admission.—Intellectually, very far below par. Right spastic hemiplegia, the paralysed limbs exhibiting trophic lesion. Pupils unequal, L. > R., acting sluggishly to light, while during convergence there is vigorous contraction. Fundi and discs of healthy appearance.

CASE 2.—P. K—, female æt. 7.

Antecedents.—Father died an inmate of Dalldorf Asylum; he had been a general paralytic with a clear history of specific disease. Patient is the last child of seventeen. It was not noticed that there was anything the matter with her legs till she began to walk at three years. No history of fits.

Present state.—Pupils dissimilar, L. > R. Right pupil fixed to light and upon convergence; left but faintly responsive to either stimulus; optic discs healthy; all ocular movements well carried out. The two sides of the face quite symmetrical in their aspect and movements. Tongue deflected to right on protrusion. Spasticity of all four extremities, less marked in the upper limbs. Knee-jerks exaggerated, left greater than right. Left foot-clonus, gait spastic.

CASE 3.—A. S—, male æt. 12.

Family history and personal antecedents.—Parents were first cousins. Father presented a likely history of luetic infection. Patient is the third child. Labour tedious, and instruments had to be used. Child asphyxiated when born. He never ailed till up to the age of nine, when

a first convulsive seizure occurred, leaving the right side paralysed. After a quiet intermission of six weeks, he had a second paroxysm with ensuing left hemiplegia. After a lapse of another four weeks a third and last attack came on, since which patient's mental condition rapidly deteriorated.

State when first examined.—Complete absence of language, hyper-tonicity of muscles of all limbs. Right extremities more paralysed than left; double genu valgum. Gait of the spastic-paretic type. Pupils unequal, R. > L., reaction to light and convergence gone in right eye, very deficient in left. Ophthalmoscope reveals nothing abnormal.

Death took place from independent causes.

Pathological summary.—Thickened and milky appearance of pia-arachnoid, with matting of the superficial layers of cortex. Pia does not peel without tearing of brain substance. General convolitional atrophy. Lateral ventricles much distended with serous fluid, ependyma thickened and highly granulated.

CASE 4.—E. S—, male æt. 14. Illegitimate child; family history otherwise unimportant. Mother experienced a good deal of worry during pregnancy. Delivery natural and easy; infant delicate. When six weeks old he took convulsions, and, coming out of them, could not move his right side. In the course of the subsequent eighteen months the paralysis gradually subsided. At twelve years he had an apoplectic fit, after which he increasingly failed in his walking power, and completely lost his speech.

When first seen, his language was almost unintelligible, and he scarcely appreciated the simplest remark. Thyroid gland slightly enlarged; heart-beat accelerated in a rhythmical manner, the number of contractions being about 120 per minute. Weakness of right lower face. Tongue, when protruded, curves to the right. There was utter inability to walk or even stand without extraneous aid. When supported during progression, he brings his limbs forward in a spastic-ataxic way, swinging his right foot round with a semicircular movement. Myoclonic jerkings are present in various muscles all over the body, and athetoid movements in right toes. All four extremities are in a spasmodic condition, more marked on the right side. Right knee-jerk excessive. By a single tap on the Achilles tendon, three to four contractions are readily obtained. Double patellar clonus and right foot-clonus.

Post-mortem record.—Meninges thickened and adherent to cortex. Ventricles greatly extended and granular. Yellow patches of old hæmorrhagic softening on surface of caudate nucleus, $1\frac{1}{2}$ cm. antero-posteriorly by 1 cm. laterally. Basal arteries atheromatous.

CASE 5.—E. B—, male 12 years. Born out of wedlock; birth natural and easy. When eight days old was taken with fits. Attacks kept on occurring at varying intervals during the next five months; after ceasing for eighteen months the spells returned. In his fourth year had measles and supervening pneumonia. Pupillary irregularity was only noticed when he was five. No definite statement could be obtained with regard to onset and duration of paresis. Of late patient is said to

develop occasional violent outbursts of temper and reckless impulsiveness.

State on admission.—Cranium oxycephalic. Dissimilarity of pupils, R. > L.; both irresponsive to light. Action during convergence lost on right eye and a mere flicker on left. No ophthalmoscopic changes. Doubtful weakness of left lower face and hypoglossal nerve. Slight spastic paresis of left arm and faint evidence of rigidity in the other limbs. Patellar tendon-reflexes increased. Tachycardia. Frequent occurrence of major epileptic attacks.

Autopsy.—Milky aspect of pia-arachnoid. Sclerosis of right posterior central gyrus. Ventricles greatly dilated, and ependyma coarsely granular.

CASE 6.—A. M—, female æt. 12. Father very alcoholic. Rather mentally enfeebled, her state being strongly suggestive of incipient progressive paralysis. Patient is the fifth child, and was naturally delivered after easy labour. Her intellectual powers up to the age of eight of average quality. In her seventh year she had an attack of convulsions, and at eight took measles. Since that time she has been weak-minded and subject to vertigo. At the same time she began to be awkward in walking, and since her tenth year involuntary jerky movements are manifest.

When admitted her pupils were widely dilated and unequal, the right the larger one, both fixed to the strongest light, and failed to act upon convergence. Ocular movements perfect. Optic discs somewhat pale, without presenting definite existence of atrophy. Nothing abnormal, cardiac or pulmonary. Slight spinal lordosis, and there was considerable rigidity in arms and legs. Tendon jerks of the clonic type, double knee- and ankle-clonus. During progression patient plants her feet widely apart, very slightly stamping her legs, not throwing them strongly forward as in ordinary ataxy, on account of a very marked stiffness. Great reduction of voluntary power in lower limbs. Choreiform movements are seen in muscles of trunk and extremities. Condition of arms otherwise natural. Fatal termination in January, 1899, from intercurrent pulmonary affection.

Autopsy (twenty-four hours after death).—Heart-muscles soft, pale, fatty; valves healthy. Old pleural adhesions of left apex. Left lung studded with tubercles, caseous nodules, and cavities. Broncho-pneumonial patches in inferior lobe of right lung. Enlargement of spleen; kidneys show evidence of parenchymatous degeneration. Liver fatty. Mucous membranes of the lower intestines injected and swollen. No signs of old syphilis. Skull thickened, sutures ossified, sinuses contain clots of blood. Dura natural. Pacchionian bodies not unusually large. Pia-arachnoid opaque and thickened, more especially on either side the longitudinal fissure; strips with undue ease, and without laceration of cortex. Ventricles perceptibly distended; ependyma smooth, healthy.

On slicing brain is moist, and there is no undue multiplication of puncta cruenta. Naked-eye appearance of spinal cord good.

CASE 7.—E. G—, male æt. 8. Father incurred specific infection previous to marriage, recovering under antiluetic treatment, but evidently

communicated the disease to patient's mother, who shortly after marriage exhibited venereal symptoms. At present moment apparently in enjoyment of good health.

First pregnancy resulted in abortion at three months. Patient the second child. Labour difficult, protracted, necessitating instrumental interference. When four months old patient was taken with an attack of convulsions terminating in paresis of right arm and slight weakness of right leg. Since then seizures have periodically occurred. No attempt to speak or to walk has ever been made.

Present state (March 17th, 1899).—Patient is quite demented. He can neither stand on his feet nor walk without assistance. Head and face asymmetrical; voluntary action of facial muscles equally powerful on either side; right hemiplegia with contractures; left limbs in a state of slight rigidity; knee phenomenon in excess, R. > L., Achilles-reflex brisk. Pupils equal, perfectly immobile to the stimulus of even focal illumination; reaction upon convergence and accommodation could not be tested. Retinoscopy shows both discs to be of a palish white-grey, with blurred edges (post-neuritic atrophy). Patient died from intercurrent broncho-pneumonia (July 8th, 1899).

Brief summary of post-mortem notes.—The main feature of the finding was atrophy of the left hemisphere, and a gummatous growth originating in the meninges of the left hemisphere and spreading over the parietal lobe, including both ascending convolutions in their entire extent and the first temporal gyrus. The specific growth had penetrated into the white matter, and was separated from the lateral ventricle only by a thin layer of natural tissue.

CASE 8.—K. K.—, male æt. 10. Parents dead. Family and previous history unobtainable. When admitted (October 10th, 1899) patient showed little intellectual development. His physique was fair; horizontal circumference of cranium 46 cm. Facial asymmetry; pupils wide and do not contract to light; accommodation reflex could not be tested. No change of fundi or discs. Knee- and Achilles-jerks exaggerated; no ankle-clonus. When maintaining the dorsal decubitus patient draws up his legs; he can, however, extend them at will with apparent ease. There are no contractures, and no rigidity is felt in effecting sudden passive movements of legs. Patient is unable to walk by himself. When assisted stands with a broad base, and in stepping scrapes the right foot along the ground. Patient is subject to occasional epileptic paroxysms. Died January 1st, 1900, from pneumonia.

Autopsy (four hours after death).—Dura adherent to skull. Between the dural membranes a thin layer of fluid blood. Pia intensely opaque and thickened, particularly so over right Sylvian fissure. Ventricles moderately dilated, ependyma a trifle thickened. Heart muscle fatty; lungs congested, show evidence of grey hepatisation.

CASE 9.—C. P.—, female æt. 7. Both parents are inmates of Dalldorf Asylum, and suffering from progressive paralysis.

Father according to his own story contracted a hard sore followed by rash, and underwent a course of antivenereal treatment. He could make no definite statement as to whether he had infected his wife.

The latter denies ever having had syphilis, but owing to her very enfeebled state of mind not much weight attaches to her report.

Patient is the only child, and there were no miscarriages. Maternal grandmother, when interviewed by me, stated that when patient was born her finger-tips and soles of feet were covered with a vesicular eruption (pemphigus?). After this had cleared off, patient's mental progress and general health were satisfactory up to her third year, when she all of a sudden developed a squint and found difficulty in walking, by degrees becoming quite unable to guide her steps. At the age of five she was seized with epileptiform spasms, and during three days lay in a comatose state. She made a gradual recovery, but never regained the power of locomotion. No recurrence of fits.

Notes on admission.—Mentally very imbecile; double pes talipes; knees flexed. On striking the patellar tendon there was a clonic response. Doubtful comparative weakness of left lower face. Pupils semi-dilated, equal in size, insensible to light, and very sluggish during convergence. No abnormality of fundi. Tongue non-tremulous, protruded in middle line. When both arms are simultaneously raised above the horizontal there is a distinct retardation of movement in the right extremity. Movement of fingers in both hands awkward. Plantars on tickling the soles of feet show extensor response. Pin-pricks cause patient to draw back her legs in a lazy fashion. Sensations and special senses unimpaired. Patient is incapable of standing or walking except when supported. When standing she rests on the balls of her toes, and the heels are drawn up from the ground; hip and knee-joints slightly flexed. The other systems of the body are not affected.

CASE 10.—W. L., male æt. 9. According to the information received from the child's mother there is no neuropathic heredity, and both parents have never been ailing. Venereal infection and abuse of stimulants denied. There were eight full-time children, of which patient is the last, one stillborn, and one miscarried at second month, four children died. The survivors are in good health and mentally bright. Mother went through pregnancy and labour without any drawbacks; child was normally developed when born, and was brought up by bottle. At five months convulsions came on, recurring at intervals till he attained his fifth year. Mental faculties below par from birth.

On first examination (January 1st, 1898) he exhibited a high degree of mental obscuration. Head of hydrocephalic shape. Corneal opacities in both eyes. Left pupil of medium size, its margin a trifle irregular through anterior adhesions. All reactions present. Right pupil widely dilated, iris annular, non-adherent, direct and indirect light reflex abolished, accommodative reflex faintly retained; eyes can be readily moved in all directions. Normal condition of optic nerves. The other functions of the body are regular.

CASE 11.—F. B., male æt. 15. The following history was given by patient's maternal grandmother and his father.

Father of alcoholic habits (was intoxicated when interviewed), has had

a soft sore, no secondary symptoms, and was treated locally. Patient's mother died of "spinal syphilis" (tabes?). She had five pregnancies. First was an abortion at fourth month; patient the second child; third child died twenty-four hours after delivery; fourth and fifth children are delicate. Grandmother noticed unnatural dulness in patient at the age of six weeks. Later on he frequently exhibited hasty temper on slight provocation. Did not get on at school.

On admission he was of very weak intelligence; physically fairly strong, and had a good deposit of subcutaneous fat. His speech difficult of comprehension, but in nowise resembling that of a general paralytic. Slight cranial asymmetry. Right palpebral fissure comparatively narrow. Ocular movements perfect. Horizontal nystagmus. Pupils L. > R. All reactions extinguished. No facial palsy, or paralysis of extremities. Knee- and Achilles-jerks exalted; at times right ankle-clonus can be obtained. Right plantar reflex of the extensor type. Gait awkward, not distinctly pathological.

Analysis.

The eleven cases included in the third group consist of eight boys and three girls, their ages at the time of admission varying between seven and fifteen years. I do not mean to enlarge on the preponderance of the males, the higher percentage being in all probability accidental. To arrive at a proper estimate as to the real proportion of males and females we would have to be in possession of larger figures. Nine cases were clinically of infantile cerebral paralysis, one of them proving on post-mortem examination to be caused by gummy meningo-encephalitis, and two were cases of uncomplicated idiocy. In all instances but three the children were mentally deficient from birth, or were noticed to be wanting in normal intelligence before the close of the first year.

In three cases only the intellectual condition was stated to have been normal till the third, eighth, and ninth year respectively.

All patients were more or less demented on admission. In all cases language was either absent or impaired, but there never was any resemblance to the articulatory disorder of general paralysis. There was, moreover, no instance of abolished knee-jerks, the very converse obtaining, as in all cases a more or less exaggerated condition of the tendon-reflex was found.

All patients but one had a history of convulsive attacks at some time or other of life, paralysis and mental enfeeblement frequently being ushered in by the first seizure.

In six cases post-mortem examinations have been made, to which I shall recur presently.

Turning now to a study of the two points taking front rank in our interest, the pupillary anomalies and their bearing on syphilitic heredity; the former show two types, a binocular and a unioocular one. Of the latter I have only our example to record, viz. light reflex extinct, and accommodation slow.

Cases of one-sided deficiency of pupillary action are not of very frequent occurrence in the adult, and evidently exceptionally rare in mentally affected children.

As regards the binocular examples we have—

- (1) All reactions lost in two cases.
- (2) Pupils fixed to light, action during convergence could not be tested in three cases.
- (3) Pupils rigid to light, and sluggish upon convergence in one case.
- (4) Light reaction gone, convergence reflex sluggish in one eye, normal in the other, in one case.
- (5) Contraction to light and convergence absent in one eye, slow in the other, in two cases.
- (6) Light reflex deficient in both eyes, action upon convergence and accommodation being vigorous.

We have, therefore, in eight instances double loss or deficiency of light reflex, and in four cases additional double loss or deficient reaction during convergence and accommodation. In one example only did contraction on convergence show natural briskness.

In three observations mobility during convergence and accommodation could not be tested, and in one child all reflexes, with the exception of convergence action in one eye, were abolished.

In six instances there was double affection of all reactions. One salient feature of these observations will not have escaped your notice, *i. e.* the great frequency of simultaneous deficiency of all reactions, this being the reverse of the condition in general paralysis, where in a large proportion of cases reaction to convergence is retained. This remarkable difference of pupillary behaviour is probably due to diversity in the extent of nuclear changes; the reason, however, for this diversity is as yet in abeyance.

Approaching the question of syphilitic heredity, we must

bear in mind that outside of venereal disease there are quite a number of other factors playing a recognised predisposing or even ætiological rôle in the history of idiocy as well as infantile cerebral palsy, the most prominent among them being—consanguinity of parents, illegitimate birth, premature birth, ancestral alcoholism, severe nervous shock or bodily injury of mother during pregnancy, the fact of the child being the last or one of the last of a long family, difficult and protracted labour, asphyxiated birth, head injury, and acute infectious diseases. In the overwhelming majority of cases we shall encounter a plurality of predisposing agents, and the difficulty we experience in trying to fix the blame on one ultimate cause is very often insurmountable; we must then be content to state a joint responsibility of several predisposing factors, leaving the question of the exciting cause, the actual ætiology, an open one.

In searching out our cases for predisposing and ætiological elements we note :

In Case 1 : (a) Presumptive history of maternal syphilis ; (b) illegitimate birth.

In Case 2 : (a) Clear history of paternal syphilis, father died a general paralytic ; (b) patient the seventeenth child.

In Case 3 : (a) Father presents likely history of syphilis ; (b) father and mother first cousins ; (c) labour tedious ; (d) child asphyxiated.

In Case 4 : (a) Illegitimate child ; (b) mother experienced much worry during pregnancy.

In Case 5 : (a) Illegitimate child, no further history.

In Case 6 : (a) Father intemperate ; (b) mother's mental state suggestive of incipient general paralysis.

In Case 7 : (a) Both parents give a definite history of luetic infection.

In Case 8 : (a) No history.

In Case 9 : (a) Father with syphilitic antecedents and a general paralytic ; (b) mother a general paralytic ; (c) child born with presumably specific eruption.

In Case 10 : (a) Patient the eighth child, family history otherwise good.

In Case 11 : (a) Father very alcoholic ; (b) father gives history of soft sore not followed by secondary symptoms ; (c) mother died of spinal syphilis (? tabes).

From the preceding groupings of predisposing factors it will

be readily seen that only in one example (10) syphilitic heredity may with likelihood be excluded. Of the remaining observations one (8) is *minus* any history at all ; and in three (1, 4, 5), the patients being illegitimate children, syphilitic ancestry naturally cannot be negated, particularly in Case 1, where the mother presented a likely history of venereal disease. The same applies to Case 6, where the mother's mental condition suggested incipient progressive paralysis ; to Case 3, in which there was a presumptive previous history of paternal infection ; and to Case 11,—mother succumbing to a specific disorder of the spinal cord, and father having had a soft chancre.

In a considerable number of the cases of conceivably or presumptively syphilitic origin we have several of the "predisposing" elements. Only in two instances the *etiological* connection between ancestral syphilis and infantile cerebral trouble is absolutely obvious and non-contentious, viz. in Cases 7 and 9. In the former both parents owned to previous infection, whilst no ulterior predisposing factor could be traced, and the post-mortem revealed gummy meningo-encephalitis. In the latter there was likewise a luetic history and development of general paralysis on part of both parents, and the new-born infant exhibited what may be assumed to have been a specific exanthema.

The family history of this case likewise bears out the relationship between syphilis and progressive paralysis of the insane, whilst the case itself may be considered as intermediary between infantile cerebral palsy of specific origin and developmental general paralysis.

For Case 2 paternal syphilis has very probably to answer, as well as for the two last-mentioned instances, only that the presence of another predisposing element—patient being the seventeenth child—prevents us from quite unhesitatingly accepting syphilis as the *immediate* cause.

The lesson to be learnt from the above considerations is that finding as we do ancestral syphilis in the majority of cases of early dementia with impairment of pupillary reaction, either as the proximate cause or as one of several predisposing elements, deficiency or loss of pupillary action in cases of infantile mental enfeeblement must necessarily point to syphilitic heredity. Our present knowledge, however, does not allow us to negative

the existence of other causes outside of syphilis. In advancing this view I am in harmony with Babinsky and Charpentier,⁽⁹⁾ who in a recent writing discussed the broad question of pupillary symptoms in their relationship to syphilis.

In concluding this paper let me briefly touch on the pathology of the six cases in which a post-mortem examination was made. In five instances autopsy disclosed a naked-eye condition such as we are accustomed to find in the advanced stages of general paralysis, viz. thickening of pia-arachnoid, adhesions to cortex, distended and granular ventricles. In addition to these changes Case 4 showed atheromatous basal arteries and small patches of yellow softening in the caudate nucleus, Case 3 very marked general convolitional atrophy, and Case 5 sclerosis of the ascending parietal. The latter is the only example in which a microscopic examination of the cortex has been carried out, for which I am indebted to Dr. Navratzki, one of our assistant medical officers. Contrary to our expectation the natural wealth of tangential fibres was present except in the sclerosed posterior central convolution; neither did the grey matter of the central canal manifest any morbid alteration. The pathological finding of this case calls for special attention, showing that in spite of macroscopic appearances resembling those of general paralysis, the microscopic investigation may reveal an aspect different from what one would be led to expect. A minute pathological study of a large number of similar and allied cases is a matter very much to be desired.

Case 7 is the only one of cerebral syphilis; at the same time one of those instances in which the family history permitted us to make a likely if not absolutely safe diagnosis as regards the nature of the anatomical changes. A clear history of parental syphilis is, as we all know, by no means an infallible guide in this respect; for in a number of similar instances morbid alterations of a non-specific kind are met with.

Running our mind's eye over the heterogeneous mass of cases of congenital and early weak-mindedness in which parental syphilis plays a predisposing or the ætiological part, we may recognise, clinically as well as pathologically, three varieties, the latter not necessarily, and very frequently not at all, corresponding to the former.

Of the three clinical groups the first comprehends the cases of non-paralysed idiot children, the second those of infantile cere-

bral palsy proper, the third those of juvenile paralysis, of which I agree with Dr. Mott⁽¹⁰⁾ that we may discern two types. In every one of these three groups abnormalities of pupillary action may be present. This may be regarded as the rule in juvenile paralysis and in many cases of brain syphilis, as the exception in infantile cerebral palsy proper, and still more so in ordinary idiots.

Very frequently we shall encounter transition forms not fitting into either of the three groups, and we must likewise bear in mind that gummy alteration of the central nervous system may simulate any of the three types, as well as the transitory ones. In a large proportion of examples of cerebral syphilis the diagnosis in relation to the anatomical character of the morbid changes will have to remain *sub judice* until after autoptic inspection.

The most common of the transition cases in my experience are those intervening between infantile cerebral palsy and juvenile paralysis (*e. g.* Case 9). Of the pathological varieties, the first includes all cases with specific cerebral or cerebro-spinal changes. The second is characterised by the typical findings, macroscopic and microscopic, of general paralysis. The third embraces all cases not to be classified under the first two heads (*e. g.* Case 5).

It will be the business of pathologists, more especially of those connected with large asylums, to clear up the pathology of this third category, and ascertain whether it constitutes a genuine pathological entity, or whether we must distinguish further varieties.

Dr. JONES.—I should like to ask Dr. Koenig for an explanation as to one phenomenon which I have occasionally met with in cases of general paralysis of the insane, and which has been called the "paradoxical" pupil. The eyes are closed, and when opened again instead of the pupil contracting it dilates. It is an unmistakable occurrence, and it has appeared in my experience in general paralysis only. I am not acquainted with the explanation, and I should be glad if Dr. Koenig can throw some light upon it.

Dr. KOENIG.—In reply to Dr. Jones I would say that, as far as I know, there has been no definite explanation advanced as regards this paradoxical pupil. A similar state obtains, I believe, in pupils on opening the eyes in the process of awakening. The pupils, which during sleep are contracted, expand instead of contracting to light, as one would suppose them to do. Perhaps this is a similar condition.

(1) *Zeitschrift für klin. Medicin*, 1896, Hefte 3 und 4.—(2) *Die infantile Cerebrallähmung*, Wien, 1897.—(3) "Ueber cerebral bedingte Complicationen, welche der cerebralen Kinderlähmung, wider einfachen Idiotic gemeinsam sind, sowie ueber die abortiven Formen der ersteren" (*Deutsche Zeitschrift für Nerven-*

heilkunde, Bd. xi).—(4) Since my first publication Tuzek (*Berlin. klin. Wochenschrift*, 1898, No. 37) has communicated a case in point.—(5) *Jahrbuecher für Psychiatrie und Neurol.*, 1900, Heft 1.—(6) *Deutsche Zeitschrift für Nervenheilkunde*, Bd. xv.—(7) 25, xi, 1886.—(8) *Deutsche med. Zeitung*, 27, viii, 1889.—(9) *Extr. du Bulletin de la Société de Dermatologie*, séance du 13, vii, 99; *De l'abolition des réflexes pupillaires dans ses relations avec la syphilis*.—(10) *Archives of Neurology of the London County Asylums*, 1900.

The Asylum at Pau, a Self-supporting Public Asylum.

By A. R. WHITEWAY, Barrister-at-Law.

THE Asile St. Luc at Pau is indeed an Institution which deserves to have its story told. Through the kindness of the authorities this story is now for the first time made public. It is in effect that, starting with a capital of £12,000 and a small farm of some twenty acres, a nearly perfect asylum with 900 inmates and a staff of over 100 assistants has been built up by degrees, now not only self-supporting but last year showing a profit of £2000, spent mostly in structural improvements and additions and in the purchase of adjoining land. The Medical Superintendent has a free hand, being responsible only to the Conseil-Général of the Department, who, as they find him no funds, merely exercise a benevolent supervision. How such a satisfactory state of affairs has been brought about it is the purpose of the present article to briefly indicate, by way of an object lesson in asylum management.

HISTORY.—In the year 1838 the French Lunacy Act was passed, which in theory compelled the erection of a separate asylum in each Department throughout the kingdom. Theretofore syphilitic prostitutes, sick prisoners, and lunatics in chains, treated as dregs of a society of which they are but necessary bye-products, were herded together in one building in Pau in the care of a concierge, and daily visited by a doctor appointed for the purpose. Notwithstanding the Act of 1838, it was not until 1868 that the Department of the Basses Pyrénées began to carry into effect the provisions of this statute as to constructing a proper asylum for the insane alone. The old *maison de force*, now the Museum, was sold for fr. 300,000 to the town of Pau. With this sum upon a farm of twenty

acres two miles off, which had been for long allotted to and worked by the patients, the present Asylum of St. Luc was commenced.

There are in France various kinds of asylums for the insane : (1) *State establishments* strictly so called, of which there is now in fact but one, namely that at Charenton ; (2) *Departmental asylums* such as that we are describing, of which there may be forty-five in all ; (3) *Communal asylums*, perhaps fifteen in number, nominally annexed to hospices ; (4) *Private asylums*, perhaps twelve in all, of which that of M. Miruit, which serves for both the Departments of Lot and Dordogne, is a good typical example. There are besides two *Autonomes*—one at Bordeaux and one near Lille,—which are entirely self-governing. If a Department possesses its own asylum, a certain sum per head per day is paid by it for each indigent patient maintained, whom the superintendent is obliged to receive at the price fixed by the Conseil of the Department. At Pau this sum is 8½*d.* a day. The problem to be solved is, how to make this pittance suffice to furnish the fr. 1 40 c. worth of food, clothing, and share of general expenditure entailed by the reception of each person, in compliance with the uniform minimum scale fixed by the Minister of the Interior, which can, however, be modified by the Préfet in each Department. The way this is brought about at St. Luc is by bargaining to take patients from two adjoining Departments, neither of which has as yet faced the initial cost of buildings of its own. These are the Hautes Pyrénées and the Landes. For the last ten years they have paid at the rate of fr. 1 18 c. a head ; but after April next, under a new contract, they are to give 3 c. less during the next twenty years. Besides indigent patients from the three Departments already mentioned, there are a very small number from other sources, such as the Army and the Prison Service, who pay about fr. 1 30 c. All these belong to the Fifth or Indigent Class. Even so at first sight there is a loss of 20 c. a head a day on each of these better paying guests. The deficit is made up in three ways : (1) By taking about 120 still better paying patients mainly from the same three Departments, one at fr. 8000 a year, who has a house to himself with two servants found by the establishment ; thirteen at fr. 8 50 c. or fr. 6 50 c. according as they have three rooms or only one each, with fr. 2 50 c. for a male or fr. 2 extra for a female servant ;

sixteen at fr. 4 50 c. ; seventeen at fr. 3 50 c., and sixty at fr. 2 50 c. a head a day. All these patients have to find their own clothes and tobacco. (2) By the labour of some 450 of the indigents male and female for a portion of say 300 days each year. These practically do everything necessary for the working of the establishment under proper foremen, and work on the sixty acres of garden, farm, and grounds belonging to the Institution. (3) By taking adequate measures to prevent any waste in the food and clothing of patients a saving of about 13 c. a head a day is computed to be brought about.

Dr. Girma, the present Director, sees that a sufficiency of food, including 257 grammes of first-rate meat on every *jour gras*, warm clothing and breathing space is allotted to each inhabitant, while none are overworked. No restraint is used except isolation, the strait waistcoat having been discarded now for two years, while outdoor air and exercise are the chief medicines that the patients are compelled to take. The Institution structure has been built up bit by bit as occasion demanded, and the marvel is that it presents so harmonious an appearance. What strikes the visitor is the practical character of every detail of the establishment. The windows looking south, though protected, are nowhere rendered repellent by unsightly bars. The lay element and the religious sisters are said to work in their service of mercy in perfect accord. Having regard to the excellence of climate and situation at St. Luc, it is to be regretted that no thorough open air treatment has as yet been attempted for the phthisical, such as has been for years in full work at Villejuif, but the splendid corridors and balconies, chiefly facing due south, afford opportunities for getting air and exercise at all seasons under exceptionally hygienic circumstances. The treatment by keeping agitated patients in bed with the view of affording perfect rest and quiet is here carried out with success.

The Staff consists of two doctors, two supervisors, and a sufficiency of male and female attendants and sisters, making with the foremen of shops and farm and clerks a staff of over 100 all told. The chief attendant has been at St. Luc from the foundation of the Institution, and worthily hands on its traditions to his subordinates. Although there is no regular school for probationer attendants, they are said to learn their duties easily and efficiently, great care being taken in the initial selec-

tion from among the fifty usually on the list for each vacancy. The secret of success is that they have an exceptionally competent head, who gets matters into the right groove to start with, and by constant watchfulness afterwards prevents them from ever getting off the rails.

AVAILABLE LABOUR.—As some eighty patients on an average belong to the class of demented with faulty habits, fifty to the agitated, sixty-five to the epileptic, 100 to the invalid, and 120 to the paying boarder element, making up nearly half of the entire insane population, only about the other half, or 450 pairs of hands, are available for work of any kind. The value of their labour differs indefinitely, and from day to day. Still, taken as a whole it suffices, with that of efficient foremen, for the general service. The men and women patients being about equal in number, half the workers are male and half female. In the shops the estimated profit upon the men's work is fr. 10,000; while that upon the labour of the women, chiefly in making and repairing clothes and in washing, may be taken at about fr. 17,000 each year. The aggregate value of the services of those who undertake the agricultural duties of the farm and gardens is reckoned at about fr. 20,000 annually. As far as possible those who work together in any common occupation are placed in separate dormitories, *e. g.* the agricultural labourers, and those employed in scavengers' duties. Thus their getting up at hours necessary for their respective employments disturbs none of their fellow-patients. Extra food and small payments stimulate each worker to do his or her best for the common good, while the interest taken by each in the daily toil is no doubt of individual personal benefit as a physical, mental, and moral restorative. The shops in which men are employed may be roughly classed as those of painters, glaziers, carpenters, masons, builders, tailors, cart-makers, shoemakers, blacksmiths, and wheelwrights.

LABOUR.—Thus, with the exception of that afforded by an administrative staff of a dozen persons, of forty-four attendants, and twenty-eight chief workmen and labour superintendents, all the labour at St. Luc is obtained from twenty religious sisters, who get but their food and £8 a year each for clothes and from the indigent patients. Besides sufficing for the work of the establishment, such labour produces food, clothes, and other articles, which taken together effect a saving of over fr. 47,000

annually, and in addition much of the indigents' work goes in making structural additions and improvements, which at the end of the next ten years will be no more required. After that period it will be utilised in the manufacture of carpets or some other articles for sale to the general public, as fortunately competition of this kind has not yet been objected to in France, as is prison labour in Britain and America.

ECONOMIC ARRANGEMENT.—This consists in the rigorous application of two principles, buying in the cheapest market, and producing as far as possible what is consumed in the establishment, as well as in effectual prevention of waste by adequate elasticity in commissariat administration. No objection having been raised by jealous contractors, cattle are purchased by an official in the neighbouring markets, and killed on the farms without being fattened there, and good meat thus obtained at a saving of 100 per cent. The meat each patient eats daily costs $2\frac{1}{2}d.$; if bought in the open market it would cost $5d.$, and not be nearly so good. Best joints are consumed by the private patients, and other parts by the State-supported. The skin, bones, and refuse are sold: Pigs, fowls, and rabbits are bred on the estate. In bread the saving is only in the superior quality of the home-manufactured article, the price being the same. Corn is purchased from the farmers, ground and made into bread on the premises, while more than sufficient fruit and vegetables are grown in the extensive gardens. Waste is prevented by each day preparing a careful list of the food that will as a fact be eaten by the population on the following day, and not as usual by the purchase and preparation of a constant quantity every day for each inmate, whether it can be eaten or not. If a patient is on the sick or infirm list he has some delicacy suitable to his condition, and not the regulation food, much of which in his case would necessarily be wasted. It is here, perhaps, that the excellence of the management is most strikingly in evidence, and here also that the greatest saving is effected without detriment and indeed with benefit to patients. The same economy is observed in the matter of clothes, which are all manufactured on the premises, the old ones being sold at the end of the year for what they will fetch.

BUILDINGS.—The asylum is built on the detached block plan, and, notwithstanding the large area covered, the dis-

tribution of food and stores is easily effected in trucks readily wheeled along corridors connecting kitchens and wards. All dormitories are well ventilated, and while adequately warmed in winter are yet cool in summer, by reason of the excellence of the verandahs, shutters, and blinds protecting the southern exposure from the sun. Overcrowding is the danger to be feared, as the population increases by leaps and bounds year by year. But this is as yet capable of being readily coped with, owing to the growing habit of sending back to their homes or elsewhere, on probation, all suitable unrecovered cases. There is an objection to removing patients far from home and friends. They are then cut off from the advantage of visits from relations, which alone prevents defectives from becoming outcasts, by keeping them ever in touch with their original family life. Although manifest disadvantages exist in sending a lunatic with a small subsidy back to his family, such as the fact that he may not improbably there be treated as an inferior, and also afford a bad object lesson in heredity to his brothers and sisters, nevertheless many compensatory advantages co-exist side by side ; the cost is less, and the substantial kindness shown him will probably be greater than among strangers.

But whenever the return of patients on probation to their homes is impracticable or undesirable, an enlightened boarding-out system among peasants is the best substitute for the relief of overcrowded institutions, and this method will no doubt be found to work well likewise at St. Luc.

PAUPER LUNATIC BOARDING-OUT SYSTEM.—This system in England is being applied to about 6000 cases, in Scotland to 1019 patients in their own homes, and to 1658 with strangers ; in Belgium at Gheel and Lierneux to a large extent ; and in France at Dun-sur-Auron in the case of more than 500 inoffensive lunatics. Home treatment has also been found suitable in Russia, Germany, and the United States. The approximate sum paid in Scotland is 11*d.*, at Gheel fr. 1 38 c., at Dun fr. 1 40 c. a day, 20 c. of this being here the establishment charge, and at Ilten 93 c. In the Basses Pyrénées about 50 c. is usually a sufficient subsidy.

ACCOUNTS.—Asylum accounts are kept with a detail such as is only to be found in France, which is pre-eminently the land of statistics. They go to show the mean cost of indigent

patients to be nominally fr. 1 40 c., and in reality through the prevention of waste but fr. 1 27 c. a day, and that of boarders about fr. 1 50 c. But this result would seem to be arrived at without bringing into account the rental value of the establishment, which taken at 3 per cent. upon the prime cost amounts to over fr. 70,000 per annum. If this sum were brought strictly into account, the outgoings per day in connection with each description of patient would be further increased by about 20 c. A somewhat more serious error appears to result from estimating the yearly profit made by the asylum at £2000, which, if we have rightly apprehended the true inwardness of the accounts, or "compte moral," as they are quaintly termed, is arrived at by taking credit for the farm and garden produce at market prices, without allowing anything for indigent labour, nor for that employed in making and mending the clothes of patients, or for washing and such like, except as lumped in this profit of about £2000 a year. Surely great part of this profit should be considered as having been expended on behalf of, and so as forming part of the expenses that ought to be divided among, the total number of patients, all this labour having been in effect essential to their maintenance at the prices *charged*, and in the existing comparative comfort, which is mostly referable thereto. The requisite free labour could not be had at much more than double the cost, having regard merely to the necessary expenditure in wages; and thus if this contention be correct, and indigent labour were not forthcoming, the prime cost of each class would have to be still further increased by perhaps another 20 c. a head a day. The work of 450 persons, even if insane, under proper foremen for any material part of 300 days a year, must be worth more than £2000.

Expenditure, such as that upon food and clothing, manifestly varies according to the markets; while general expenses and rent are constant. Thus the establishment charges can fairly be divided into two categories:—(a) Food, clothing, and tobacco; (b) pocket-money of labourers, general establishment, fixed charges—such as salaries, lighting, repairs, and estimated rent. These, divided by the number of days the total number of patients have passed in the asylum (318,455), give the approximate cost per head per day of each, boarders and paupers alike. And when this quotient has been increased by

the addition of the proportionate fraction of rent fairly attributable to each, as also by his proper share in the very underpaid available labour, the result will be a truer estimate of the cost per head per day, viz. fr. 1 27 c., plus 20 c., plus 20 c., viz. fr. 1 67 c. in all ; or perhaps more accurately still, by entirely neglecting the value of the labour as well as the fictitious profit, and considering the establishment as not much more than self-supporting, and by assessing the all-round cost at something more like fr. 1 40 c., without labour a head a day for each indigent patient. In this way of regarding the case the profit of 17 per cent. on the farm is a purely paper one ; but none the less, given the institution as a going concern for which no rent but only low interest upon construction moneys is to be reckoned, and the subvention paid in the case of indigents, and "pension" in that of boarders, we have here an undertaking that is clearly somewhat more than self-supporting, inasmuch as it is able to keep going, and also by its own earnings and labour to increase its proportions year by year, according as occasion requires. The same can hardly be said of any other public undertaking, handicapped as it is in the price at which more than three quarters of its inmates have to be taken, the half of which latter are but mere dead weight, through being unable to aid by any work that they can do in the general upkeep of the institution.

MOVEMENT OF POPULATION.—On January 1st, 1891, 885 lunatics resided at St. Luc, of which 766 were indigent, 392 men and 374 women, and 119 boarders. During the year 156 were admitted for the first time, 24 had been there before, and 5 came by transference from other asylums, making 185 in all. Of these 71 were discharged improved and 25 recovered, while 1 escaped and 10 were sent away for various reasons—numbering 107 in all. Moreover 98 died, 49 men and 49 women. On the 31st December in the same year the numbers were respectively 398 indigent men and 309 women, or together 757, besides 108 boarders. In all 1070 patients passed through the establishment in the year 1898, 497 from the Basses Pyrénées, 210 from the Hautes Pyrénées, 201 from the Landes, and 7 from other places. The boarders—of whom but three are English—belonging to the six classes (the sixth of which fare as do the indigents) were 10, 10, 18, 23, 63, and 31 respectively. The proportion of 25 recoveries, 27 relieved,

98 deaths, and 1 escape out of 1070 patients compares very favourably with other asylums, such as Villejuif for example, in whose floating population of 2600 there were 400 deaths, and only 7 per cent. of recoveries, with 10 per cent. of relieved, perhaps by reason of its less genial climate and surroundings, and also no doubt owing to the fact that the patients there are chiefly of Parisian, and not of healthy peasant extraction as at St. Luc.

AS DEPARTMENTAL PROPERTY.—The land and buildings, which have cost the Department of the Basses Pyrénées nothing more than the price of the old *maison de force*, are now worth about fr. 2,500,000, and have a debt of only fr. 300,000 upon them, that will be paid off in some twelve years' time by amortisation. By an expenditure of the fr. 500,000 more that has been already sanctioned, though only to be incurred bit by bit, according to precedent as requisite money is earned, an asylum calculated to contain 1000 patients will then have been completed, and become the unencumbered property of the Department, though this may perhaps take ten years to accomplish entirely. Not only must this ultimately be the case, but the Basses Pyrénées will be able to get its insane perfectly cared for there at 8½*d.* a head instead of at fr. 1 20 c., which is the minimum cost that would otherwise have to be met. No other asylum in France is running so successful a course, and it is only in Lozère that boarders are taken more cheaply (fr. 1 10 c.), and at Avignon that the departmental subsidy is slightly less. By being its own landlord, allowing only 3 per cent. for rent, viz. fr. 73,350, a saving of 20 c. a head a day is effected, whereas otherwise the actual cost would be about fr. 1 40 c. This might be increased further by 25 c. a head if the asylum were not its own grazier and butcher in the matter of the 80,000 kilos. of meat consumed each year, and further still by 20 c. a head a day if indigent labour were not obtainable for the entire service of the institution. Even then good milk would have to be got at 20 c. a litre, and all provisions purchased in the best possible market. As has been said before, this prosperous state of affairs has been brought about by careful utilisation of the labour of inmates, and by taking boarders, with the result that the total income in 1898 was fr. 656,798 94 c., including fr. 101,847 34 c. brought over from 1897, and the outgoings fr. 499,357 42 c.,

extraordinary expenses fr. 34,520 51 c., and supplementary ones fr. 58,000 1 c., leaving a balance to be carried over to next year's account of fr. 117,000. Placing the balance brought over from 1897 on one side, the extraordinary expenses (being in fact interest and sinking-fund instalment) added to the surplus income to be carried over this year together amount to fr. 50,000 or £2000, which represents pretty fairly the true profit of the asylum, taken as an unencumbered going concern, with a fair average amount of patients and tied labour.

GENERAL OBSERVATIONS.—Practice as opposed to theory is the underlying principle of management at St. Luc. Everywhere a benevolent administration shows itself at work. The place is more like a large family, where as many as may be day by day go forth to their work and to their labour for the commonweal until the evening. No mechanical restraint is used to economise attendance, nor more opiates than are indispensable. If there are rather more separate single rooms (which are match-boarded and not padded) than would seem quite necessary, there is yet a garden with which these communicate, and thus some open-air exercise is possible even for those thus unfortunately secluded. The southern peasant is so natural and abstemious in his habits that the class of insanity mostly met with at St. Luc's is as a rule not difficult to treat, nor are the patients for the most part unhealthy in body or difficult to cater for. The food is excellent and both well cooked and served, but the quantity would seem insufficient even for a Parisian, and still more so for the carnivorous man of the North.

Although there is no wall surrounding the property, nor any efficient system of sentinel attendants, hardly any escapes take place, or outrages or accidents of any kind. This shows the individual attention daily given to the condition of each inmate. The cubic space allowed in the dormitories is sufficient, and their arrangement satisfactory, while the light and cheerful aspect of the day-rooms may perhaps be mainly owing to the situation. Even with a population of excitable southern French, St. Luc gives the casual visitor more the idea of an English country workhouse, from the great number of its old and feeble inmates, than a hospital for mental cases properly so called. There are but three children patients. When it is remembered that there is little or no State supervision, and that the County Council of the Department is mainly interested in getting their

lunatics looked after at the lowest possible rate, it is matter for wonder that the development of so elaborate a concern has progressed thus speedily, due regard being had to the limited means at the command of its originators. With respect to the administration of St. Luc, it remains only to apply the words of Krohne, the prison director : " If you have a good head, even with inferior methods, all goes well ; but with the best methods and a bad head everything very soon gets out of joint." The only improvement there is to be desired is more attendants and a slightly more liberal diet ; and there, as in France generally, the overlooking of a Minister or court of lunacy to relieve the préfets of the care of the insane in their districts, as well as legal authorisation for the frequent exeats given to patients for the purpose of returning to their homes. In brief, it is too easy to get out of lunatic asylums in France, for it is no one's especial business to keep doors barred at which so many are ever knocking for admission. Moreover, as no one is personally interested in compelling insane patients to come under restraint, too many are at large, not only on leave, but never having been officially treated as lunatics at all.

Without doubt what is done at St. Luc is done well and humanely. The only question is whether this conforms exactly with the true requirements of the increasing regional insanity, with which, in the imperfect state of the French poor laws, it is impossible adequately to cope. The boarding-out system may be the most useful stop-gap. In any case it is a progressive and not a reactionary measure—an altruistic attempt to bring the sheep that was lost home to the flock, so as not to segregate him in a separate pound along with others afflicted with similar unfortunate propensities for the term of his natural life. For the rest, the insane of Pau may no longer cry as before 1868, " Who enters here leaves hope behind!"

APPENDIX I.

Copy of a Daily Statement showing the number of Mouths to Feed.

ASILE PUBLIC D'ALIÉNÉS DE PAU.—TABLEAU NO. I.

Articles 20 et 39 du Règlement intérieur. Bulletin de la population à nourrir le _____, d'après la population constatée la veille au soir.

Désignation des diverses catégories d'individus à nourrir.	Régime commun.						Régimes spéciaux.						Total Hommes. Femmes.	
	4 ^{me} classe.		1 ^{re} classe.		2 ^{me} classe.		3 ^{me} classe.		4 ^{me} classe.		5 ^{me} classe.			
	Hommes.	Femmes.	Hommes.	Femmes.	Hommes.	Femmes.	Hommes.	Femmes.	Hommes.	Femmes.	Hommes.	Femmes.		
Pensionnaires { Hors classe. 1 ^{re} classe 2 ^e classe 3 ^e classe 4 ^e classe	...	...	...	...	...	...	...	...	...	...	...	...	6	9
	...	...	6	9	...	...	...	...	...	...	...	...	6	9
	...	...	...	...	10	10	...	...	...	...	...	...	10	10
	...	...	...	...	...	...	30	29	...	...	...	...	30	29
Aliénés au compte du département	12	14	...	...	...	...	...	...	...	...	...	...	12	14
	390	372	...	...	...	...	...	...	...	...	...	...	390	372
Aliénés militaires.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malades à l'Infirmerie.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Religieuses { Régisseur. Surveillant-Chef	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	1	19	...	...	...	...	...	...	...	...	1	19
Employés { Élèves internes Commis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	1	1	...	...	...	...	...	...	...	...	1	1
Boulangers { Commis Boulangers	...	...	2	...	...	...	...	...	...	...	...	...	2	...

Servants	59	41	...	...	...	...	...	...	...	...	...	...	59	41
Personnes accidentellement nourries, trois ouvriers et M. le Secrétaire de la Direction	3	...	...	...	...	...	...	...	...	...	...	...	4	...
Totaux par Sexe et par Classe.	464	427	6	9	12	28	10	10	30	29	10	10	522	503
Totaux par Classe.	891		15		40		20		59		20		1025	

APPENDIX II.
Copy of Dietaries for a particular day.
Régime alimentaire du _____.

	1er repas.	2me repas.	3me repas.
Hors Classe	Chocolat au beurre	Potage, Œufs sur le plat, Rosbif melon, Haricots au jus, Fromage raisins	Soupe, Omelette soufflée, Soles frites, Purée de pommes de terre, Confiture fruits secs.
1re Classe	Chocolat	Œufs sur le plat, Poisson frais, Haricots au jus, Raisins	Soupe Julienne, Omelette soufflée, Purée de pommes de terre, Confiture.
2e Classe	Café au lait	Poisson frais, Haricots au jus,	Soupe Julienne, Omelette soufflée, Purée de pommes de terre.
3e Classe	Idem	Poisson frais, Haricots en salade	Soupe Julienne, Œufs frites, Salade de laitue.
Régimes spéciaux de 4e classe et régime commun	Pain à la main ou soupe	Soupe garbure, ¹ Haricots vinaigrette, (Domestiques) ² œufs et haricots	Soupe à l'oignon, Fromage, (Domestiques) ³ fromage et pommes de terre.
Mets de remplacement ou de supplé- ment	Chocolat, Café au lait, Lait pur, Soupe	Vendu à 7 malades, 14 œufs, 27 " café au lait 6 " chocolat au lait 56 " " lait	—

¹ The thick cabbage soup of Beara.

² *i. e.* the servants are fed as if belonging to the 4th class, but they have in addition eggs and beans, and cheese and potatoes on this occasion.

The Remodelling of an Old Asylum.⁽¹⁾ By ERNEST W. WHITE, M.B.Lond., M.R.C.P., Medical Superintendent, City of London Asylum; Professor of Psychological Medicine, King's College, London.

IT not infrequently happens that the senior assistant medical officer of a modern institution for the insane is elected medical superintendent of an old asylum. Such was my lot when early in 1887 I was chosen by the Court of Aldermen of the City of London to fill the post of chief officer to their asylum at Stone, and I entered upon my duties with no light heart, because it was early apparent that many structural and administrative changes would be necessary to bring this institution abreast the times. The asylum is constructed on the gallery or corridor plan, in linear form, extending from east to west, with projections north and south at several points. This linear form is modified by semi-detached laundry and workshop blocks, which are connected by covered ways to the central administration situated midway between these blocks, and at right angles to the line of the wards, which it intersects as it runs north and south. The style of architecture is Gothic, of white brick with Suffolk quoins, stone mullions, and dressings to the gables; the roof is of Broseley tiles. There is a handsome tower of white brick and stone with embattlements; the central portion of the tower is an iron smoke shaft, the part intervening between this and the outer wall being a heated extraction shaft for removing the foul air from the galleries and single rooms. The buildings are of two stories, except to the south of the central administrative block, where there is a third story for the old chapel (now being converted into a recreation hall), and for some of the staff bedrooms of either side. The estate comprised in 1887 thirty-three acres.

What were the defects of this institution, and how have they been remedied? The chief structural defect was undoubtedly the existence of a dividing wall extending the whole length of the main building from east to west on both ground and first floors, which so split up the space that the wards, which were separated by glass screens, were small, with connecting galleries and through traffic on both floors on the south side, and the

dormitories small and stuffy, and on both floors on the north. Where was the through ventilation which is so necessary? The w.c.'s were all on the south side, and communicated directly with the wards. They were deficient in number (only one third the proper proportion), often offensive, especially when the sun was upon them in the summer-time, and on the male side there were a sufficient number of stall urinals adjoining the w.c.'s for a railway terminus! These were an ever-present nuisance. With two exceptions there were no w.c.'s connected with the dormitories for night use. The nurses' and attendants' rooms were all on the north side, damp and cheerless, never brightened by sunshine. There were no proper ward sculleries; the washing up was done in the lobbies of the w.c.'s, where sinks had been fitted, and on the male side these adjoined the urinals. There were no ward store-rooms. The stock was kept in small wardrobes and in cupboards, suitable for brooms and brushes only, under the stairs. As regards lavatories, three or four single rooms had in a similar number of wards been fitted up with basins, but apart from these the ablutions were carried out in basins in the dormitories, or in the lobbies attached to the w.c.'s, where basins had been fixed. Each ward had a single bath-room, too small for any dressing accommodation. The patients were therefore obliged to undress and dress in the open wards, a very objectionable practice. There were no general bath-rooms for the proper supervision of the bathing and inspection of the patients for bruises or skin eruptions. The walls of the wards, dormitories, single rooms, and staircases throughout the asylum were unplastered, but had been distempered a blue colour with a light drab brown painted dado, a red line intervening. This rough surface harboured dust and germs, and made the surroundings of the patients cold and comfortless. I should add there were no slop sinks, no boot and cloak rooms in any of the wards, and no proper broom and bucket closets. The day-rooms were badly lighted, on one side only—the south,—stuffy and ill-ventilated, with no cross air current. They were, moreover, small and difficult to manage, being on both floors, therefore requiring a large staff. The same objections applied to the dormitories, only more so, as they faced the north, never received any sunshine, and always looked damp and comfortless. The single rooms were nearly all on the north side of the galleries, which on both

floors were used for through traffic and as day space. All the day-rooms were of a size, although they had to accommodate very different classes of cases. There was an excellent system of ventilation, but it was incomplete and partly defective. The inlets were at the floor level of the galleries, the air being warmed on admission by passing in air-ducts over hot-water pipes, part of a circulating system, of which there were three in all, one on the male and two on the female sides, with corresponding stoke-holes and saddle boilers. In the winter those of the female side necessitated the frequent trucking of coals and coke through the female grounds, an undesirable arrangement. The air, after admission into the galleries near the floor level, passed from the south side across the corridors, over the doors of the single rooms near the ceiling, and was extracted from near the floor level on the north side of the single rooms, and taken to the central shaft already described. The day-rooms and dormitories had similar inlets on the south and north sides, but no outlets for vitiated air. These had been overlooked by the architect. In most of the day-rooms additional artificial heat was obtained from hot-water coils in the bays on the south side, which, being encased, harboured dust and the *débris* of food pushed through by patients.

A word next regarding the sewerage system. The w.c.'s were of the old Jennings type with side handles. The bottoms of the pans were frequently broken by the slops being emptied into them, and the water valve was often defective. The soil pipes passed out on the south side and were not ventilated on egress. The sewer pipes were not laid on concrete, and being on gravel and sand, they kinked and leaked at almost every joint. Their course was close to the buildings, along the entire south front, therefore just under the windows of the day-rooms and galleries on the ground-floor, then round the west end to the north of the asylum, where they delivered into a large tank of 120,000 gallons capacity, situated at a distance of only two hundred feet from the administrative centre. There was a short ventilating shaft to this about twenty-five feet high. The sewage was there stored and underwent fermentation. It was pumped from this tank back to the engine-room in the centre of the asylum, and then driven to a higher level beyond the cottage hospital, and delivered on a 9-acre field, distant about 120 yards from the main buildings. The tank was

always a nuisance to the asylum residents, and the 9-acre field, which had become sewage sodden by being irrigated by the fermented sewage, was a constant nuisance to our neighbours. The inner airing courts were like rough playgrounds, devoid of flower-beds or paths, and in them the patients were congregated in large numbers daily for exercise, but few being employed outside, for there was no farm, and but 9 acres (the portion which received the sewage) under cultivation as kitchen-garden, the remaining 24 acres of the estate being covered by the buildings, airing courts, cricket ground, and cemetery. The small extent of the property was therefore a great drawback to the proper treatment of the patients and working of the institution. There were no greenhouses belonging to the asylum, and flowers were not cultivated. The workshops for the tailor, upholsterer, and shoemaker and their patients were small and dark, with windows only on one side, and no supervision from without. The special observation dormitory on the female side was much too small, badly lighted, and badly ventilated; that of the male side was of recent construction and free from objection. The floors of day-rooms, galleries, dormitories, and single rooms were worn and warped, and allowed percolation beneath when scrubbed from day to day. They had become very insanitary from long use and the faulty habits of patients. The buildings generally were very deficient in alternative exits for use in the event of fire. The arrangement of the outside hydrants was satisfactory, but those inside were stowed away in cupboards, round corners, and not readily supervised, therefore the nozzle or hose would often be missing when required. The water-supply of the asylum was from a central well near the engine-room and boiler-house, which were in the centre of the administrative block. The supply had never failed, but in the event of fire involving the engine-room, no water would have been available. The well is 120 feet deep in chalk, with a central boring of 100 feet below this; the quality of the water is excellent, but with 17 grains per 1000 hardness. A rain-water storage system had been arranged originally for collecting the rain water in a 120,000-gallon tank near the laundry, for use there and in the engine-room, but many of the stack pipes were blocked and leaked, and the collecting system of pipes had settled in the gravel and sand, and the pipes were filled with sediment, kinked and leaky,

and even in some instances broken across, so that but a very small portion of the rainfall on the buildings reached the tank ; most of it percolated the ground near the stack pipes to the detriment of the foundations. There were no mess-rooms and no nurses' recreation room. The administrative department was very defective. There were no central ground-floor stores ; the attendants, nurses, and servants had to pass down a common staircase to the basement stores at the centre, and these stores were damp and unsuitable for dry goods. There was no vegetable room connected with the kitchen department, and we had no housemaid's pantry. The laundry was very old-fashioned, all the work in it done by hand, and the hand machines were very out of date. The drying power was glaringly deficient. There were but four horses ! The foul washing was done in an annexe to the general washhouse. There was no staff laundry. The clothes of both divisions were received in the general washhouse, and there was but one small general delivery room. Moreover the male washing had to be brought through the female division, and returned by the same route. There was a central dining and recreation hall, but without a permanent stage. In the winter months a temporary stage was fitted in this hall for dramatic entertainments ; it was made up of the dining-hall tables tied together, and stage fittings ; it took us the best part of a week to erect, and when up filled a third of the hall, therefore greatly curtailed our dining accommodation for the time being. The sick came off very badly as regards their surroundings. There were no hospital wards proper. Small cheerless dormitories on the north side of the terminal day-rooms on the ground-floor were allotted to the sick. These dormitories held from six to eight beds, but the cubic space was very insufficient, and on the male side there were no padded or single rooms off the dormitory ; they were at the north side of the gallery adjoining the day-room. In both divisions the slops and stools had to be taken through the day-rooms—which were also dining-rooms for the sick—to the w.c.'s, a most objectionable arrangement. The mortuary was a very old-fashioned building, and adjoined the laundry, which was most undesirable. The asylum was lighted throughout by gas supplied by the Dartford Gas Company ; the gas was often of inferior quality, and the light bad in the evening from defective pressure.

Such, then, were the chief structural and other defects of this institution. It is now my pleasing duty to record how, by means of the support of the Visiting Committee and the energetic action of that Committee during the past thirteen years, the following remedies have been effected.

(1) *The land question.*—In December, 1887, we purchased by private treaty, at £74 an acre, the adjoining Stone Lodge Farm of 107 acres, which, added to the 33 acres of the original estate, made 140 in all; but we did not get possession of this land until April, 1890. Last year two additional acres were bought to round off the west end of the farm. We therefore have 142 acres of freehold land in all. At the present time no land in the parish of Stone can be purchased under £200 an acre. The advantages of the acquired land are as follows:—eighty-six acres adjoin the original estate to the north and east, and have a gradual fall of 96 feet towards the Thames. This portion was admirably adapted for surface sewage irrigation on the intermittent system by the natural force of gravity. In the marshes to the north are 21 acres of pasturage for cows, and excellent watercress beds which have been long established. The value of this farm for the employment of patients as a remedial agency cannot be over-estimated.

(2) *The alterations of structure.*—These were commenced in 1887, and are now approaching completion. The wall already mentioned, which extended the whole length of the main buildings from east to west, and separated day-rooms from dormitories on both floors, has in every case been removed, the dormitories on the ground-floor have been added to the day-rooms, and upstairs the day-rooms have been added to the dormitories. We now have through ventilation of both wards and dormitories. By night the windows of the former can be kept wide open, and by day those of the latter. The supervision of the patients is also considerably improved by this arrangement. Properly necked cross-ventilated sanitary spurs have been built to all the wards and dormitories thus formed on the north side. These spurs are of white glazed brick with terrasco floors, and have on the ground-floor 4 pedestal w.c.'s (1 to 12 patients) with Doulton's *Simplicitas* pans and special pulls, also each spur has a slop sink. On the top floor are slop sink, w.c., and a clothes-room for the patients' clothes at night. The old w.c.'s on the south side have been converted

into nurses' and attendants' rooms all along the line. The single bath-rooms in most of the wards have also been fitted as nurses' and attendants' rooms, of which we were very short. Proper sculleries have been made near the north or dining end of those wards in which patients dine, and suitable lavatories have been fitted to all the wards and the dormitories needing them. In some wards single rooms have been converted into store-rooms. Connected to others new store-rooms have been built. Boot-rooms and broom and brush cupboards have been made where necessary. All inside urinals were abolished in 1893, since which time the pedestal closets have supplied their place. General bath-rooms, central for either division, have been erected in white glazed brick, with pale green crystalal dados and terrasco floors. There are six baths, a shower and needle bath, and a large dressing-room on the female side, and seven baths on the male side, with shower and needle bath and dressing-rooms also. The baths are of porcelain of the best Stourbridge pattern (Rufford's), and fill and empty in twenty-five seconds. The wards, dormitories, and single rooms are being plastered, and the floors renovated throughout. Light has been introduced in every direction. All doors have glass panels excepting where contra-indicated! Those of the nurses' and attendants' rooms have also spring blinds inside. This change was largely effected in 1888; much light was thereby borrowed, and better supervision ensured. We have since realised that the more glass you have in an asylum the less you have broken! The system of ventilation has been improved by extracting the impure air from the single rooms near the ceiling line, by withdrawing it also from the wards and dormitories near the ceiling line to the central extraction shaft, and by the introduction of Boyle's mica flap ventilators into all the chimney breasts which are not used for fires. We are also constructing in both divisions ventilating flèches with electric motor fans for removing the impure air by ducts from the dormitories of the main building, where the present arrangements are insufficient. The workshops have been enlarged by throwing a wide passage into them, and their lighting improved by the introduction of intervening glazed screens. The female special observation dormitory now allows of 56 patients, split up into three divisions, being under complete observation by one stationary night nurse. Four additional alternative exits for use in the

event of fire have been added to the upper story on the female side, and three on the male. Those of the laundry and workshop blocks are stone staircases. All inside hydrants are now unencased and kept coupled up. An alternative water-supply from the West Kent Waterworks to the main tanks has been added for use when needed. Mess-rooms on both sides, with sculleries attached, have been erected, and on the female side a suitable nurses' recreation room. Central ground-floor stores with hatchways opening on to the male and female general corridors have been formed over the old engine-room, and a dairy, vegetable room, and housemaids' pantry added to the kitchen department.

Three new laundries (general, officers', and foul) have been constructed, and the old laundry has been rearranged; the finishing room becomes the sewing and mending room, the old sewing-room the laundry day-room, and the dormitories above remain but little changed.

A housekeeper's cutting-out room and laundrymaids' mess-room, with staff bedrooms overhead and cross-ventilated sanitary spur, are added to the old buildings, and the washhouse is absorbed in the new central power station. The three new laundries are of white glazed bricks, with salt glazed dados, and are very complete, with separate receiving and delivery rooms (male and female), washhouses, drying and finishing rooms, etc. Electric motor fans ventilate the various sections. Corridors connect the laundries to each other and to the day-room, sowing, and mending room. The laundry machinery is supplied by Manlove, Alliott and Co., Tullis, and Bradford's, and fitted by the last-named firm. It is worked by electric motors from the subways, therefore free from noise, nuisance of oil, and danger of shafting and belting. It will also be more economical to work, because it can be used in sections. The laundries will appear unnecessarily large to public asylum officials, but one third of our patients are of the private class, which will explain the apparent redundancy of this department. The new general power station, which I have said above adjoins the laundry, consists of a boiler-house, engine-room, accumulator-room, water-softening house, coal-store, etc. These are largely of white glazed bricks. The three boilers are 30 ft. \times 7 ft. 6 in., of the Galloway type, with forced draught added. The flue is connected with the old central

smoke shaft in order to preserve the original ventilating system, which has stood the test of time.

The Atkins modification of the Porter Clark process is the one adopted for water softening. All the stoke-holes of the several heating centres of the buildings and greenhouses are done away with, and the heat supplied as live steam in the form of calorifiers from the central power station. These heat the several hot-water systems in the air ducts. From this station also cables go to the electric motors, which work the well pumps and the machinery of the bakehouse and workshops at a distance of more than 100 yards. The station also supplies the electric motor power for the laundries and the various ventilating fans throughout the asylum. It moreover furnishes the hot-water supply of the institution, and will give the electric light, the fittings for which are almost completed.

The old engine-room and boiler-house will be converted into a central Turkish bath.

A new mortuary has been erected to the north of the laundries, to replace the old one pulled down during these extensions. Its interior is of white glazed bricks throughout. It has male and female divisions, a well-lighted post-mortem room, with white porcelain revolving table and pathological laboratory.

The new detached chapel is built of faced flint and Portland stone, with tiled roof, and is on the north side of the administrative centre and to the east of the new laundries. It is a Gothic building of the early Decorated period, and accommodates about 350 persons. It consists of nave, chancel, and transept for the organ and vestry. The floor of the nave is of wood blocks, that of the chancel of tiles. The roof is of English oak on the hammer-beam principle, and the seating of oak also. The windows are of stained glass. Those east and west were the gift of members of the Corporation. The old chapel over the dining hall is being converted into a recreation hall, and a stage and dressing-rooms are being added to it on the north side over the kitchen.

Male and female hospitals have been erected. The female is new throughout, and attached by corridor to the west end of the female division. It consists of a central day-room and galleries facing the south, with nine single rooms (two padded), six nurses' rooms, lavatories, and sanitary spurs to the north of

the galleries, and other administrative offices beyond. At right angles to the galleries at the east and west ends hospital wards extend to the south, with a good view and cross-ventilation. This hospital accommodates fifty patients.

That of the male side is at the east end of the main building, and very similar to the female, except that only one half is new, the other half being the old male infirmary gutted and re-arranged ; part of it is therefore on the first floor. It will also accommodate fifty patients. A view of the Thames has been obtained for those in the sick ward, by removing the boundary wall opposite the hospital and replacing it by railings. We have also an infectious hospital beyond the cricket ground for twelve patients, six of either sex.

(3) *The sewerage system.*—In 1890 it was decided to adopt a new method of sewage disposal, by abolishing all storage and pumping, and by distributing the sewage fresh, before fermentation had set in. A twelve-inch main, 370 yards in length, was laid from opposite the administrative centre where the sewage entered the old tank, to a natural gully on the new farm land to the north-east, in a perfectly straight line with a fall of one foot in ninety-six. It passes under Cotton Lane at a depth of 10 feet from the surface, and at one spot is 14 feet 6 inches from the ground level. There are four manholes for inspection and flushing, and you can see daylight through its entire length. There is no storage ; the sewage is delivered fresh on the hill-side, where some 25,000 gallons daily can be directed over from thirty to forty acres of land by gravity. The heavier solids are removed every day at the outfall, where there are gratings in a shallow tray-like arrangement for separating them. They are mixed with sifted dry earth and cinders and used as manure. A system of open earthenware channel pipes and moveable galvanised gutter piping, which taps the liquid sewage at various points, ensures its distribution over a different portion of land daily. There is no effluent ; the subsoil is gravel, sand, and chalk, and therefore highly porous. All the soil pipes from the building to the main have been ventilated with full diameter pipes on egress on the north side. They were relaid on concrete in straight lines, and have junctions only at manholes.

The old sewage tank of 120,000 gallons capacity has been cleaned out, and is now used as a second rain-water tank for the engine-room and boiler-house. The rain-water system has

been relaid throughout on concrete, and now collects to two tanks of equal size, the original one supplying the laundry. Friction between the two departments regarding rain water will therefore cease.

As regards the grounds, the inner airing courts have been properly laid out as gardens, and the outer courts planted and developed. Glass houses have also been erected for the propagation and storage of hothouse plants for the wards.

The plans for the new buildings and the remodelling of the old were made by the City Surveyor from my suggestions. The total cost will be about £80,000. The original asylum cost about an equal sum.

The chief advantages claimed for our remodelled asylum are—

(1) The wards are all on the ground-floor, face the south with one exception, and have through ventilation. As they are only separated by glass screens in the main building there is thorough supervision, and they are easily worked.

(2) The upper story consists of dormitories only, and through ventilation can be ensured all day. It is possible, also, by master-locking off the upper story on the male side, for the beds of that division to be made by female patients, who can cross over to it by a gallery through the dining hall.

(3) All w.c.'s and soil pipes have been removed from the south to the north side only, and the w.c.'s are in necked and cross-ventilated spurs. All inside urinals have been abolished.

(4) Most of the nurses' and attendants' rooms are now on the south side.

(5) The necessary offices have been added to the wards and dormitories.

(6) We have hospitals for the sick and infirm, general bath-rooms, new laundries, a separate recreation hall, with stage, etc., a detached chapel, and a new mortuary, all equal to our requirements.

(7) By the centralisation scheme all stoke-holes are abolished, and heat, motor power, light, and the hot and cold water supplies are derived from one general power station.

(8) We have an alternative water-supply from the West Kent Waterworks for emergencies, such as a fire involving the pumping station, well contamination, etc.

(9) The sewage disposal is devoid of all storage (we have not three inches anywhere), therefore fermentation cannot occur, and the farm benefits by the irrigation.

There is one matter I should like to allude to before concluding ; I am strongly in favour of a central dining hall when the wards are handy to it. We find the sexes like to be associated at all meals, and for quite ten years past we have given them music during dinner. It aids digestion, and going to the hall is a pleasant break in the day's monotony. The windows of the wards can moreover be then thrown open, and proper ventilation ensured.

With full knowledge and experience it is comparatively easy to plan a new asylum. To remodel an old one, and have a full and paying house all the time, is a more difficult task. If we have succeeded our reward will be in the approbation of those best qualified to judge, and in the improved surroundings of those committed to our charge.

(1) Read at the South-Eastern Division of the Medico-Psychological Association at Dartford, 25th April, 1900.

DISCUSSION

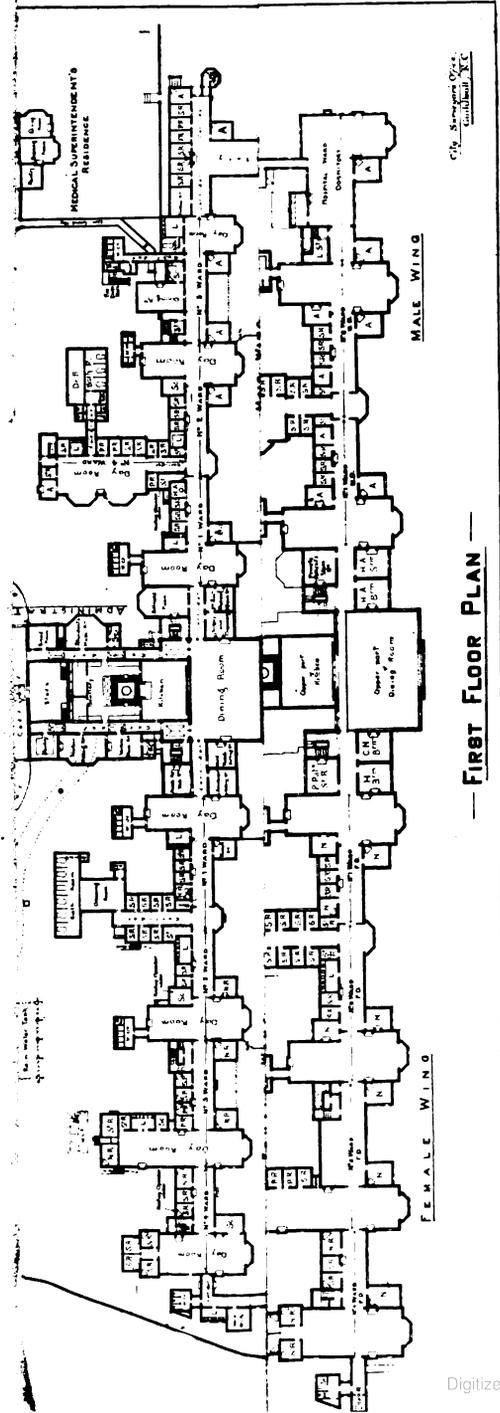
At the Spring Meeting of the South-Eastern Division, April 25th, 1900.

Dr. PERCY SMITH, who had taken the Chair owing to the departure of Dr. Beach, expressed the thanks of the meeting to Dr. White for his able paper.

Dr. THOMSON said he understood from personal experience the many difficulties a medical superintendent had to encounter when, after having been trained in a new asylum, he was elected to an old one. He considered Dr. White was entitled to great credit for what he had accomplished.

Dr. BOWER and Dr. RICHARDS drew attention to several matters which specially deserved favourable comment, and they very heartily congratulated Dr. White on the results of his labours.

Dr. WHITE, in reply, thanked members for their criticisms. With regard to the Kent Water Company, he explained that an agreement was made to connect their supply at a cost of £37 10s., and the Asylum then paid £5 per quarter as a minimum rate for a supply not exceeding 120,000 gallons. Above this supply 10d. per 1000 gallons was charged.



— FIRST FLOOR PLAN —

To illustrate Dr. WHITE'S paper.

Continuity of Work under Altered Conditions. By the
Rev. H. HAWKINS, late Chaplain Colney Hatch Asylum.

THE time at last comes when, sooner or later, the old work has to be given up—work of various kinds in different cases. But the special sphere of occupation referred to is that in which the *Journal of Mental Science* is chiefly interested.

One cause or other, failure of health, age limit, fresh employment, or other occasion, brings to an end the active work carried on, perhaps, during many past years. The change of habits and routine, which have become a second nature, is in view, and has to be faced.

The purpose of this brief paper is to suggest the question whether, on retirement from the long-continued work of asylum life, in one or other of its departments, a cessation of interest in the employment of former years is preferable, or whether, under altered circumstances, a continuity of the work which has been the responsibility and happiness of a lengthened period in the past is desirable and practicable. In one aspect the continuity of professional, as of private life, is not altogether optional.

Whether voluntarily or not, memories are revived, the scenes of former labours, *e.g.* infirmaries, wards, etc., present themselves to the "mind's eye." Old familiar forms and faces, many of valued friends, are vividly recollected, and at times memorable events in the past official years are recalled. Though the old vocation has been laid aside, its remembrance cannot be, nor should be, altogether effaced. In any new phase of life there should not be a hiatus as regards the employments of past years.

New occupations to a certain extent take the place of old, according to individual tastes and opportunities, but there should not be, even if it were practicable, entire severance from the work of past professional life.

The case comes to recollection of a distinguished surgeon, a President of the College, who passed his latter years in the country improving his property, regularly visiting London from time to time to fulfil some special medical engagement. It seems almost unnatural, on the termination of the active duties,

e. g., of asylum life, even to wish abruptly to cut off communication with the past, to turn one's back upon the scene of past labours and varied associations without any desire henceforward to take some part under new conditions in former occupations, and still to maintain kindly associations with days that are no more.

Of course any sympathetic interest shown in the work taken up by a successor, any slight service rendered in furtherance of objects which formerly engaged one's attention and energies year in and year out, would become on retirement the service and interest of an extern, an outsider, standing aloof but not unconcerned.

Reviewing past errors, deficiencies, neglects, etc., an outgoing official would discover ample cause for suppression of self-complacency, and maybe for frank recognition of greater efficiency in his successor's administration.

But the main purpose of these lines is to consider whether, and in what directions, there may be continuity of the kind of work referred to under altered conditions. And here the question presents itself whether, in the case of those officials whose retirement is accompanied with a pension, the honorarium would not to many be more pleasant and welcome if it were viewed not merely as a recognition of past service, but also as a motive and stimulus for continued interest in former work, and as an acknowledgment of the graciousness of rendering some *quid pro quo* on the part of the recipient. Moreover an honourable feeling would be cherished in the pensioner of still being, in a degree, an active, and not a mere sleeping partner of the corporation.

A few suggestions may be allowable as to some ways in which useful interest may be shown in work no longer actively engaged in. Real pleasure would often be given to an intelligent patient by the receipt from some former member of the staff with whom, perhaps, the inmate has been in daily communication, of some slight but valued memorial—letter, newspaper, book, memento of a birthday or season of the year. A sympathetic visitant of an asylum ward often becomes a patient's friend, a relationship which should be sustained after separation ; and some kindly token, indicating "not forgotten," would pleasantly respond to the question which may have arisen, "Does my old friend remember me?"

Looking along his bookshelves volumes may catch the eye, books which are never taken down for the owner's perusal, and which might be profitably forwarded for the instruction or recreation of the inmates of asylum wards. By such contributions continuity of interest and of service might in a very useful way be maintained. And some books not considered likely to be appreciated might find interested readers.

A late distinguished alienist was once referred to as the historian of his speciality. The learned leisure of retired members of his profession might, perhaps, oftener (it is respectfully suggested) find congenial occupation in contributing to the cure or relief of mental maladies by means of treatises upon the writer's speciality, and of communications to professional journals—the valuable result of wide and ripe experience. Such literary employment would be for a certain class of former asylum workers congenial continuity of service.

Again, associations on behalf of the infirm in mind, and of those who minister to them (“after-care,” “asylum workers,” etc.) would become better known, and rendered more efficient by the attendance on their committees, and by the counsels of former asylum officials, who, prevented from being present at meetings even kindred to their official work during the laborious years of acting and exacting professional life, might yet have both leisure and inclination to do so in a subsequent period of comparative leisure.

Not unremembered by the friend who once was in daily communication with them, are many patients who miss his or her familiar presence or kindly greeting on departure; might not sympathy with mental patients be extended by endeavours to induce (it has been done successfully) kindly disposed persons, here or there, to befriend, by visits or through the post, lonely inmates of asylums? Not only would the lives of these be brightened and cheered, but also the desire to relieve one of the saddest of maladies might be communicated to others. This is certain, that kindly intercourse (of course, under due regulations) between selected patients and friends outside the walls would result in mutual advantage.

Another example of “continuity” may be instanced. Both the harmonious management of asylums and the well-being of their patients largely depend upon the character and efficiency of the main body of the working staff—the attendants and

nurses. Few persons would be better judges of the suitability of young men and women in quest of such employment on the staff of an asylum than former officials in the service.

Occasions might arise when an applicant with aptitude for the special work might advantageously be introduced to the management, and thus a double service, both to the staff and to the candidate, rendered.

“Continuity” of work from a religious point of view would be valued by many. Not a few of the afflicted in mind in asylums—there to remain, perhaps, during life’s residue—have become familiar friends to former members of the community.

Some of these, on retirement, would wish to preserve remembrance, before God, of those to whom they had become attached. The words of a graceful living writer are suggestive: “You go over the dear names, sweet beads of the heart’s rosary, telling one by one to God, with their several wants and needs.” No doubt there may be more especial reference to a closer relationship than exists between an official and a patient. Yet there are those who appreciate, in its degree, the relationship.

The foregoing suggestions may perhaps serve feebly to illustrate the design of this paper to plead for continuity of service, with particular reference to one branch, under varied conditions and altered circumstances.

It would be appreciated as partial compensation for the inevitable discontinuance of the daily routine which afforded in bygone years active employment for mind and body.

Moreover, continuation in some shape of former work would diminish the feeling of professional *isolation*. In retirement there would be agreeable consciousness of still being “in touch” with the work and workers of other days. And though more recent interests and occupations would take their place in the foreground, yet, by the continuity referred to, the completeness of a career would be better maintained.

No doubt the prospect of severance from former companionships and associations is to some natures exceedingly painful. After very many years of service an honoured medical superintendent described his withdrawal from office as a “screw-wrench.”

Might it not be the wiser course, in many cases, on retirement from official life not to acquiesce in *entire* estrangement between past and present, but, in entering upon a fresh phase of existence, which well employed brings its own special bene-

fits in their season, to endeavour to be still of some slight use on the field of former labour by "continuity of service under altered conditions" ?

An Analysis of One Thousand Admissions into the City of London Asylum.⁽¹⁾ By ARTHUR E. PATTERSON, M.D., Senior Assistant Medical Officer, City of London Asylum, Dartford.

IT is obvious that it would be quite impossible within the short limit of time at our disposal to enter into a full and complete account of all the data collected with reference to these admissions, which commenced on January 1st, 1892, and terminated on December 31st, 1899 ; I will therefore confine my remarks to the more important features presented by them.

The very great majority of rate-paid patients admitted here have previously been found wandering in the City of London, having come not only from various parts of England, but from all quarters of the globe ; and they therefore show the most diverse and interesting forms of mental disease, whilst almost every nationality is met with amongst them.

We first commenced to take private patients on January 1st, 1892, and the first patient of this class—a lady who is still with us—was admitted the very next day. The reception of private patients has been attended with marked success, and there can be no doubt that the accommodation for them is highly appreciated, as is proved by the fact that we often have to refuse cases simply from want of room ; this taking of the private class also tends very much to elevate the general tone of the asylum, and not only acts beneficially on the rate-paid, but instils greater interest in those responsible for their care. Whilst on this subject it may be of interest to state that during the eight years under notice 120 males and 158 females were admitted as private patients, 33 males and 7 females being subsequently transferred from the rate-paid to the private class, making a total of 153 males and 165 females, or 318 of both sexes under treatment as private.

Of the 1000 cases under consideration 620 belonged to the male and 380 to the female sex, and of these 44 males and 26 females were re-admissions, of whom 34 males and 18 females had previously been discharged as recovered from this asylum in the following years: males—1 in 1881, 1 in 1884, 1 in 1886, 3 in 1888, 3 in 1889, 2 in 1890, 4 in 1891, 1 in 1892, 4 in 1893, 1 in 1894, 3 in 1895, 4 in 1896, 5 in 1897, 1 in 1898.

Of the females 1 had recovered here previously in 1883, 1 in 1886, 2 in 1887, 1 in 1890, 2 in 1891, 4 in 1893, 1 in 1894, 2 in 1896, 3 in 1897, and 1 in 1898.

Two males and one female had previously been admitted on three occasions, whilst two females had also had two previous attacks. These relapses occurred most frequently in those having a history of heredity and drink in addition to the former attack, and this applied equally to both sexes.

The forms of mental disorder have been classified as simply as possible to prevent needless confusion, and for this reason such a class as delusional insanity has not been put under a distinct and separate head, but those cases which might have been so classed have been placed under the division of mania or melancholia according as the predominant symptoms were those of excitement or depression.

The forms of mental disorder are as follows :

Amentia, by which is meant idiocy or imbecility, whether complicated by epilepsy or not. There were comparatively few of this class admitted, and all of these have been imbeciles, 8 of whom were males and 14 females, total 22. Two of each sex suffered from epilepsy, which was therefore associated with about one fifth of the total cases of amentia.

The aments of the City of London are sent to Leavesden Asylum, and do not come here.

Mania, which has been subdivided, as has the class of melancholia, according to the duration of the attack on admission; thus all cases which have lasted for three months or less before coming here have been considered acute; if the mental disorder has lasted more than three but less than twelve months, subacute; and if more than twelve months chronic.

Of the total admissions 291 males, or 46 per cent., and 181 females, or 47 per cent., came under the class of mania, and these are subdivided as follows :

	<i>Males.</i>	<i>Females.</i>
Acute	198	83
Subacute	32	24
Chronic	37	57
<i>Mania a potu</i>	14	4
Senile mania	10	13
	—	—
	291	181

Amongst the males rather more than twice as many suffered from acute mania (under three months' duration on admission) as from all the other forms put together, whilst of the females the acute class was small, and the chronic proportionately larger. Although only fourteen males and four females were included under *Mania a potu*, or transient attacks due to drink, these figures represent but a small proportion of those admissions in which drink was a very potent factor in the production of the mental disturbance, as will be shown later on, when the common causes of insanity are reviewed.

Melancholia.—Of the total admissions 185, or nearly 30 per cent. of the males, and 147, or nearly 39 per cent. of the females were melancholics, and these were again subdivided as follows :

	<i>Males.</i>	<i>Females.</i>
Acute	134	77
Subacute	18	17
Chronic	26	42
Senile	7	11
	—	—
	185	147

Amongst the males nearly three times as many cases of acute melancholia were admitted as all the other forms put together, whilst amongst the females only 7 more were in the acute class than in the others, whilst the chronic section was again a large one.

Mental stupor was the form of insanity in 3 males and 2 females.

Epileptic insanity, of which there is little to be said beyond that 32 males and 13 females, total 45, or about 4 per cent. of the entire number of admissions, came in under this head.

Dementia.—In this class 24 were of the male, and 8 of the female sex, giving a total of 32, or 3 per cent. of all admissions. In 4 males and 2 females the dementia was associated with epilepsy, whilst old age was the cause in 7 men and 2 women. There was no instance of primary dementia.

The above groups have presented little or nothing of special note, and no useful purpose would be fulfilled by their further analysis, but the divisions now to be considered are more important, and present features which are interesting, and worthy of more detailed attention.

Puerperal insanity.—Only 7 women, or roughly speaking 1·5 per cent. of the total female admissions, have come in suffering from insanity the result of the puerperal state. The reason for this small proportion is not far to seek when one remembers that very few women at the child-bearing period of life are resident in the City of London, and it is therefore not surprising to find that of the cases met with no less than 4 belonged to the private class, and were brought here from a distance.

All these patients were women under the age of thirty, the youngest being a mere child of sixteen years, whilst the two eldest were aged twenty-nine. In 5 of the 7 the woman was a primipara, and in every instance the attack of insanity was the first from which she had suffered.

Result of treatment.—Three, or 42 per cent., have recovered, two were discharged relieved, one to the care of her husband, and the other on transfer to another asylum: the latter has since died. The remaining two are still here.

As regards the length of residence in those recovered, one was with us for two months, another for four, and the third for one year.

General paralysis of the insane.—Of the 620 male admissions 76, or 12 per cent., have been general paralytics, and of the 380 females 8, or nearly 3 per cent. The proportion of males to females was as 6 to 1.

Amongst the males 43 were married, 30 single, 1 was a widower, and in 2 the condition as to marriage was unknown. Of the women 4 were married, 3 widowed, and 1 single. It will thus be seen that the disease was met with more frequently in the married than the single, which is generally accepted.

Only 2 males were under thirty years of age, 34 were between thirty and forty, and 30 between forty and fifty, whilst 10 were aged between fifty and sixty. These figures show that no less than 64 out of the total 76 were between the ages of thirty and fifty.

All the females with one exception were between thirty and forty.

Taking the males first, in 13 no cause could be ascertained. Of the known causes syphilis heads the list, there being a distinct history of this disease in 18 cases, or 28 per cent., whilst drink is the next most frequent cause, the two being associated in 8 instances, whilst drink alone occurred in 9.

Mental anxiety and worry was responsible for 15 cases, and the remaining causes in the order of their frequency were 8 from blows on the head, 4 from hereditary predisposition, and 3 from sexual excess. In one case influenza alone was given as a cause, whilst in two others it was associated with plumbism and with syphilis respectively.

Amongst the females drink appeared as a cause four times, in one of which it was associated with syphilis, and in another with influenza. Mental anxiety and heredity were each given in one instance, and in the remaining two cases no cause could be elicited.

Previous attacks of mental disorder were noted in 6 male general paralytics.

There can be no doubt that a very large number of general paralytics have syphilis to thank for the cause of their illness, and personally I am confident that if we could get at the true history of the obscure cases which come under our care this disease would be much more frequently found than it is at present; but for obvious reasons it is often quite impossible to get reliable information on the subject.

With reference to those cases of general paralysis attributed to blows on the head, the usual history given is that the injury was sustained some years before—often many years before—the onset of the symptoms, and may therefore fairly be classed as a predisposing cause.

Of the 76 male paralytics no less than 67 presented symptoms of mania, 5 only were melancholic, and 4 were demented. Of the 8 females 2 were melancholic, and the remainder maniacal.

Fifty-three males and two females have died of this class.

The average duration in the males has been slightly over two years in the asylum, in the females very much longer.

In the whole history of the institution only one patient was found to be *not insane* on admission.

Bodily health on admission.—The very large proportion of 573, or 57 per cent., were in an unsatisfactory physical condition when they came in, thus proving that over half of those suffering from mental disease are below par as regards bodily health.

Out of the thousand admissions, extending over a period of eight years, only 6 males and 1 female have died of tubercular disease, and a study of these deaths is very instructive, for it shows that of the males 2 had cavities and 2 marked consolidation of the lungs on admission, whilst in the remaining 2 alone were the lungs normal. The 1 female had slight affection of the right apex when admitted, and died of a severe attack of hæmoptysis—a very rare event here. When it is noted that 118 males and 37 females have died from all causes, of whom only 2 males succumbed to phthisis developed after admission, there can be no doubt that the proportion of deaths from this disease is by no means large.

It may perhaps be argued that a certain number of deaths amongst these admissions have occurred in which active tubercular mischief was present though the certified cause may have been some other disease; but this is not the case, for it has long been noticed that tubercle in this asylum is conspicuous by its absence as a cause of death, and is found in a much smaller proportion of cases than obtains in many other similar institutions.

Many patients are admitted here with undoubted symptoms of pulmonary tuberculosis in whom the physical signs clear up during residence. That confirmed phthisis runs a long course with us is evidenced by two females, who were admitted in 1891 and 1894 respectively with marked pulmonary mischief, in both of whom little progress has been made by the disease.

The reasons for the comparative absence of tubercle here is to be found in the healthy site, the system of ventilation, and the free lighting of the wards (all of which face the south) by the introduction of glass wherever possible, thus permitting

ready access to the sun, the most formidable antagonist with which the tubercle bacillus has to deal. It has been suggested that the desiccating influence of cement works in the neighbourhood may have a beneficial effect on pulmonary disease, and this material can certainly often be recognised in the atmosphere.

It may be added that the milk has been scalded on reception from the farm for the past seven years.

Continuing to review the bodily health on admission, the condition of the heart now calls for attention.

Cardiac disease in one or more of its many forms has been frequently met with in those admitted into this asylum, as the following data will show.

Of the 620 males, 52, or 8 per cent., had heart affection, and of these 32 suffered from the valvular form; whilst of the 380 females, 75, or 19 per cent., were similarly affected, of whom 54 showed valvular mischief, making a total in both sexes of 127, or nearly 13 per cent. of all admissions.

Mitral disease was most often associated with symptoms of mania in males and melancholia in females, whilst aortic disease was noted in these two forms of mental disorder about equally in the two sexes.

In only 6 general paralytics—all males—was there heart disease, and these were valvular, 3 being mitral and 3 aortic.

In but 1 out of 45 epileptics of both sexes was there any sign of cardiac disorder. The sole point which is noteworthy in the foregoing remarks is that heart disease has occurred rather more than twice as frequently in women as in men, and I am strongly of opinion that not only cardiac but general vascular degeneration is commonly developed amongst female patients during their residence in asylums as a result of the sedentary lives which they lead.

The causes of insanity in those admitted, in order of frequency, have been previous attacks, intemperance in drink, hereditary predisposition, mental anxiety and worry, adverse circumstances, influenza, and the climacteric in women.

Drink was twice as frequently associated with symptoms of mania as with those of melancholia. One fourth of the total number of general paralytics had a history of intemperance, but in these it was probably far oftener a symptom than a cause, and was frequently associated with syphilis.

Hereditary predisposition was encountered as a cause in 114 males and 97 females, total 211, or 21 per cent., and was proportionally far oftener met with in women than in men, and the great majority of these females were melancholic.

The degree of heredity was as follows :

	<i>Males.</i>	<i>Females.</i>
Direct	51	30
Collateral	55	52
Remote	8	15
	—	—
	114	97

Mental anxiety and worry gave rise to insanity in 28 males and 21 females, and 11 of the former were general paralytics.

Adverse circumstances were responsible for the admission of 16 males and 9 females, and in these mania was twice as frequently met with as melancholia.

Nineteen females have suffered from insanity associated with the *change of life*, and the average age at which the symptoms appeared was forty-seven years. Of these 12 were melancholic and 7 maniacal, and only 2 have recovered. This small proportion of recoveries goes to prove that this particular form of insanity is not a very hopeful one.

The last cause of mental disorder to which I would ask your attention is the very important and interesting one of *influenza*, and perhaps I may be allowed to consider it in more minute detail than those which have already been mentioned.

Influenza, as it appeared in epidemic form, was an acute affection running a specific course, and a considerable amount of evidence goes to prove that its virus or poison when once introduced into the system acted primarily, and in many cases chiefly on the nervous system, showing its presence by a feeling of bodily *malaise* with mental depression, accompanied by more or less pyrexia. As the nervous system was so frequently affected it does not appear strange that the epidemic was followed in a certain percentage of cases by mental breakdown, and in my experience insanity has broken out much more frequently after influenza than after all the other fevers put together ; thus 25 of the admissions here had a previous history of influenza, whereas only 6 followed other fevers, 3 of these appearing after enteric. This form of mental disease has

been more frequent in females than in males, the proportion being 4 to 1. The percentage on the total admissions was 4·3 for women, and 1·7 for men. As regards age there was little or no difference in the two sexes, the average in males being thirty-seven and in females thirty-five. All the patients with the exception of 3 were aged between thirty and forty, and none were met with under twenty, and it would therefore seem that the mental disturbance usually appears during the prime of life.

Heredity plays a very considerable part in the production of post-influenzal insanity, and was present in 10 out of the 25 cases, or 40 per cent.

Previous attacks of mental disorder had been recovered from in 2 cases, in both of which that produced by influenza exactly resembled the former illness.

Though any form of insanity may occur as a sequel to influenza, melancholia was the most frequently met with, and sleeplessness with refusal of food was common, the latter more particularly in women. Hallucinations of hearing and delusions of poisoning predominate. Suicidal propensity was found in 3 women and 2 men.

Influenza preceded general paralysis in 4 males, but has not been met with as the starting-point of epilepsy.

The length of time which usually elapses between the attack of influenza and the onset of the mental symptoms is almost impossible to ascertain with any degree of accuracy, but the balance of evidence goes to prove that where influenza *alone* is the cause these come on soon after the feverish attack is over, and are then maniacal in nature; but such cases are comparatively rare, for other causes are generally met with in addition to the influenza, the chief of which are heredity, mental anxiety, syphilis, and drink. It may fairly be assumed that influenza by itself is not a frequent cause of insanity, but gives rise to mental disturbance in those having other causes in addition.

We now come to the consideration of those discharged from the asylum.

Recoveries.—The proportion per cent. of recoveries to admissions in the 1000 cases under notice has been 40 per cent. for males, 37 per cent. for females, and 39 per cent. for both sexes; this does not include 21 males and 12 females who

are deemed curable and are still in the asylum. Amongst the males, of those suffering from acute mania 51 per cent., or about one half, recovered, from subacute mania 58 per cent., from acute melancholia 48 per cent., and from subacute melancholia 50 per cent. In *mania a potu* every case save one recovered, as did 2 out of 3 of mental stupor.

Amongst the females the recovery rate for acute mania was 49 per cent., for subacute mania 40 per cent., for acute melancholia 51 per cent., and for subacute melancholia 30 per cent. Here, again, every case of *mania a potu* with the exception of one got well, as did 3 out of 7 suffering from puerperal insanity.

An endeavour to ascertain the relation of the number of recoveries to the duration of the mental disorder before admission shows that in the two sexes 45 per cent. with acute mania and 41 per cent. with acute melancholia get well when the symptoms have lasted for less than one month on reception; this coincides with the general experience, that the earlier the patient enters the asylum after the onset of the attack the better is the chance of recovery.

Mania a potu gives by far the highest recovery rate, and all cases except one female came in within a week of the appearance of the first symptoms.

Of admissions suffering from acute mania in males and acute melancholia in females about half recover, and of those which have lasted under one year on admission 48 per cent. get well.

The average period of residence in those recovered under the various forms of insanity was as follows :

	<i>Males.</i>	<i>Females.</i>
Acute mania . . .	6½ months	12½ months
Subacute mania . . .	9 "	18 "
<i>Mania a potu</i> . . .	3 "	2 "
Acute melancholia . . .	8½ "	6 "
Subacute melancholia	14 "	7 "

Females seemed to take twice as long to recover from the acute forms of mania as males, whereas acute mental depression in women was recovered from in half the time required for a similar result in men. The average period of residence for all acute attacks which recovered was 7½ months for both sexes.

Mania a potu was of shorter duration than any other form of insanity.

Chronic melancholia was occasionally recovered from after a long residence, extending into several years.

In puerperal insanity the average period of residence in the recovered was six months.

The great *difference in weight* of patients on admission and on leaving the asylum as recovered was often very striking. Many of the people admitted here are in a thin feeble state, and it is no uncommon thing for them to lay on weight, even to the extent of two or three stones, during a residence of a few months.

The average increase in weight in recoveries from mania has been 12½ lbs., and from melancholia 11 lbs. Of the entire number of those recovered only 7 males and 3 females showed a decrease in weight on discharge, and in these the loss was small.

Relieved and not improved.—During the past eight years 87 males and 55 females, total 142, have been sent out relieved, and 11 males and 20 females, total 31, not improved. Of the above 78 have returned to the care of friends, whilst 95 have been transferred to other asylums. A total of 47 patients of the chronic class have been discharged to the Metropolitan Asylum at Leavesden, under Sect. 25 of the Lunacy Act, 1890.

Deaths.—Of the 1000 admissions 118 men and 37 women, total 155, or 15 per cent., have died. The large preponderance of male deaths was attributable to general paralysis of the insane, which accounted for 53.

The six most frequent causes of death in the order of their frequency were—

	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
1. General paralysis of the insane	53	2	55
2. Heart disease	8	7	15
3. Exhaustion from mania	10	5	15
4. Exhaustion from epilepsy	8	4	12
5. Senile decay	8	3	11
6. Exhaustion from melancholia	4	2	6.

Our death rate has never once in the history of the asylum reached the average public asylum death rate.

One hundred and twenty-one post-mortem examinations were made. Of these 95 were on males, and 26 on females. It must be remembered that the friends of private patients and those of the Jewish faith frequently object to allow any examination to be held.

The only *inquest* held during these eight years was upon the body of a man *æt.* 38, who was admitted in a state of wild mania, with great bodily exhaustion. His death took place within thirty-six hours of admission, and the verdict of the jury was exhaustion from acute mania, the result of an accidental kick of a cab horse about ten years ago.

The only subject which remains to be dealt with is the *treatment*, which will be briefly considered under two heads, moral and medicinal. Of these the former is the more important in promoting the recovery of those under our care.

The systematic *employment of the insane* is one of the best methods of treatment at our disposal. Attached to this asylum is a farm of 120 acres, and a considerable proportion of our male patients are daily employed there, and in the gardens and grounds surrounding the institution; in addition many work as printers, carpenters, tailors, painters, and in other capacities. Altogether as many as 70 per cent. of the men are usefully engaged in some work or another.

The women are employed in the proportion of 60 per cent. in the laundries, kitchen, dormitories, and wards, and we are about to supply the quieter patients of this sex with light garden tools, so that the flower beds in the proximity of the female wards may be tended by them under proper supervision, thus giving them an interest outside the ordinary routine.

Exercise in the grounds and by road walks is enjoyed by both sexes, and the *amusements* are many and varied, including dances, concerts, picnics, athletic sports, cricket matches, tennis, bowls, etc.

Restraint and seclusion are practically unknown in this asylum, although we receive a large proportion of acute cases, which require constant supervision and attention; these are sent out daily for a short time in the grounds under the care of special attendants and nurses, unless their physical condition is such as to contra-indicate it.

In those cases where *forced feeding* is inevitable, through the persistent refusal of food, the œsophageal tube is generally used

here, the patient where possible being placed in the sitting position so as to allow of the action of gravity in the flow of the nourishment, which is not so decided in the lying-down posture. In certain cases the nasal tube comes in useful, but the stomach-pump or Higginson's syringe is never employed for forcible feeding.

In certain cases of melancholia, where food has been refused for some time, I have used *lavage of the stomach* with benefit.

It is just possible that a certain amount of the benefit arising from this method of treatment is due to its unpleasantness, for patients do not express the most unbounded delight at the procedure.

A most important and useful means of treatment in suitable cases is that by *shower-baths*; these are largely employed at this asylum, where there is a special shower-bath book for each division, in which is entered the name of the patient in full, the reason for the bath, the date of commencement, the duration, when discontinued, and the result. No shower-bath is ever given to any patient over fifty years of age, and a careful medical examination of the chest is made before the first bath is administered, whilst the chief of each division is present during the operation. The baths recently erected and now in use are a combination of shower and needle, and answer well. The usual duration ordered for each bath is twenty seconds. The best class of cases for treatment by this method are the young of both sexes, especially those who are dejected, listless, and apathetic, and of faulty habits; the mental and bodily improvement in such is often very marked. Certain cases of maniacal excitement coming on in youth also derive great benefit.

Whilst on the subject of baths it may be mentioned that it is proposed to convert the old engine-room into a Turkish bath for use by both divisions.

A special bed sore paint is in use here, consisting of equal parts of Tinct. Catechu and Liq. Plumbi Subacetatis, B.P., and this has kept us free from bed sores for many years past.

With reference to strictly medicinal treatment, we have a great aversion to keeping patients under chemical restraint by means of the *bromides* in combination with *chloral*.

The sheet-anchor in the treatment of melancholia in this asylum is the *morphia and ether* combination first advocated

by Huxley, the former superintendent at Barming Heath. *Erythrol tetranitrate* has been employed in certain cases of melancholia, and there can be no doubt that in this drug we possess a very efficient and rapidly acting vaso-dilator; in one case a series of very instructive sphygmographic tracings were obtained, showing that its action is well established within half an hour of administration. By the reduction of arterial tension sleep is promoted, and it certainly allays the restless agitation of melancholics. The great drawback to its use is the headache often induced by it, which is sometimes very intense, and the cause of such bitter complaint that in several instances the drug had to be discontinued.

In the treatment of *epilepsy* the bromides are useful, but have to be carefully watched. A combination of bromide of potassium and belladonna has been found of service in diminishing the number of fits, but it must not be forgotten that all bromides tend to hasten the onset of dementia.

In *status epilepticus* the bowels are relieved by enemata, the head raised to promote the return of venous blood by the force of gravity, and the *liquid extract of ergot*, in half-drachm doses, given with a little brandy and water, or the *citrate of ergotinine* by hypodermic injection.

As an hypnotic *trional* is much to be preferred to *sulphonal*. We have found its action much improved when administered on alternate nights with *paraldehyde*, and it is a very good rule to "ring the changes" in the use of all sedatives.

Bromidia has not proved of any great service, and is a remedy of doubtful value.

Thyroid extract was given a trial here but abandoned, as the results were by no means satisfactory, all those subjected to it complaining of headache and rapidly losing flesh; and this form of treatment for the cure of mental disease now seems to have fallen into disrepute, but in one case of myxœdema admitted here its effect was so marked and beneficial that perhaps brief reference may be made to it.

The patient, a Jewess, married, æt. 39, was admitted in January, 1896, suffering from melancholia with hallucinations of hearing. After a residence of some months, during which she showed no sign of mental improvement, it was noticed that her speech was measured and hesitating, her ideation slow, and her expression heavy and stupid. Myxœdema was diagnosed,

and she was ordered thyroid tabloids daily, when she at once improved, and was discharged recovered four and a half months after the commencement of the treatment.

She was readmitted here exactly one year after with all the symptoms well marked : the skin was now dry and rough, the hair of the head thinned ; she was dull, apathetic, and slow in thought and movement ; she spoke languidly and deliberately, articulation was thick and rather blurred, and her voice monotonous ; her expression was heavy and stupid, whilst her memory was defective. On admission she was at once put on thyroid treatment, when she rapidly lost all these symptoms, and was sent out recovered after being with us four months.

(¹) Read before the South-Eastern Division of the Medico-Psychological Association held at Dartford on April 25th, 1900.

The Best Method of dealing with the Pathological Work of the Irish Asylums. By W. R. DAWSON, M.D.

THE modern conception of asylums as hospitals for the treatment of those diseases whose salient phenomena are mental, and the fact that insane patients are peculiarly liable to be attacked by ordinary physical diseases, for which they must be treated in asylums, render it essential that these institutions should in their organisation and equipment be approximated to general hospitals as closely as their peculiar circumstances allow. In general hospitals nowadays the pathological department takes a position the importance of which is increasing every year, owing to the extraordinary progress in all branches of pathological science, and it is just as important that this department should be efficiently worked in asylums. Its functions may be said to be twofold, clinical and what we may roughly call anatomical.

The common operations of clinical pathology, such as ordinary urinary examinations and the staining of sputum for tubercle bacilli, are now expected to be within the powers of every medical man, and their carrying out will devolve as a rule upon the younger members of asylum staffs. But even as regards these simpler processes difficult cases arise from time to

time where wider experience is needed, and many procedures, such as the detection of unusual bodies in the urine (hæmatoporphyrin, for example), determination of the presence or absence of diphtheria bacilli in the mouth-secretion, the examination of blood for micro-organisms, and the like, demand an amount of time and experience, and a laboratory equipment, such as few asylum officers have at their disposal. Yet all these procedures are absolutely essential from time to time if the patients are to be properly treated. The prosperity of such institutions as the Clinical Research Association shows how widely this necessity is felt by the busy members of the general profession, and surely medical officers of asylums must find it not less urgent. In a few fortunate instances, it is true, where there is a school of medicine in the vicinity, the aid of an outside laboratory may be available, but in the vast majority of instances no such aid is available, and in any case a public institution should not be dependent on the charity of outsiders in carrying on its work.

When we come to deal with post-mortem pathology the need for special skill and experience becomes increasingly evident. Ordinary naked-eye and even microscopic examinations may be and are efficiently made by asylum officers, but questions often arise which no ordinary asylum officer can in the nature of things be competent to settle. Take one instance. A patient is found post mortem to have a number of ribs broken. Is this due to morbid fragility of the bones, or does it indicate violence? Obviously, in some cases at all events, this point requires investigation of a kind beyond the scope of any but an experienced pathologist. Again, the occurrence of epidemics in asylums, such as beri-beri, requires pathological investigation, and one might easily multiply instances of various kinds. But most of all is the need for special knowledge, skill, and experience obvious in dealing with the central nervous system, the organs in which as alienists we are chiefly interested. The brain is the most difficult and complex of all organs, and to appreciate its changes in disease requires a minute knowledge of its normal anatomy and physiology, such as few men have time to acquire. Its investigation, again, can only be carried out by some of the most difficult, complicated, and lengthy of all the methods at the disposal of the investigator, while the mass of work being done all over the world necessitates an acquaintance with foreign languages, and a large amount of

time devoted solely to keeping up with the literature of the subject. It is therefore clear that to deal adequately with asylum pathology specially trained pathologists are necessary, working in properly equipped laboratories, and devoting all their time to the subject. No outside pathologist could give the necessary time, even if he had the requisite degree of knowledge.

Hitherto I have merely dealt with ordinary asylum work, but I need hardly say that this is not all, and that our hopes of a real knowledge of the conditions of insanity, and consequently of a rational treatment of it, centre in original research directed to its pathology in the wide sense, albeit in conjunction with enlightened and scientific clinical observation. For such research, more than for any other branch of pathology, special knowledge and skill and much time are absolutely necessary, and we must see that they are available if we do not wish to lag behind other countries in this department of scientific progress. But I need delay you no longer with arguments, which, indeed, seem almost superfluous, for a proposition so self-evident as the need for special arrangements for dealing with the pathology of asylums. Let us see now what means are elsewhere in existence for meeting this want.

In many of the English and Scottish asylums there is a resident pathologist, who has a laboratory at his disposal, and is responsible for the pathological work of the institution. But he is, as a rule, simply the junior assistant, and is expected to combine with his pathological duties a not inconsiderable amount of clinical and administrative work ; and even if it were not so, there being little prospect of advancement in his particular line, he usually after a year or two, just as he has acquired a useful amount of knowledge and skill, accepts promotion to a higher assistantcy, and drops to a large extent his pathological studies. Such an arrangement, therefore, hardly fulfils the conditions which I have laid down ; but even if it did so, in this country it would, for financial reasons, be out of the question. The clinical and administrative departments of our Irish asylums are none too well manned, and therefore their Boards could scarcely be expected to offer an adequate salary for a resident pathologist in each, or even in a majority, of the institutions.

Even across the Channel, however, there is a wide-spread dis-

content with the existing arrangement, and as long ago as 1892 the London County Council took steps to introduce a better order of things in the seven asylums under their control, and accordingly, after inquiries both in England and abroad, they established a central laboratory at Claybury Asylum, splendidly fitted out for its purpose, and placed over it a scientific man in every way competent to fill the post, Dr. F. W. Mott, F.R.S., with an adequate salary and two assistants. This experiment has been a complete success. Not only has most excellent work been done, as shown by the first number of the *Archives of Neurology*, published from the laboratory, but, as Dr. Mott stated in his first report, his "appointment appears to have been an incentive to pathological work at other asylums," a very important point. I need only just mention the magnificent central laboratory of the New York State Hospitals for the Insane with its eight departments, each in charge of a specialist, which has been established since 1895, and turn to what is, for our purpose, the most useful example of such institutions, the Conjoint Laboratory of the Scottish Asylums. Stimulated by the success of the London County Council, a number of these institutions combined in 1896 and started a laboratory in Edinburgh under the control of Dr. Ford Robertson, who was already known for his work in the field of cerebral pathology. He receives £400 a year as salary. The duties of this post and the objects of the laboratory are as follows :

- I. To carry on original researches upon the pathology of insanity.
- II. To examine pathological material sent from the asylums, and to furnish reports.
- III. To give instruction free of charge to members of the medical staff of the associated asylums in the pathology of mental diseases and in laboratory methods.
- IV. To assist members of the medical staff of these asylums in original research by (*a*) suggesting subjects, (*b*) collecting material, (*c*) advising as to methods, (*d*) assisting with reference to literature, (*e*) providing "demonstration sets" of microscopic specimens to be sent round to the asylums, (*f*) visiting the associated asylums at intervals with reference to their pathological work.

V. To form a library of books and journals bearing on the subject.

Seventeen of the twenty-four Scottish asylums have now joined the scheme, contributing to the support of the laboratory, in proportion (nominally, at all events) to their death-rate, a total sum which last year amounted to £650 10s. The administration is in the hands of a General Board, composed of the superintendents of the associated asylums, together with lay governors from each when desired, from which General Board a smaller Executive Committee of nine is annually elected.

This scheme has now been working for several years, and has been strikingly successful. Numerous papers have appeared in various scientific journals by which our knowledge of cerebral pathology in relation to insanity has been extended, and Dr. Robertson is about to publish an important work covering the whole ground, and embodying his researches on the subject. Medical officers of asylums have received instruction, pathological work has been stimulated elsewhere, and, in short, the programme of the undertaking has been pretty fully carried out. So successful has the laboratory been that, as we learn from the last report, it is proposed to extend it by the establishment of a separate department for pathological chemistry under a specialist in this subject.

We are therefore led irresistibly to the conclusion that the establishment of a central laboratory in this country is not only the best, but is the only way at our disposal for dealing with the pathological work of our asylums. On the whole, a scheme modelled on the Scotch institution, though with certain modifications, would seem to be the most practicable. Thus the mode of control, and management, can hardly be improved on, but the duties of the pathologist should not, I think, be restricted to the nervous system. They might be defined as, first, to examine and report on all material, both clinical and post-mortem, sent to him from the associated asylums. Secondly, to give pathological instruction free of charge to medical officers of the associated asylums. Thirdly, to act as pathological consultant to the associated asylums in all other matters (such, for example, as instruments and laboratory fittings) on which his advice may be sought by them, and perhaps to visit them at intervals with this object in view. Fourthly, to carry on

original research in the pathology of mental and nervous diseases. Whether any attempt should be made to form a neurological library is a matter which must depend on the success of the project in other respects.

Lastly, we have to consider whether such a scheme is financially practicable. The first point is as to the laboratory itself and its equipment, and here I venture to think we are peculiarly fortunate. At the Richmond Asylum in this city, and therefore at a spot easily reached from any part of the country, there already exists one of the most commodious and best-equipped asylum laboratories in the three kingdoms. If, therefore, the Richmond authorities can be induced to place this at our disposal, it seems to me that, for the present at all events, we need go no further. The next point is with regard to the raising of the sum necessary for the maintenance of the laboratory and the pathologist's salary. It seems to me that in order to induce a competent man to give his whole time to the work we should offer not less than the salary paid by the Scottish asylums, viz. £400 a year. Setting down the working expenses at £100, this means £500 a year to raise. There are in this country twenty-three district asylums, in addition to which there is the Central Criminal Asylum at Dundrum, the Stewart Institution, St. Patrick's Hospital, and a number of private asylums, some of which would no doubt contribute. If we might put down the combined quota of all the asylums other than district asylums at £40 a year, this leaves only £20 a year to be contributed by each of the latter. Furthermore, the conjoint pathologist might also act as pathologist to the Richmond Asylum, and in this case the Governors of that institution might be induced to give a much larger proportion than £20, say £100 a year, which would still further reduce the contributions of the other asylums. There are one or two other ways in which money might be raised, but I think I have said enough to show that the scheme is well within the range of practical politics, and, indeed, is not only the most effective but the most economical mode of meeting the difficulty. Be it understood that what I have said about the financial and other arrangements are only thrown out as suggestions designed to show how the scheme might be worked out. The arrangements would, of course, rest with the General Board.

It may be said that such a laboratory would not deal with

the whole pathological work of our asylums. It would not, and it is neither necessary nor desirable that it should. Assistant medical officers are quite capable of doing the routine pathological work, especially if they have had a course of instruction at the central laboratory; while all questions of unusual difficulty, importance, or interest, would be referred to the conjoint pathologist for solution. Indeed, the establishment of a comparatively well-paid post of the kind would doubtless tend indirectly, as well as directly, to increase the efficiency of asylum officers, by acting as an incentive to assistants to devote more attention than they have hitherto done to the study of pathology.

In conclusion, I may perhaps be allowed to say that when the point was mooted by me in the Presidential Address at the opening meeting of the University Biological Association last November, it met with emphatic approval, not only from the guest of the evening, Dr. Aldren Turner, of London, but subsequently from the *Lancet* in a notice which that journal inserted in its columns. A few weeks ago the question was again brought before the above Association, on which occasion the speakers were unanimous in their approval of the scheme, and a resolution was passed to the effect "that in the opinion of the Dublin University Biological Association it is desirable to establish a central laboratory for the Irish asylums, devoted to the study of pathology in relation to nervous and mental diseases." From these indications and others I think we may take it that our project is sure of the sympathy and support of all enlightened members of the outside profession, a support of which, in its influence on the lay boards with whom the successful starting of the scheme finally rests, we should gladly avail ourselves.

DISCUSSION.

At the Quarterly Meeting of the Irish Division at Dublin, April 10th, 1900.

When he had read the above paper Dr. DAWSON proposed the following resolution:—"That, for the better carrying on of the pathological work of the Irish asylums, and for the encouragement of original research in the pathology of nervous and mental disease, it is desirable to establish a central laboratory devoted to these special ends, under the management of a competent pathologist, who shall give all his time to this work; and that a Committee of five asylum superintendents be appointed to take steps to give effect to this resolution."

Dr. NOLAN in seconding the resolution said: After the very able manner in which Dr. Dawson has dealt with the subject it is absolutely unnecessary for me to say anything except to formally second the resolution. To my mind the question is not one for argument, but it is one for apology, and I think

the superintendents of the Irish asylums are rather late in the day in trying to carry out what has so long been in operation elsewhere. I am afraid if they do not do something, outside influences—professional and lay—will place them in an exceedingly awkward position, in consequence of the large sums of money lunacy is costing in this very poor country, if it can be said that the money is going to little more than hotel keeping. We have been subjected to the reproach that superintendents of asylums are something between hotel keepers and jailors. It appears to me that we should do more than speed the parting guest, and I think our work should certainly not end at the mortuary door. I am convinced the treatment of the insane will derive from pathological research aid of a most practical and useful character. It would weary you uselessly to labour this point. We all feel that it is absolutely essential. The details of the scheme will be, of course, difficult, but these difficulties are not insurmountable. There has been an absolute necessity for it for years, and I hope it will rouse enthusiasm now. If properly and energetically worked by the Committee, a result will be attained sufficient to initiate this project, and I am sure it will then find support for itself. In the London County Asylums, where you know a similar project has been successful, the pathologist originally appointed at £700 has got an increase of £300 a year to his salary. Dr. Dawson has referred to New York, but the scheme carried out there is perhaps too ambitious. The Scotch scheme is one which should appeal to us, and it is the duty of every superintendent in Ireland to support that.

Dr. FINEGAN said: I think the resolution is most excellent. There is one point, however, which I would suggest as an addition to it. This matter does not rest so much with the Association as with the controllers of superintendents—the committees of management. I am quite satisfied all superintendents in Ireland would be only too anxious to advance the matter in every way in their power.—and the Association would strengthen the hands of the superintendents by having a copy of the resolution sent to each committee of management of Irish asylums, in order to get an expression of opinion from them. The superintendents would, of course, educate the committees on the subject.

Dr. MERCIER.—The resolution would carry weight with the laity if a statement were added to it, referring to the work done in the pathological laboratories started on this plan and the great advantages reaped therefrom. Such a memorandum should point out how pathology aids treatment, and how great public advantage would be gained by a shortening of the period of stay in asylums, which would not be an improbable result. If you are asking a public body for money you must show a fair reason for the employment of that money, and demonstrate that its effect will be to save money in the future.

A prolonged discussion ensued. Drs. Donelan and O'Mara expressed a fear that the foundation of a central laboratory might rather check individual pathological work elsewhere. Dr. Dawson pointed out that such had not been the result of a similar scheme in Scotland. Drs. Lawless, Donelan, and Nolan suggested that the co-operation of the inspectors should be sought in the matter. Dr. Nolan and the Chairman suggested that some difficulty might be experienced as to obtaining contributions from the local committees, for work not directly and solely under their control in each case; and the Chairman pointed out that the Lunacy Amendment Bill (England), now passing through Parliament, contained a special clause empowering the committees of different asylums in that country to combine, not only for the purpose of constructing an asylum, but for the purpose of erecting and equipping a laboratory for pathological purposes. This is a Government bill, and the Government are by it committed to the principle of permitting combination for the purpose. A bill for the amendment of the recent Irish Local Government Act had been announced, and it was suggested that the Government be requested to permit the addition thereto of a clause legalising such combination among the Irish district asylums. It was deemed that this matter should be immediately taken up by the Committee about to be formed. After further discussion as to how the details of the scheme could best be carried out, the resolution was put to the meeting and unanimously adopted.

Dr. NOLAN then proposed, and Dr. LAWLESS seconded, "That the following members be appointed as Committee to carry out the objects of the foregoing

resolution, namely, Dr. Dawson, Dr. Woods, Dr. Graham of Belfast, Dr. Conolly Norman, and Dr. Finegan, and that they be given power to co-opt further members in case of vacancies occurring, or to add to their number." This resolution was adopted unanimously.

The Therapeutics of Insanity. By HARRINGTON
SAINSBURY, M.D.

THIS subject is of such magnitude and it presents so many aspects that it would not be possible to develop it at all satisfactorily within reasonable limits, if one were to attempt to deal with it comprehensively. I shall therefore be excused if I pass very cursorily over certain systems of treatment which do not, and dwell more upon certain others which do fall within my competence. The selection will by no means represent the order of importance.

That which may be called the sociological treatment of the unsound of mind depends upon the recognition of the rights of citizenship as still belonging to the imbecile and the lunatic, however much these rights may be limited or qualified; the question to be answered in each individual case is "How much freedom? how much restraint?" On this subject Emminghaus (*Virchow's Jahresberichte*, Jahr xxxiii, sect. "Psychiatrie") refers to Böttiger's views on *the treatment of the insane in colonies* (*Ueber die coloniale Behandlung von Geisteskranken*). Böttiger maintains that this system of treatment gives the best results because of the beneficial effects of occupation upon the mental state, and because also of the wide range of liberty which the system places at our disposal.

In the carrying out of the treatment the colonies may stand either as independent foci, or they may be in more or less close connection with the asylum as a centre.

According to Böttiger at least one half of all the inmates of the asylum are capable of treatment in the "colony." He advises that where the asylum, as parent institution, has affiliated daughter colonies, these should be situated near the asylum, and that whilst the latter should retain the hospital character the colonies should partake of the nature of groups of dwelling-houses.

He sums up the advantages which the "colony" system

offers as follows:—(1) Favourable sanitary conditions; (2) greater facilities for apportioning to each case the required measure of freedom; (3) greater opportunities for varied occupation; (4) lessened cost of establishment and maintenance.

Böttiger insists that all *forms of psychosis* are suitable for this treatment during longer or shorter periods.

To the important subject of the *industrial training of imbeciles* Dr. Shuttleworth contributes a paper in the July number of the *Journal of Mental Science*. Shuttleworth draws attention to the great value of schools in the development of imbeciles, the object in view being always the choice of an occupation for the individual.

On account of the limitations of mental development the acquisition of manual dexterity is most important, and accordingly instruction in the handicrafts should constitute an essential feature of the training. The development of the muscles by suitable gymnastic exercises will be of value to the same end.

For male imbeciles out-of-door occupation in the fields, gardens, etc., is desirable, and for female imbeciles light field work is likewise to be encouraged.

Those imbeciles unsuited to agricultural work should be busied with domestic work or occupation in workshops, *not in factories*. Suitable occupations are bootmaking and mending, tailoring, mat weaving, brushmaking, etc.

In any case individualism is all-important. Dr. Shuttleworth is in favour of a system of small rewards in institutions for imbeciles as a means of arousing zeal.

At times a considerable amount of taste is to be found among the feeble-minded, and the cultivation of powers of drawing, painting, etc., in particular among the better classes, will be then called for.

Passing from the general to the special, we may first consider the subject of *suggestion in the treatment of psychoses*. In the *Centralblatt f. Nervenheilkunde und Psychiatrie*, April, 1899, Prof. Bechterew, of Petersburg, writes on the "Treatment of Chronic Alcoholism by the Simultaneous Use of Hypnotic Suggestion and other means." His experience on the value of suggestion in this disease will be probably in accord with that of most other workers in this field; but the point to be accentuated here is the combining of this treatment with other remedies de-

signed to meet the damaged state of the bodily health. Thus he prescribes, in addition, the use of baths and rubbings, the sedative employment of bromides with codeia, of heart tonics, such as digitalis and adonis vernalis, of general tonics, in particular strychnine. As he insists, chronic alcoholism involves not only a psychosis, but also a number of morbid bodily states, and hence he urges that it is most reasonable to apply remedies to these latter when we are attacking the disease as a whole. The ultra-scientist may exclaim against composite treatment, but the practical man will not be deterred.

Von Bechterew contributes to the February number, 1899, of the same journal, an article on the "*Treatment by Suggestion of Sexual Inversion and of Masturbation.*" His first article, which certainly gives the impression that this is a new therapeutic departure, brings down upon him the heavy hand of Dr. v. Schrenck-Notzing, of Munich, who shows clearly that as far back as 1889, v. Krafft-Ebing, Ladame, and he himself had published reports of treatment of these conditions by suggestion ; a bibliography which he adds enforces his case.

Admitting this correction, v. Bechterew's cases do not lose in their value as additions to our knowledge of a department of pathology in which any and every means of alleviation or cure is welcome.

In these cases, also, v. Bechterew counsels the employment of other means, baths, bromides, etc., besides suggestion.

Among the most satisfactory of all the methods of treatment of mental cases are the hydropathic, when they are effective ; in the treatment of insomnia this holds notably. Dr. Ernst Beyer therefore earns our thanks for his paper on "*The Application of the Prolonged Bath to the Cure of Mental Disease*" (*Centralbl. f. Nervenheilk. u. Psychiatrie*, Jan., 1899). He says with truth that in spite of the general recognition of the warm bath, this variety of bath has received but little attention.

The technique of the ,prolonged bath, though very simple, must be sought in Dr. Beyer's paper. The temperature of the water is maintained at 95° F. The patient divides his life between the bath and the bed ; in the morning into the bath, in the evening into the bed, and so on for days and weeks together ; the meals are, of course, administered while in the bath.

The many precautions upon which some insist, the careful examination of pulse and respiration, and of the general powers, etc., all these are as a rule unnecessary. The treatment is to be regarded as adapted for most patients without hesitation and without fuss. Experience of the daily routine of these baths in the Heidelberg Clinique, where constantly half a dozen such are in use, has convinced Dr. Beyer of the simplicity and safety of the practice, and he even goes so far as to regard these many precautions and observations as contra-indicated, because interfering with the quieting influence of the treatment.

Constant supervision is a necessity of the method, and one attendant to every two or three patients will be requisite: to supervise being his sole occupation. An abundant supply of easily accessible baths is also essential, and to each section allotted to noisy and dirty patients there must be one bathroom, in which must be one bath to every two or three patients. Herein may lie the difficulty of adapting the system to large establishments, for *there should not be many baths in the same room* or the sedative influence will be interfered with; indeed, even in smaller number it is advisable to separate the baths from each other by partitions, which, however, need not be complete.

We must pass over other details and proceed to consider the kind of patient suitable for this treatment. All cases with bedsores are indicated, and we are to note that sores of all kinds heal well in the bath. Cases of excitement generally are indicated, and particularly cases which are dirty, or which, if suffering from bedsores, cannot be treated, the patient fouling the wound or pulling off the bandages.

Difficulty in keeping the patient in the bath is experienced much less often than would be thought likely, and mechanical means of restraint are never employed; but a dose of hyoscin may in certain cases be required to start the baths.

The prolonged bath has proved most successful in the excitement of acute mania, less so in that of dementia præcox, though more extended experience has not differentiated so markedly between these conditions as appeared likely from earlier observations. The excitement of paralytics has been little amenable, but that of alcoholics and epileptics has been successfully treated.

In conclusion the writer considers that the routine use of these baths will prove one of the most important advances in the treatment of the insane.

The feeding of insane patients often requires the most careful and anxious attention. It must be approached from two points of view, viz. (1) the state of the digestive organs; (2) the nature of the food supplied. We are apt not to pay sufficient attention to the former of these, and hence the importance of such contributions as that of Dr. Greenwood on "Lavage in the Refusal of Food by the Insane" (*Journal of Mental Science*). According to Greenwood the refusal to eat often depends upon the presence of an acute gastric catarrh, and he has obtained marked and often surprising success from the use of repeated lavage in such cases; the measure of the success being shown by the return of the appetite for food or the voluntary taking of food, or by an improved digestion (should there still be refusal) as shown by a gain in weight. The common sense of this procedure will not fail to commend it.

The food suitable for insane patients who are ill nourished is a subject the importance of which need not be emphasised. We would here draw attention to the numerous forms of artificial foods, such as somatose, sanose, nutrose, eucasein, tropon, etc. These are employed as nutrient adjuvants; they are preparations of casein or of animal and vegetable albumens, and are generally administered in doses of one drachm to half an ounce two or three times a day, according to age. They are for the most part without or with very slight taste, and hence can be admixed with milk, cocoa, coffee, beer, wine, soups, or other foods. Some of them are soluble in water or emulsify in the same. Important papers on these preparations have appeared in several journals, note in particular that of Strauss on "Tropon" (*Therapeutische Monatssch.*, May, 1898), and of Biesenthal on "Sanose" (*Therap. Monatssch.*, April and May, 1899). One important advantage of tropon over other like preparations is its relative cheapness, a very solid advantage. Tropon, like its congeners, is readily digested and assimilated, for though it is insoluble in water it peptonises readily, the whole of its 90 per cent. of albumen passing into soluble peptone (see also *Merck's Report*, published March, 1899).

The advantages which this class of food offers may be

summed up as—(1) high nutritive value ; (2) ready assimilability ; (3) ease of administration because of tastelessness.

In certain mental states profound depression of the vital powers develops with rapidity. In these states much as food may be needed it may cease to be assimilated, though presented in the most digestible form. Here the one indication for the performance of any function, digestive or other, is to whip up the flagging powers, and, as a novel means of so doing, we may refer to the *treatment of the typhoid state by the hypodermic injection of salines* of which mention was made in the last number of the *Journal of Mental Science*. It will be noted there that to stimulate the vital powers generally, small injections of some three or four ounces are given and repeated ; whilst much larger injections, up to a pint or even more, are indicated when the vital failure is mainly in the circulation. Of the marvellous recuperative power of saline injections in collapse from shock or other cause, we have abundant evidence in ordinary medical practice.

Binswanger (*Virchow's Jahresbericht f. 1898*, art. "Psychiatrie," Emminghaus) recommends as a treatment for *psychoses with exhaustion, hypodermic injections* of an entirely different kind, viz. of *bouillon cultures of the bacterium coli*. The cultures are first killed by means of a 1 per cent. formalin solution, then in the dose of 0·5 to 10 c.c. they are injected with due antiseptic precautions. The injections are continued until the production of fever, but on this attaining 39° C. (102° F.) the treatment is intermitted till the temperature has fallen again. During two years fifteen cases were thus treated, with result four cures, two alleviations, and in nine cases no change.

The volume of these injections, 0·5—10 c.c., is quite too small to make it probable that mere bulk plays any part in the effect, as in the previously mentioned saline injections is probably the case.

Passing to the medicinal treatment of insanity we come to a region of exceptional and confounding activity—the past tense would perhaps describe this more fitly. In three directions we may observe this activity, first in the extension of the long list of hypnotics, secondly in the development of new opium derivatives, and thirdly in the production of new bromine compounds : these all concern the alienist directly.

Of new hypnotics, Dr. Ernst Schultze, of Andernach, writes

in the *Neurologisches Centralblatt* (March, 1900) concerning *dormiol*, a product of the combination of chloral with amylene hydrate. Despite the numerous introductions by the chemist, the older hypnotics—chloral hydrate, sulphonal, trional, paraldehyde, amylene hydrate—maintain their superiority, and among these for certainty and readiness of action chloral hydrate comes first. On the other hand, chloral hydrate is regarded by many as poisonous even in moderate dose, and the idea of combining chloral with amylene hydrate was to keep, if possible, the chloral effect without its drawbacks.

Dormiol is a colourless limpid liquid with a pungent menthol-like odour and burning taste. It mixes in all proportions with alcohol, ether, chloroform, benzol, fats, and the ethereal oils. It shows a peculiar behaviour to water, but can be made to dissolve in it in all proportions if certain precautions are observed; to obviate difficulty, however, a 10 per cent. solution of *dormiol* in water can be obtained commercially. The taste is no serious drawback, and only two out of sixty patients refused it for this reason; moreover, if need be, it may be administered in gelatine capsules. Sleep followed the dose within the hour in the majority of cases, very often within thirty minutes; it lasted five, seven, eight hours. *Dormiol* was effective in about 75 per cent. of the cases. In the event of refusal to take the drug it may be administered *per rectum* admixed with some two or three drachms of mucilage of gum acacia; thus given it in no case caused irritation.

The cases most suited to *dormiol* were of melancholia, of depression, and of hypochondriasis. In the excitement of mania and of general paralysis, and even in that of epilepsy, it failed for the most part. The dose given was in general about 20 grs., but in some few cases it had to be raised to 45 grs.; if this dose failed the drug was not indicated. In other cases 12—15 grs. would suffice.

Unpleasant after-effects were practically absent, and in no instance was there any serious disturbance of respiration or circulation. The appetite was not impaired, or less so than with other hypnotics. Habituation was not observed, nor delay in the appearance of the effect, as may be noted, particularly in the case of sulphonal.

In the administration care was taken not to repeat the dose on two consecutive nights.

Dormiol may be confidently recommended as an efficient and therefore useful hypnotic.

In the *Annales Médico-psychologiques* Dr. Viallon, of Dijon, discusses the merits of *tribromo-salol* as a hypnotic, and he comes to the conclusion that it is not suited to alienist practice : (1) because of its slight and inconstant hypnotic action ; (2) on account of its insolubility ; (3) because of its high price.

It may be given " in certain special cases where the patients are docile, and it may advantageously replace bromide of potassium *on occasion*." " It was very inferior to other hypnotics, such as chloral, sulphonal, trional, etc."

To the sedative value of *hyoscin hydrobromide administered sub cute*, Dr. Dörner (*Virchow's Jahresbericht, loc. cit.*, p. 80) testifies. He recommends it (1) in all cases of acute maniacal excitement with destructiveness or violence, with the exception of those cases with vivid hallucinations and delusions ; (2) in melancholia agitans ; (3) in sleeplessness where other means have failed.

Dörner does not find hyoscin of use in hysteria or in psychoses which demand the continued use of sedatives.

The dose may, with caution, be raised to one or even two milligrammes without danger, and be maintained at this level so long as the heart's action is good and likewise the nutrition of the patient.

New morphia derivatives.—We owe to Merck in particular the synthesis of a number of morphia derivatives, upon the physiological action of which v. Mering reports briefly in *Merck's Report*, published March, 1899. Of such derivatives three in particular have been investigated, viz. *dionin* or hydrochlorate of ethyl morphine, *heroin* or the diacetic ester of morphine, *peronin*, a benzoyl-morphine hydrochloride. The first, *dionin*, as a substitute for morphine, has the advantages of mildness of action and free solubility ; it is, indeed, the most soluble of the morphia salts or morphia derivatives. It has been employed in all morbid states in which opium or morphia are indicated, including mental conditions, though the reports of its use in asylums are conflicting. It has been specially recommended in the treatment of morphinism during the withdrawal of the alkaloid, and the particular value which it presents here is that it does not produce euphoria, and so tempt the patient on its own account ; further, its free solubility causes it both to

act rapidly and to be rapidly eliminated from the body. The usual dosage of dionin is gr. $\frac{1}{2}$ — $\frac{1}{4}$ repeated two or three times in the day. Hypodermically the average single dose is from $\frac{1}{4}$ — $\frac{1}{2}$ gr. In morphinism the dosage is much higher, and as much as 7—10 or even 16 grs. may be injected beneath the skin *during the course of the day* (see *Merck's Report, loc. cit.*). Fromme prefers dionin to codein in morphinism (*Schmidt's Jahrbücher*, 1899, No. 8).

Heroin, combined as the hydrochlorate. Further investigations with this salt have discovered that it is more active than was first thought, being decidedly more poisonous than codein, and exerting a depressant action upon the circulation and respiration. This has led to a lowering of the dose which, formerly prescribed in the amount of 0.005—0.02 grm. ($\frac{1}{12}$ — $\frac{1}{8}$ gr.) two or three times daily, is now restricted to gr. $\frac{1}{12}$ as the average upper limit of the repeated dose (see *Münchener med. Wochenschr.*, xlvi, 27, 1899, paper by Erich Harnach).

Peronin is not very soluble, and its usefulness is limited on this account. It has been employed by Meltzer (*Therap. Monatsh.*, 1898, p. 317) as a hypnotic in states of mental excitement. In these states the dosage was $\frac{1}{2}$ —2 gr., which quantities were given without any risk (*Merck, ibid.*, 1899).

New bromine preparations.—The prevailing employment of bromides in all departments of medicine, but particularly in mental disease, gives importance to any modifications of these universal remedies. To two of these we would draw attention, viz. *bromalin* and *bromipin*. The former, described in *Merck's 1895 Report*, has not been much tested till within the last two or three years. It is an organic compound,—bromethyl formine by name—and the special advantages which are claimed for it are that it conveys the influence of the alkaline bromides whilst avoiding or minimising some of their irritant effects. The eruptions of bromism and the alimentary disturbances are thus avoided. The theory of the salt is that it breaks up, yielding the active bromine and an antiseptic compound—formaldehyde—the action of which corrects the stomach and intestinal disturbances called forth by the alkaline bromides. This treatment is an advance upon that previously proposed by Féré, viz. the *simultaneous* administration of some intestinal disinfectant, e. g. β -naphthol or bismuth salicylate, along with the alkaline bromide, but the object is the same.

Bromalin is easily soluble in water, and may be given either in water with syrup of orange, or in cachets; the dose is 10—30 grs. three or four times daily, *i. e.* about double that of potassium bromide. Rohrmann reports recently upon its favourable action in epilepsy, his experience being gained at the Göttingen Mental Clinique.

Dr. Kothe, of Friedrichroda, discussing the treatment of epilepsy in the *Neurolog. Centralblatt* of March 15th, 1900, speaks very highly of the value of *bromipin*. His own experience is limited to six cases; but these, taken with the reports of Gessler, Dornblüth, Schultze, and Wulff, lead to the conclusion that in *bromipin* we possess an agent which has all the powers belonging to the other bromine compounds without their disadvantages.

Bromipin is a combination of bromine with sesame oil, a 10 per cent. solution being employed. Of this a *daily* dose of from 4—8 or 10 teaspoonfuls (15—40 grms.) is most effective in removing the seizures and in benefiting the mental state. A further advantage lies in the nutritive value of the oil, which is of easy digestion.

When administration by the mouth is objected to the oil may be given as a rectal injection in the same dose (15—40 grms.) and with the same efficacy. When administered in this way Dr. Kothe has always given it as a single dose shortly before bedtime. In no case did any rectal irritation arise. In three of these cases Wintermütz examined the urine and discovered hydrobromic acid in minute quantities, proving the absorption of the drug from the bowel.

Kothe refers to Flechsig's method of treating long-standing cases of epilepsy, refractory to the ordinary bromide cure, by the use of opium and of bromides in sequence, but, as he says, this treatment requires very careful watching, and since his knowledge of bromipin he has abandoned it. Kothe begins with the dose of 15 grms., generally as a rectal injection; this he continues, advancing the dose if need be up to 30 or even 40 grms. during the next six to seven weeks; he maintains the dose at this level for two to three weeks, and then during another six to seven weeks he gradually reverts to the initial dose. This cycle is subsequently repeated more or fewer times according to circumstances. The first course is preceded by some weeks of rest in bed, but not the subsequent courses.

The successful treatment of epilepsy demands, he insists, a lengthened course in the case of each and every treatment.

Iodine is in such great use in nervous diseases, in the form of the iodides, that we may add to these statements about bromipin that there is a similar preparation of iodine, viz. *iodipin*, also in 10 per cent. solution in sesame oil. This preparation is capable of replacing the iodides (see *Merck's 1898 Report*, and those of 1899 and 1900).

A Theory concerning the Physical Conditions of the Nervous System which are Necessary for the Production of States of Melancholia, Mania, etc. By JOHN TURNER, M.B., Essex County Asylum.

VERY perplexing to the student of insanity is the question as to *how* states of exaltation or depression arise. On the physical side to what changes in the nervous system do they correspond? And are these changes localised in different parts of the nervous system in mania and in melancholia; and, if so, what is the site whose disarrangement issues in exaltation or depression?

To such questions as these the following hypothesis has been brought forward as an answer:

Even if, as is very likely, it is only a provisional explanation, it may serve a useful purpose in enabling us to form a conception how states of exaltation and depression may arise and be associated with a nervous system damaged in one or another way.

It is true that Dr. Bevan Lewis (*Text-book of Mental Diseases*, 2nd edition, p. 167) states that melancholia and mania are "serial stages in the same disease," and that the latter is merely a "still lower stage of reduction" to that which we get in the former; while Drs. Batty Tuke and Woodhead (see article "Pathology" in *Dict. of Psychol. Med.*, p. 899) refer the symptoms of mania and melancholia to intensity and rapidity of onset of the exciting cause, in melancholia the intensity being less and the onset gradual, whilst the reverse is the case in mania.

But neither of these assumptions helps us in the least in

forming any idea *how* it is that these states arise in a disordered nervous system.

The hypothesis here brought forward seems to me to meet the facts of the case better than the above-mentioned, and to enable us to form a more adequate conception of the mechanism concerned in these states.

Stated briefly it is supposed that whilst both melancholia and mania are associated with a dissolution of the nervous system, in the former case the reduction takes place along sensory lines of the reflex nervous arc, and in the latter along motor lines.

In the present state of our vocabulary it is very difficult without using cumbrous phrases to avoid confusing physical processes with their mental accompaniments. In the following pages the hypothesis is intended to apply purely to physical conditions ; the mental states associated with these are necessarily alluded to, but what we are concerned with are nerve-cells and nerve-fibres. No amount of jugglery with these terms can ever convey to our minds the faintest conception of the how or why of pain and pleasure, or of any other mental states ; it must be sufficient for us to know that certain physical conditions are invariably associated with certain mental states. It will, therefore, be understood that when such terms as melancholia, mania, stupor, etc., are used, that in all cases we are only dealing with the physical changes that underlie, as it were, these psychical states.

The doctrine of evolution teaches us that the physical substrata of all consciousness, all intellectual actions, in fact all mind, is the sensori-motor apparatus.

The only nervous elements we know of are cells and fibres. Fibres either convey ingoing (sensory) stimuli, or outgoing (motor) stimuli, or stimuli passing from one cell to another.

The type of all nervous systems is the simple sensori-motor apparatus consisting of an ingoing sensory fibre ending in a central sensory cell, from which a connecting fibre passes to a motor cell, out of which passes a fibre leading to a muscle, gland, etc.

The simplest nervous system consists of few such mechanisms coupled together, the highest of an infinitely large number piled one on top of another, and connected in every conceivable way.

There is no need to refer to all the properties of these sensori-motor mechanisms. I shall only mention those which are directly concerned with our hypothesis.

The sensory cells may be likened to detonators which explode or discharge the motor cells.

Now when a motor cell is discharged there are facts which tend to show that its molecular constitution is broken down, and a more stable composition of nervous substance results, so that to re-discharge it a stronger stimulus is needed. The converse of such a statement leads us to suppose that the longer a motor cell has been left undischarged the more and more unstable its constitution becomes.

On the psychical side there are many reasons which lead us to infer that states of restlessness, cravings, feelings of restraint, or actual pain are associated with motor cells in a state of high tension—cells in which energy has been accumulating and is latent, waiting for the appropriate stimulus from the sensory cells to get themselves discharged.

On the other hand, motor cells which get rid of their tension (molecular instability) by free discharge, those in which no undue tension is allowed to accumulate, are psychically associated with a sense of freedom and well-being; as witness the excessive mobility of young children, in whom melancholic states are rarely met with. Emotional disturbances with tears, sobbing, etc., being quite distinct from states of depression.

There is a very important distinction to be borne in mind between two sets of sensory fibres, viz. those which convey impressions from without, through the medium of the special senses (epi-peripheral feelings of Spencer), and those which convey impressions from the interior of the body, from the viscera, muscles, joints, etc. (ento-peripheral).

The impressions received through this latter class of fibres constitute the *cœnæsthesia*; it has been likened to the screen or background of consciousness on which the impressions from the special sense organs are flung. Although the impressions received through this second source largely enter into the totality of feelings which constitute the *ego*, yet in health they either do not enter into consciousness, or at best only impinge as it were on its fringe. They are, as Lloyd Morgan phrases it, marginal states of consciousness.

Feelings derived from this source are voluminous and ill-

defined. They probably constitute a large part of the mental states we term emotions. Of course emotions are vividly conscious states ; what I mean to infer is that the continuous currents which all our lifetime stream into the central nervous system from these sensory channels do not as a rule arouse vivid states of consciousness, although they largely influence such states, and give, as we say, the emotional tone to them.

It is due to the nerve-currents derived from these sources that there originates that sense of well-being or joyousness which at times for no very obvious reason possesses us.

Emotional states probably represent the most primitive and oldest (phylogenetically) of our nervous states. They are associated with all parts of the individual ; they have grown in complexity with the increase of complexity produced by the evolution of the organism, and are therefore more or less associated with every part of that organism. Hence the universality of their effects ; we feel an emotion from the top of our heads to the tips of our fingers and toes and all over the body. There seems to be such a relation between the states of mind (not necessarily conscious states) aroused by impressions from these two channels, inner and outer, that when one is in the ascendancy the other is low, or but little attended to. As a rule we may say that we are, strictly speaking, conscious only of impressions received through the channels of the special senses. The other set, though of importance in determining conduct and the general state of mind, carry on their transactions beyond the margins of consciousness in health. Even during painful states, when our "attention is distracted" the pain, though acute, is often disregarded—falls outside the margin of consciousness ;—hence most pains are most acutely felt at night, when little occurs to distract our attention.

In all melancholic states the relation between impressions from the special senses and from the cœnæsthetic channels is altered, so that we get a rise of subject consciousness and a fall of object-consciousness ; melancholics all being morbidly introspective and self-absorbed. This condition is brought about by the undue prominence given to impressions from the cœnæsthetic sources, owing to the other channel being, as I imagine, interfered with or blocked.

Now regarding the entire nervous system as built up of an infinitely large number of sensori-motor mechanisms, how may

we account for melancholic states when the system suffers a reduction from disorder of some one or other part of it.

Postulating that the sensory cells act as dischargers to the motor, and that nervous currents are constantly streaming in to the central nervous stations from every afferent channel, whilst energy is likewise constantly accumulating in the motor cells, in health the central sensory cells send currents in sufficient number and intensity to the motor cells to discharge them and prevent undue accumulation of energy, by which means the bodily activity is maintained. But if from any reason these sensory cells are rendered functionless, or the impressions they usually receive are hindered from entering them, then energy must accumulate to excess in the motor cells. There is pent-up activity, and the condition is accompanied by more or less acute feelings of uneasiness, restraint, dulness, or actual pain. Ultimately a time comes in most cases when the tension is so high that the molecular equilibrium overturns itself, as it were, and the result is an outburst of motor activity.

That we must rid ourselves somehow or other of superfluous energy is exemplified well in the case of many idiots. Their sensory inlets are in most cases largely unused. Their eyes and ears respectively appear to absorb but few impressions, their tactile sensibility is much blunted, taste is often nearly abolished, although the appetite remains. The result of this cutting off of sensory impressions is that energy accumulates, which gets itself expended in apparently purposeless and often unceasing movements; they rock themselves to and fro all day long, or scream or breathe rapidly and noisily, like an engine letting off steam, which is practically what they are doing. They should be melancholic, but to be so implies the possession of more intellectual faculties than they possess.

It must be supposed (to account for the distressing feelings) that this accumulation of energy in motor cells is accompanied by some leakage along the outgoing fibres. We are not dealing with one cell, but large groups of cells coupled together, and it is possible that of this number some are discharged and give rise to the feelings described, whilst the remainder are not discharged. Of course it is only when the group in its entirety is discharged that the appropriate feeling or action associated with it is realised. There are many observations in support of such an assumption; to give an example—we have all ex-

perienced the uneasy feeling that arises when we cannot recall a familiar name, although it is in common parlance "on the tip of the tongue." We try various devices to alight on the proper stimulus to set free the motor cells. At last it comes, often when we have given up thinking about the matter, and with a feeling of relief and satisfaction the word is uttered. In this case the uneasy feeling is probably caused by an imperfect discharge from the particular cell-group concerned. It does not seem at all likely that it can have its seat on the sensory side of the mechanism, because immediately the right cue is hit upon—which represents, surely, the needed stimulus—the word is recalled and uttered.

Another instance is shown by the feeling which accompanies some intense forms of grief, where the individual is said to be stunned by his sorrow, and in which relief is experienced as soon as he can give expression to his feelings, generally by tears.

Some cases of melancholia never show motor outbursts ; it is to be presumed in such that the accumulation of energy is not greater than the cell can get rid of, which implies that in such cases there must be a very much diminished accumulation, due to general sluggishness of all the vital functions.

Stupor and melancholia would, on this hypothesis, both depend on reduction along sensory lines, but probably stupor represents a more universal or more intense reduction than simple melancholia.

It would appear likely that a blocking or annulling of the sensory channels anywhere between periphery and centre might originate melancholia, and to a certain extent this is borne out by this disorder appearing sometimes after cases of sudden deafness due to peripheral defect.

Having indicated how dissolutions occurring in the sensory sphere will give rise to melancholic states, it remains to describe how states of exaltation and manias are brought about.

A few words only are necessary, as the condition is obviously very much the reverse of the last. The other side of the reflex mechanism—the motor sphere—is here affected. As cutting off higher sensory centres leads to accumulation of energy in the motor cells, and hindered activities, so cutting off *higher* motor centres leads to a freer expenditure of energy in the remaining motor cell levels.

The free intercommunications which in all probability connect not only centres on the same level, but also those on different levels, afford increased facilities for the remaining motor centres to get their energy expended. We get a large influx of sensory impressions arriving at the central nervous stations with fewer motor cells to act on; these sensory impulses become less spread out, more concentrated, and more likely to exert sufficient force on the motor cells to produce action.

The stimulus pouring in through sensory channels, unable to expend itself on its accustomed motor cells, does so on other and less closely connected centres by roundabout routes, and hence the incoherence of thought and action in these conditions.

In conclusion, I should like to draw attention to the fact that the only condition of melancholia which has a pathological basis capable at present of demonstration gives some countenance to the present theory.

There is a fairly well-defined group of melancholic cases, usually terminating quickly in dementia, which present a definite alteration in the majority of the giant and pyramidal nerve-cells of the cortex.

Now these cells, especially the former, we have good reason for regarding as higher level motor cells.

The alteration is identical with that produced experimentally after section of the axons of motor cells.

It was first noticed, I believe by Dr. Wigglesworth, in certain cases of melancholia atonita, and described by him in this *Journal* in 1883; he, however, was inclined to regard the alteration as of an inflammatory nature.

Now W. B. Warrington (*Journ. Physiol.*, Cambridge, vol. xxiii, 1898, pp. 112—129) has shown that this change can also be produced in certain of the anterior cornual cells by dividing the posterior nerve-roots, and the reason he gives is the withdrawal of the afferent impulses which normally impinge on the cornual cells. If this is so, and for the moment granting my assumptions, then the reason that in these melancholic cases the motor nerve-cells of the cortex are affected is also to be ascribed to the cutting off of the sensory impressions which normally stream in and affect them.

It is interesting in this connection to note that certain cases of imbecility, also, present these cells characteristic of divided axons. Now there is notoriously in imbeciles a blunting of all

or most of the senses, and a corresponding lack of sensory impulses to the higher motor cells, which is sufficient, on Warrington's supposition, to account for their occurrence in these cases.

Clinical Notes and Cases.

Case of Glioma of the Corpus Callosum.⁽¹⁾ By C. MABEL BLACKWOOD, Assistant Medical Officer, Wadsley Asylum.

TUMOURS of the substance of the brain as a cause of mental disease appear to be of comparatively infrequent occurrence, some authorities having stated the number found on post-mortem examinations to be as few as 2 per 1000. The name glioma, which has been given to the special form of brain tumour, has been applied to different kinds, and more usually to a variety of small round-cell sarcoma.

Virchow described and specified under this name a tumour composed of tissue resembling ordinary neuroglia, and this type appears to be much less common.

Payne mentions that a combination of the two may be met with, though he gives the subject scanty consideration.

The form of tumour brought under notice to-day appears to be of some interest, as belonging to the last class and being of comparative rarity.

The primary site of the tumour was the posterior two thirds of the corpus callosum. Thence it extended on either side, vertically upwards, and laterally to within half an inch of the cerebral cortex, and involved to some extent the gyrus fornicatus. It pressed on the lateral ventricles, partially occluding them. The ependyma of their roof and also floor was affected. The basal ganglia, however, were normal. The tumour was not encapsuled, and seemed to merge indefinitely into the white matter.

The greater part was situated above the roof of each lateral ventricle, and each half was about the size of a pigeon's egg. It was soft in consistence, greyish or reddish grey in colour ;

parts were gelatinous, and other parts translucent. Throughout were found small hæmorrhages and cysts full of straw-coloured clear fluid, a considerable amount of degeneration having occurred. The pons was soft and disorganised, but the spinal cord showed no marked change.

The skull cap was thin, the membranes normal, the convolutions somewhat atrophied and flattened.

As regards the other organs, the lungs showed evidence of pneumonic consolidation. No other growth was found in any part of the body.

On microscopic examination the cortical cells of the left ascending frontal convolution showed granular degeneration. They were diffusely stained and irregular in contour. The blood-vessels had thickened coats. Portions of the tumours were treated by the paraffin method, and stained in various ways. Under a low power the field is seen to be studded with nuclei, the cell-substance not being visible, and between them is an indefinite intercellular substance. A number of blood-vessels are present, and the nuclei are more thickly clustered in their neighbourhood. Under a high power the cells of which the tumour is composed are distinctly seen. One type is roughly ovoid, with angles where processes are given off. The smaller cells have single nuclei, the largest as many as three or four. The cell-substance is faintly granular, and the intranuclear network is well shown. From the cells pass off several processes which interlace and form a network. These cells, which are modifications of those of normal neuroglia, are more numerous in the neighbourhood of blood-vessels. The vessels are fairly well formed, and their endothelial plates are easily made out. There are numerous small hæmorrhages, and a certain amount of pigmentary deposit which, occurring chiefly in the neighbourhood of vessels, is evidently due to extravasation of blood.

In other parts of the tumour the cells more nearly approach the sarcomatous type, though they have not the embryonic character of those of true sarcoma. Some of them are of the small round variety with large nuclei, and in such parts of the tumour as they are found there is greater vascularity and hæmorrhages are more numerous. The reticulum here is fine in character. Elsewhere numerous spindle-shaped cells are observed, and here the reticulum is of a denser and coarser

character, giving rise to the impression that the shape of the cell is due to pressure.

The subject of the tumour was a man aged fifty-six, with a hereditary predisposition to insanity, who had had previous attacks, but of these no definite information could be obtained. His last attack ran a rapid course, as he died four weeks after his admission into Wadsley Asylum, and it was stated that his more marked symptoms had only existed for a week previous to his admission.

Physically, he was very feeble; his gait was lurching, and there was distinct tremulousness of his lips and limbs. His pupils were small, gave a limited reaction to light and accommodation, and his vision was not good. His hearing was fair. His superficial and patellar reflexes were increased. Mentally, his intelligence was much diminished and his memory was very poor. He had vague fears of impending evil, and was very restless in his habits. He soon became very drowsy, and latterly semi-comatose, and died without exhibiting any further symptoms of importance. During his residence he had no convulsions.

The clinical history of this patient shows the vagueness of the symptoms in the case of a tumour of the corpus callosum, and the consequent difficulty of diagnosis. In such cases as have been recorded the cardinal symptoms of cerebral tumour—convulsions proceeding in definite sequence, headache, vomiting, etc.—appear to be very inconstant. The most obvious symptoms seem to be advancing dementia, drowsiness, and paresis. These are held to point to brain tumour, and the absence of any other marked symptoms is stated to localise the site in the corpus callosum. In the case just described the clinical history of the patient and the vascularity of the tumour appear to show that the latter was of fairly rapid growth.

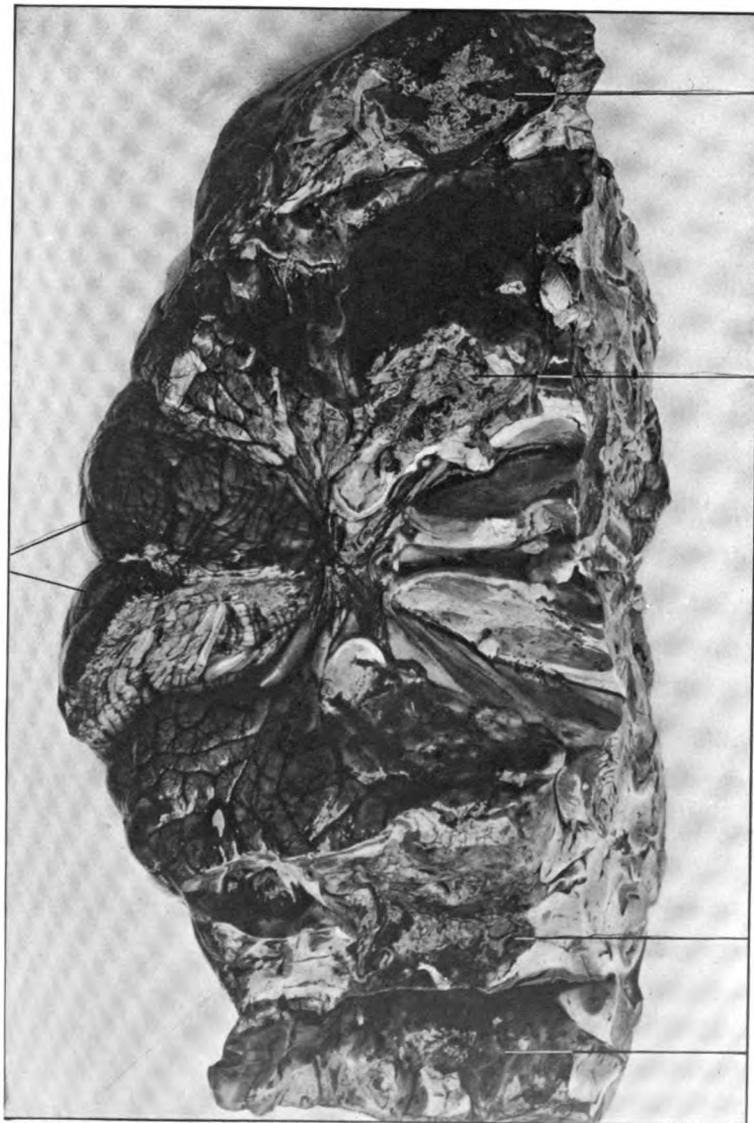
DESCRIPTION OF PHOTO.

The photo was taken with the camera directed vertically downwards on the specimen. The anterior third of the brain has been removed by a vertical incision. The corpus callosum has been divided, and the parts turned outwards on each side. Incisions through the basal ganglia, and also incisions through the tumour about the level of the gyrus fornicatus have been made on each side.

The cut surface of the tumour is seen in four places. The lateral ventricles are beneath the surfaces of the two inner portions of the tumour.

(¹) Read at the Spring Meeting of the Northern Division of the Medico-Psychological Association, 18th April, 1900.

Cerebellum.



Tumour.

Tumour.

Tumour.

Tumour.

To illustrate case by C. MABEL BLACKWOOD, L. R. C. P. Edin.

Foreign Bodies in both Bronchi; Broncho-pneumonia; Death. By FRANCIS O. SIMPSON, L.R.C.P.Lond., M.R.C.S.Eng., Senior Assistant Medical Officer, Lancaster County Asylum, Rainhill.

The following case appears to me to be unique, and therefore worth placing on record :

The patient came under my care in the Govan District Lunatic Asylum, to which he was transferred from the Govan Parochial Asylum, on July 28th, 1898. He was suffering from epileptic dementia, which was so profound that he could scarcely tell his name, and was totally unable to answer any other question addressed to him. He was untidy and dirty in his person and habits, and subject to attacks of post-epileptic furor, and violence to those around him. His physical condition on admission was fairly good. The pupils were equal and myotic, the right reacting very sluggishly, the left readily to light. The patellar reflexes were exaggerated.

The progress of this case was uneventful until May 18th, 1899, when he was seized with violent cough and great difficulty of breathing at 5.30 a.m. There was no history of any epileptic attack having occurred during the night, and, as he was found to be suffering from lobular pneumonia of both lungs, he was ordered a sedative expectorant mixture.

The case presented the usual symptoms, excepting that there was most marked orthopnoea present throughout, though the patient exhibited no cyanosis whatever. The respiratory rate, too, was noticed to be very disproportionate to the elevation of temperature and of frequency in the pulse; for, whilst the respirations varied from 30 to 41 per minute, the temperature never rose beyond 101.8° F., nor the pulse above 108 per minute.

The patient lasted rather over four days from the first onset of symptoms, dying on May 22nd, 1899, at 11.30 a.m.

The autopsy was performed twenty-three hours later, the weather being cold and damp. There were numerous old white scars upon the skin covering the occiput. The skull was rather asymmetrical and the thickness considerably increased throughout. The membranes were normal, but the left lateral and superior longitudinal sinuses were thrombosed. The brain weight was 1395 grammes, and the hemispheres were unequal, the right weighing 595 and the left 615 grammes. The cortex was considerably atrophied, and the white substance congested and oedematous, the total fluid collected measuring six ounces. The ventricles were of average size, and their ependymata were smooth. There was no sign of any sclerosis of the cortex nor of the cornu Ammonis. In the region of the left olfactory nerve and bulb there was an area of yellow softening, irregularly oval in shape, surrounding these structures in their whole extent, and involving both the cortex and subjacent white matter. On section of the olfactory bulb, there was

seen to be a small central portion only which did not appear to be affected to the naked eye.

The heart weighed 625 grammes, and was normal in every respect.

The right lung was firmly fixed in its cavity by old pleuritic adhesions. It weighed 980 grammes, and was in a most marked condition of lobular pneumonia throughout, being also very œdematous at the base. A large piece of the bowl of a clay pipe was found wedged firmly into the right bronchus about half an inch below the bifurcation of the trachea. The bronchial mucous membrane was congested at the seat of impaction, but showed no sign of erosion. The left lung weighed 1080 grammes, and was free in its cavity. It was in a precisely similar condition to its fellow of the opposite side. A rather smaller piece of the bowl of a clay pipe was found firmly impacted in the left bronchus in a similar position to that already described on the right side. The lining membrane was here, also, congested, but not eroded. The bronchial glands were much enlarged upon both sides.

The kidneys were in an advanced stage of interstitial nephritis. The other organs do not call for special comment.

It was only subsequently to the post-mortem examination that I ascertained that this man had been in the habit of chewing pieces of broken-up tobacco-pipe when he was unable to obtain the weed itself.

Whether the foreign bodies had been inhaled into the air-passages during the clonic stage of an epileptic seizure, or whether the patient had gone to bed with them in his mouth, and inspired them automatically during sleep, it is very difficult to say, but the latter seems to be the more probable hypothesis, as it would appear impossible for such irritating substances to be dormant for even a short period.

Nothing further could have been done to prolong this man's life. It was impossible to diagnose the condition with certainty because of the distressing orthopnoea, which became much aggravated and threatened to prove fatal whenever any attempt was made to raise him from the bed-rest. The bodies were jammed so firmly into the bronchi that it was impossible to pass a small probe between them and the lining membrane at any part of their circumference, and the jagged edges were buried in the mucous membrane by any attempt at extraction with dissecting forceps, so that even had the condition been diagnosed during life and the patient inverted, it is extremely improbable that they could have been dislodged.

Emphysema of Subcutaneous Areolar Tissue occurring in a case of Stuporous Melancholia. By THOMAS PHILIP COWEN, M.D.Lond., County Asylum, Prestwich.

I WAS much interested in Dr. Conolly Norman's account of a case of "Emphysema of Subcutaneous Areolar Tissue occurring in a case of Acute Mania," published in *The Journal of Mental Science*, October, 1899. A somewhat similar case occurred in the County Asylum, Prestwich, in 1892, of which I give a short history.

G. McE—, æt. 20, single, a seaman, was admitted December 9th, 1892, suffering from stuporous melancholia. His previous history presented nothing of special interest. His mental disturbance commenced six weeks before admission with the usual symptoms of melancholia with gradually increasing stupor. He had been fed with soft oesophageal tube on several occasions before admission.

On admission.—A short, slight, thin young man. His ribs showed slight evidences of rickets (rosary of lower ribs). His thoracic and abdominal viscera are quite healthy. He is in a condition of melancholic stupor with proximal rigidity. Will not speak; collects saliva in his mouth. He refuses food, and has to be fed with feeding-cup. Has retention of urine, and catheter has to be used. He was not fed with feeding-tube until after he had been in the asylum for ten days.

December 18th.—It is noted that "he remains in a state of melancholic stupor. Keeps blowing his cheeks out and holding his breath until it seems as if he would burst; this he has done for the last three days. To-day a subcutaneous emphysema of face and neck was noticed. There was no injury, nor can any phthisical condition of lungs be made out."

The emphysema gradually spread during the next day over upper part of chest and shoulders, and apparently equally so on both sides of the body. He still continued the violent effort of holding his breath and ballooning out his cheeks. A week later he ceased these violent exercises, and the emphysema gradually subsided.

He gradually improved, and was discharged recovered May 16th, 1893, having got quite fat (increased nearly three stone in weight).

Remarks.—In this case there was no suspicion of injury to ribs or throat by external violence. No subcutaneous injections had been given. A soft feeding-tube had been used, it is true, before admission, but not until ten days later in the asylum, *i. e.* several days after the appearance of the emphysema.

There was not the least sign of emphysema until some six days after admission, and I do not think that the feeding-tube used before admission had anything to do with its causation. That it was caused by "straining," and so rupturing a portion of the apex of one lung by

over-distension, I have not the least doubt, and may I suggest that, in Dr. Norman's case, it was not the strain caused by excessive shouting, but the increase of intra-thoracic pressure in resisting anything being done for her by the attendants.

Such cases are, indeed, very rare, and I cannot find any other record of a similar case in this asylum.

Occasional Notes.

Crook v. Crook and Horrocks.

DR. CROOK sought a dissolution of marriage on the ground of the adultery of his wife with Dr. Horrocks. Mrs. Crook suffered from some uterine trouble, for which, under her husband's advice, she consulted Dr. Horrocks. She visited the latter at his consulting-rooms, and stayed for two or three days at a nursing home near by. The attendance lasted, at intervals which do not appear to have been absolutely frequent, and were certainly not increasingly frequent, from November, 1896, to October, 1898. In May, 1898, Mrs. Crook, who had been married in 1891, had her first child. In November, 1899, she suddenly came into the room in which Dr. Crook was sitting and said to him, "I have something I must tell you. I have broken the seventh commandment." On being asked when it happened and who was the man, she replied, "Heaps of times with Dr. Horrocks." Asked why she did not tell it before, she said that she did not wish to get other people into trouble, but it was unhappily only too true. She repeated the statement in various forms. She also said that Dr. Horrocks had the most extraordinary influence over her, and that she never ought to have seen him. It is remarkable that after making her confession she asked her husband with what appeared to him to be perfect good faith, "What does committing adultery mean?" Subsequently she made a confession in writing, and, in reply to questions, said that the very first time she saw Dr. Horrocks they kissed each other, and that on each subsequent occasion of her seeing him at his consulting-rooms they committed adultery. The witnesses agreed that she was a woman of very ladylike and modest demeanour.

In July, 1899, Dr. Crook consulted a woman who professed palmistry in Margate. He was impressed by what she told him, and communicated this impression to his wife. In August Mrs. Crook went to the woman, who told her that her marriage lines were broken, but not by death; that she had been unfaithful to her husband, and that there would be a dreadful scandal.

When Dr. Crook took proceedings against his wife, the latter naturally placed herself in the hands of her solicitors, who, it appears, were so impressed by her demeanour, that they advised her to consult Dr. Savage. She did so on December 13th, 1899, and, having seen her, Dr. Savage wrote to Dr. Crook expressing the opinion that the charges that she had made against herself were probably only hysterical fancies, and suggested the same to the patient. She made answer, "That is not my case; mine is true," but subsequently she declared that the whole thing was a delusion on her part, due to the powerful impression made upon her by the declaration of the palmist. The President summed up with the most absolute impartiality, and without giving the jury any indication of a lead, and the jury disagreed, and were equally divided. Probate and Divorce Division, March 2nd, 5th, 7th, and 8th, 1900, *Times*, following dates.

Such is a very brief *résumé* of the facts of this case, a case of great psychological interest. The story of Mrs. Crook's adultery rests entirely upon her own uncorroborated confession, a confession which she subsequently withdrew. But it is to be remarked that before withdrawing it she adhered to it for several months, and that she was fully aware in making it of the terrible consequences that it would entail, not only upon herself but on Dr. Horrocks, and that in spite of this spontaneously, and without any sort of provocation, or occasion; without any prospect of deriving benefit for herself or her child, or anyone dear to her; without, in short, any discernible motive; she did in fact make this accusation against herself and him. The question that presents itself to every student of the human mind is, What was her motive in making this confession, *a*, supposing it was true; *b*, supposing it was false?

Supposing that her confession was true, the motive naturally alleged by Dr. Crook's counsel was that of remorse. "Why on earth, it was asked, should she suddenly have confessed her

guilt after years of silence? Why did Constance Kent seven years after the murder of the child confess from the seclusion of her retreat? From the motive that had made thousands of persons confess since the world began—namely to unburden her mind." This is a very fair argument and, granting the truth of the confession, there is nothing inconsistent with experience in the confession being delayed for months and even years. But the whole story told by Mrs. Crook is intrinsically so extremely improbable, that were it not balanced by the improbability that any sane person would make such an accusation against herself if it were not true, no one would believe it. But of these improbabilities the second is undoubtedly the greater. Granting that Mrs. Crook was in all respects sane at the time of her confession, either her story is true, or in confessing falsely she was actuated by an undiscoverable sane motive. But the circumstances of her life are so well known to her relatives as practically to destroy this latter alternative, so that the question that the jury had to determine was practically whether Mrs. Crook's statement was true, or whether her statement was the outcome of disorder of mind.

Primâ facie her story is improbable in the extreme. She herself is a woman not only of irreproachable record, but of the most marked and distinguished modesty of demeanour. On the other hand, Dr. Horrocks' record is equally irreproachable. The members of every calling live, with respect to their colleagues in that calling, in houses of glass. Every carriage-builder in Long Acre knows of every other carriage-builder in that street whether his work is honest or shoddy, how he treats his workpeople, and all the details of his modes of managing his business. Every solicitor in London knows enough about every leading firm of solicitors to be confident as to whether, in dealing with them, he may expect fair treatment or sharp practice. And every practitioner in the neighbourhood of Cavendish Square knows quite well the general ethics of all the leading consultants in their dealing with their patients. If a surgeon has ever so slight a tendency to operate too frequently; if a specialist takes ever so little too generous a view of the limits of his speciality; if any practitioner is the least inclined to see his patients too frequently; every one knows of it. All his colleagues are quite well aware of his peculiarities, and if such a thing should happen as that a physician should exhibit

gallantry towards his lady patients, not only would all the Portland estate ring with it, but not a practitioner in the country but would hear of it. That a man against whom the slightest shadow of suspicion of such a thing could exist could have been recently elected to the Examinership of the London University is utterly out of the question. And yet if we are to believe Mrs. Crook we must believe, not only that this modest, delicate-minded woman, who did not even know the meaning of the word adultery, kissed Dr. Horrocks the first time she ever saw him, and committed adultery with him the second time, but that Dr. Horrocks belied the record of his lifetime by displaying towards a patient, and that patient the wife of a brother practitioner, conduct that would revolt a Yahoo. *Nemo repente turpissimus*, says the old adage. How then shall we believe that any man, least of all a man of acknowledged probity and honour, could become *turpissimus repentissime*? Such considerations compel us to turn to the consideration of the state of mind of Mrs. Crook, to see whether in that we can find an explanation of her confession.

When Mrs. Crook withdrew her confession she attributed her delusion, as she then called it, to the influence of the palmist. This woman was first visited by Dr. Crook, who appears to have been deeply impressed by her, and who talked to his wife about her. Subsequently the wife goes to her and is told positively that she has committed adultery, and that there will be a great scandal. Her own account is that she was shocked and horrified at the statement, and that she brooded over it continuously until she persuaded herself that it was true. Whatever the palmist had told her husband was true, and therefore whatever the palmist told her must also be true; and at length she was convinced that it was true. After three months brooding over the matter she made her confession.

To the ordinary hard-headed jurymen this story seems at least as unlikely as the other; but the question to the student of psychology is, "Is this story consistent with known facts? Is it consistent with experience that a person should falsely accuse herself under the influence of a delusion manufactured, as it were, by the promptings of another person? Have we any facts to guide us?" False confessions from which the confessing party does not seek to derive benefit are not very un-

common. Whenever a very notorious crime is committed and the crime remains undiscovered, two or three sots are sure to come forward and confess to it ; but these cases have no bearing on the present one. That insane persons very frequently accuse themselves falsely of all kinds of crimes and wickedness is, of course, well known ; but then such persons manifest their insanity in other ways, and it is never in doubt, and Mrs. Crook evidently did not belong to this class. If her mind was unsound at all, it was unsound with reference to this particular subject only, and cases of ordinary melancholia exhibit no exact parallelism with hers.

No one who has witnessed the growth of an uneasy suspicion of general unworthiness into a delusion of wickedness of a particular kind, can doubt that, in a susceptible mind, the constant brooding upon a specific subject may contribute to the development of a delusion upon that subject. The growth of definite delusions in this manner is quite a common occurrence. It is true that the growth is not ordinarily traceable to suggestion from without. The suggestion usually comes from within, and is combated by those who surround the patient ; but it is easy to recognise that if there existed any tendency to self-depreciation, a suggestion of criminality made from without, in a very positive manner, by a person believed to have exceptional and supernatural knowledge, would at once carry conviction, and give rise to a delusion. Such events are not now common, because self-depreciatory persons are carefully guarded against suggestions of the kind, but the time was when they were very common. Undoubtedly many of the confessions of witchcraft were due entirely to suggestion from without. It is undoubted that many of these confessions were extorted by torture, and are therefore valueless ; and it is undoubted that some of them were deliberately made for a suicidal purpose. It is probable, also, that, as pointed out by Hume, in some of these cases the accused had actually employed means which they *bona fide* believed would raise the devil or injure others through his means. But still there remains a residue of cases in which the influence of suggestion alone remains to account for the confession. In the well-known case, for instance, of Isobel Gowdie, there appears to have been no influence operative beyond mere suggestion, and the same may be said of that notorious witch, Bessie Dunlop. Moreover, there is a case recorded by Sir George Mackenzie of

a woman who was willing to confess that she was a witch, but asked first if a woman might be a witch and not know it, a position not very different from that of confessing to adultery without knowing the meaning of the word. Of the influence of hypnotism, and how far an hypnotic state might be responsible for such a confession as that of Mrs. Crook, it is useless to speak, for I do not pretend to any knowledge of hypnotism, and the professors of that art, while they are agreed that under its influence any susceptible person may be made to do anything, are agreed, also, that no person can by its influence be induced to commit a crime ; and as the making of a confession of this nature is, if the confession is false, several degrees worse than the crime itself, it would seem that the exercise by the palmist of an hypnotic influence is excluded.

There is, at any rate, no doubt that many persons have, under the influence of suggestion from others, believed themselves guilty of crimes which they had never committed, and, under the influence of this belief, have made confessions in which the purely imaginary crimes were described with minute particularity of detail ; nor that these confessions were made in full view of the terrible consequences that it was known they would entail. If we balance the two alternatives, on the one hand, whether both Mrs. Crook and Dr. Horrocks suddenly and simultaneously underwent a sudden and total revolution in their whole natures, and gave the lie to the whole of their past lives ; or, on the other hand, whether Mrs. Crook was the victim of a delusion arising under circumstances peculiarly provocative of delusion, and known to have produced delirium in many previous instances, we cannot, under the ordinary canons of probability, avoid giving our adhesion very decidedly to the latter hypothesis.

C. MERCIER.

Degeneracy and the Increase of Diseases of the Nervous System and Insanity.

Dr. Ireland has recently attacked these problems,⁽¹⁾ and although "always with us," like the poor, they are and must remain of perennial interest, since the factors on which their solution depends are ever varying, never constant.

"Degeneracy" has been charged against every nation, in
XLVI.

every age, but in most instances the charge has been refuted by events, and in few can it be deemed to have been proven.

Nervous diseases, suicide, and insanity are usually taken as the pathological evidences of degeneration in a community. It might be also argued that they were evidences of evolution; the stress, of rising to higher standards of nervous and mental activity, breaking down weaklings who in less progressive communities would fail from physical disease. These forms of disease, again, may easily replace other diseases, from changed conditions of living, without constituting evidence of general degeneracy.

The statistics of deaths from diseases of the brain and nervous system in Scotland, quoted by Dr. Ireland, show that these have increased by about a third since 1855. During the same period deaths both from heart disease and from disease of the urinary organs have doubled; many other diseases, on the contrary, have greatly diminished.

The census returns show that there has been an enormous increase since 1855 in the number of persons living aged fifty years and upwards,—at ages, that is, when fatal nervous diseases (apoplexy, paralysis, convulsions, etc.), kidney and heart disease, are most likely to occur. This, if true, would certainly not point to degeneracy as their origin, but rather to the increase of longevity.

Statistics of suicide, again, demonstrate that (*) the increase in England has been much greater in men than in women, and especially in men from forty-four years of age onwards. If the suicidal act were the outcome of national degeneracy, the increase in the two sexes should be more equal, and probably more evenly distributed over the age periods.

The increase of insanity has been so fully and so recently reported on, by both English and Scotch Lunacy Commissions, that nothing need be said on this point.

The causes of disease, as well as the age periods of the community, are, moreover, continually changing. Alcohol, for example, is probably becoming a smaller ætiological power, but the great increase of the number of narcotic and sedative drugs, and their wide-spread abuse in the very accessible and portable form of tabloids, is probably answerable for an enormous amount of nervous disease. This may ultimately cause degeneracy, but is certainly not a result of it.

Physical degeneracy, as evidenced by a lowering of the average stature of our army recruits, is surely of little worth in a country such as England, where so many occupations demand men of superior stature. Moreover the stature of the people is rising in France and other countries, where nervous and mental diseases are very numerous.

The moral degeneracy, manifested according to Nordau in literary and artistic tendencies, can be traced for the most part to the licence which has accompanied the emancipation of thought from traditional bondage, and constitutes but a small proportion to the total output of normal art and literature.

Degeneracy, again, is scarcely compatible with the statistically proven increase in the duration of life which is taking place in Great Britain.

The census statistics record that the number of mentally deficient persons under the age of forty-five has not materially increased; yet these are the age periods in which hereditary degeneracy should be most pronounced if it were a fact.

Civilisation is, undoubtedly, attended with many evils, arising from the new temptations to self-indulgence or self-sacrifice which it offers. The individuals who exercise self-restraint in the face of these temptations make a distinct step in evolution; while those who do not, break down and are classed as degenerates; evolution and such degeneracy are thus found side by side, but the latter tends to extinction, the former to survival and development.

Degeneracy, indeed, needs to be defined, and the defects of growth, energy, self-control, life-duration, and disease, which are evidence of it, must be distinguished from the same conditions resulting from other causes before any satisfactory conclusion can be formed of its existence or of its extent.

In Notes and Queries of this issue definition is asked of the meaning of the term degenerate. The essence of the question is, whether degeneracy is meant to signify a failure to develop to the existing normal standard, or whether it implies an actual retro-evolution. If the former, how does it differ from disease; if the latter, what are its distinguishing characteristics.

(¹) *International Monthly*, March, 1900, and *Scottish Medical and Surgical Journal*, May, 1900.—(²) See *Journal of Mental Science*, January, 1897, p. 115.

The Strife with Alcohol.

The period of the year has come when the statistics of drink are being presented to the public, and when the advocates of temperance are making themselves more loudly heard than usual. We have no desire to discuss the very puzzling statistics which are placed before us, which seem to prove some facts oddly at variance with common notions; for instance, that a luxurious use of intoxicating drinks is increasing in some circles in these islands, and that Englishmen are very much more drunken than Scottish or Irish folk.

Neither do we desire to figure among those wonderful economists who seem to think that all the world would be very rich if most of the world were a little more sober.

Finally, we are not anxious to take a place among the "unco' guid," or to gain credit with the rigidly righteous by denouncing vices the temptations to which are probably not those which specially beset our particular mode of life.

But there are no people in the world who see much more of the ruinous effects of drink than do those who practise in our specialty, and it is the duty of the alienist to bear evidence to the truth in this, as in any other matter where his special opportunities enable him to be of service to society, by pointing out what he knows to be grave social dangers.

We do not hold in the infallibility of asylum statistics, but there must, we believe, be some significance in the following figures. In the five county asylums for London in the year 1897 intemperance in drink was more often assigned as a cause of the insanity of those admitted than any other cause except "hereditary influences" and "previous attacks." Omitting "previous attacks," which, if legitimately classed as a cause, certainly form a factor not easily comparable with other ætiological items, we find drink standing second only to heredity, which it generally runs very close, while in one asylum the number of cases attributed to drink actually outstrips the number attributed to hereditary influence. Again, taking Table xxvi of the last 'Report of the Commissioners in Lunacy,' which shows by yearly averages the assigned cause of insanity in the patients admitted to all asylums, private and public, in England and Wales during the five years 1893-7 inclusive, we find intemperance in drink standing for the male sex absolutely at the

head of the list, with a percentage of 21·4 for private male cases, and a percentage of 22·1 for pauper male cases; hereditary influences, which come next, only showing the respective percentages of 21·3 and 20·3. Among women the Commissioners' table shows a much smaller proportion of drink cases, but still not an inconsiderable one—8·6 per cent. for private, and 9·1 per cent. for pauper cases. It thus seems from these statistics, which are compiled from information supplied by members of our Association, that in the London district drink is answerable for almost one fifth of the cases of insanity which occur, and in the country generally for rather more than one fifth of the cases of insanity in the male sex. It is needless here to say that the sum of misery and degradation resulting from intemperance is not to be measured solely by such statistics, which we quote with reservation.

We are not blind to the many contributing elements which go to increase the force of the drink craving, to the wretched housing of the poor, to the absence of provision for rational amusement and recreation of the people, to the demoralisation which results from the disintegration of social life among the struggling masses in our great centres of population; to the dangers of a civilisation which is progressing too quickly for the health of the weaker members of society; but we hold that the state of affairs shown by the figures quoted above is one which calls for the earnest consideration of every humane man. And these figures are in general accordance with the experience of all of us.

The absurdities into which the wholesale advocates of a good cause have been sometimes led, "the intemperance of temperance enthusiasts," have tended to make sober-minded men somewhat shy of dealing with this subject; but these absurdities should not cause us to hesitate to do whatever lies in our power to rectify so great an evil. We can be useful chiefly by helping to educate public opinion on a subject on which we can speak with authority. Physicians have been mainly instrumental in the great reform which has taken place in the habits of the population in Sweden. Similarly in Russia, in America, and in France. An English newspaper has recently told us that the French are becoming as ridiculous about temperance as the English themselves. This means that the French have become alive to the increase of drinking which has unfortunately

taken place of late years in France, and are not afraid of charges of absurdity or hypocrisy in combating the evil. The pages of our excellent contemporary, the *Annales Médico-psychologiques*, contain in nearly every issue some notice of "La Lutte contre l'Alcool" or of "Les Méfaits de l'Alcool." We can help to educate public opinion. Little is to be hoped from legislation, we fear, partly because legislation is not a very efficient way to alter the habits of a free people, and partly because our legislators will not seriously attend to anything that does not make for party gain. The "easy patrons of their kin" whom we select to rule over us tell us that they know no more about our wants than "the man in the street." The man in the street is their master in wisdom as well as in voting power. Let us go to the man in the street and persuade him. When he is convinced, whatever legislation can do will be easily accomplished, should legislation then be needed.

The Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.

Though this institution has no very direct connection with our special work, we consider that its objects and claims should be placed before our readers. It owes its origin and success to the great personal energy of Mr. Jonathan Hutchinson, who for long has been endeavouring to develop the advance of knowledge among those who have already taken their Degrees or have received the Licences to practise. It is quite certain that all of us need some stimulus to follow the advances which are being made so rapidly in our profession, and it is most important to have some central place where the latest knowledge can be obtained from the most advanced and skilled teachers.

London has almost too much medical material, but a great part runs to waste. The Polyclinic saves some of this.

There are two distinct sections of the College work—one consisting of courses of instruction and of lectures on subjects which are of importance to the qualified man and the advanced student, as well as special lectures given by representative men. The other main part of the work consists in what might be called open consultations. General practitioners who have difficult or rare cases can bring them to the Polyclinic, where daily

there are, at fixed hours, consultations held on poor patients by physicians and surgeons connected with London hospitals.

We can only say that for assistant medical officers to asylums such opportunities are invaluable, for we all know the danger of specialism, and the need for medical men connected with asylums to be able to grasp the whole medical aspect of their cases. We believe there is a great future for this College.

Recent Metropolitan Lunacy Scandals.

The St. Pancras Board of Guardians are reported to have discovered that their pauper lunatics have been sent to Hoxton House and Bethnal House Asylum, where they were paid for at the rate of two guineas per week instead of 19s. 3d., which is the rate at other private asylums.

The Relieving Officers, it is alleged, have been in the habit of receiving "tips" of from ten shillings to two pounds for each patient taken to these institutions.

Whether this be true or not, there must be a scandalous want of supervision of the Relieving Officers, who have thus been enabled to put the parish to an unnecessary expense of about £6000 a year.

The Relieving Officers are also stated to have received bribes, varying from one to five shillings, from medical men certifying in lunacy cases.

The procedure in both respects has been the same; the asylum or the medical man who would not give the bribe has been rigidly excluded. No excuse can be made for the medical men, but the parochial authorities are certainly to be condemned for leaving the selection of the certifying medical practitioner and of the asylum to officials of the stamp of the ordinary relieving officer.

We understand that the Lunacy Commissioners are probably to hold an inquiry in regard to these allegations, which have been referred to in the House of Commons, and have been discussed by the St. Pancras Board of Guardians.

Night Supervision.

A coroner's jury were lately summoned in reference to a fatal accident in Colney Hatch Asylum. It appears that one patient killed another in a dormitory visited four times each night. This is not by any means the first time that such an occurrence has taken place, and the questions raised are sufficiently serious to open a discussion on means of prevention in the future. Theoretically every insane person should be under constant observation, but the magnitude of the difficulties raised by such a sweeping assertion can hardly be appreciated by those who are not practically intimate with the conditions of asylum life. First of all it is not desirable to keep our patients too long wrapped in cotton wool. We have to strengthen their impaired self-control, to guide them to health by a development of their mental faculties. The number of those enjoying liberty on parole is a real test of good administration, and as that number increases so may the doors be left unlocked and irksome discipline relaxed. Conditions of comparative freedom must, however, be faithfully considered in regard to mental variations day by day. Even then the unexpected happens, and consequently there is an unworthy temptation to apply the bad old rule, "never trust a lunatic."

Then with regard to the majority of cases for whom parole is out of the question, there is a broad but ill-defined distinction between those who are "harmless" and those who are "dangerous." No human prescience is sufficient to foresee when the harmless may suddenly develop into the dangerous, and we may take it that the Colney Hatch murderer belonged to this class, otherwise he would certainly not have been sent to sleep in a dormitory visited at infrequent intervals, but would have been kept apart or under special supervision. The coroner's jury suggest to the Asylums Committee of the London County Council "the desirability of providing some means of communication between the dormitories and the attendants, and a more frequent supervision of the inmates."

The first suggestion is by no means new. Patients have made it of their own accord, not only those who have slept in dormitories, but also those who have occupied single rooms. We are not aware of any such system in use in the asylums of

this or other countries, and it would be desirable to ascertain if anything has been done, anything which is not liable to frequent abuse nor prohibitive in cost. The country has long demanded similar protection in railway trains, and the results are as yet far from satisfactory.

The second suggestion is engaging much attention at present. Adequate supervision at night has long been desired by every superintendent, and we need only refer to the discussion on the paper by Dr. Middlemass and Dr. Elkins at our last Annual Meeting, to show that it occupies a foremost place in our thoughts. No doubt fatal accidents of the kind will continue to occur by day as well as by night. These are risks which are inseparable from asylum life, and risks which have been duly noticed by the Parliamentary Committee in their efforts to secure compensation for those whose duties place them in posts of danger. Yet these are risks which should be minimised by every possible effort. It is evident that the question is ripe for discussion, and we hope that practical suggestions will be forthcoming by which, without great increase of staff, patients in dormitories may be assured of safety.

Notes and Queries.

Dr. MERCIER has made a suggestion which might easily be developed into a valuable aid to those who are concerned with the progress of mental science. He thinks that part of this JOURNAL should be reserved for Notes and Queries. There are many questions demanding solution, and closer thinking might well result in concise statements of opinion as to undecided or undefined points. This has already been brought under notice in the short-lived career of a French journal to which we referred in January of last year.

L'Intermédiaire des Neurologistes et des Aliénistes was designed to be a medium for the exchange of ideas connected with neurology and insanity. Unfortunately it did not prove a success. Perhaps the comparatively small numbers of those to whom it appealed did not suffice to maintain an extra periodical so limited in scope. Dr. Mercier's proposal, however, is well calculated to stimulate and to inform. It gives promise

of results which would render this JOURNAL more useful to our readers. We do not ask for lengthy replies to the questions; but we hope that, by the middle of next quarter, brief answers will be forthcoming to the preliminary inquiries which he submits, and that further queries will be suggested.

Queries.

1. What becomes of the children of general paralytics, begotten in the early stages of the malady?
2. What is the meaning of the word *degenerate*?
3. How may heredity be supposed to act in the production of insanity?
4. How is a morbid change in the brain cell to be interpreted?

HAVELOCK ELLIS.

Part II.—Reviews.

The Elmira Reformatory. The Twenty-third Year-book (1898) of the New York State Reformatory.

A SOUND if uneventful record of work. The reports of the school director, the trades-school director, the manual training director, and the physical director show that all these departments are carried on with energy and considerable success. Much is claimed for manual training, and it is believed that in enabling prisoners to do good honest work they are enabled to become good honest men. Considerable weight is also attached to the experiment now going on with regard to treatment by food and diet.

It is noteworthy that in the report of the Board of Managers a strong appeal is made for an absolutely indeterminate sentence. At present the managers are limited by the maximum sentence imposed by law. When that is reached, the prisoner must be released, whatever his condition may be. The managers believe that public feeling is now ripe for the abolition of this restriction, and they point out that no hardship could thus be inflicted on the prisoners, for the inmates of Elmira are liberated considerably sooner (on an average after two years and two months, instead of four years) than if they had been sent for the same offence to an ordinary prison. While, however, the majority are stimulated to exertion and improvement by the hope of earlier release, there remain a minority whose inertia requires a greater

stimulant, and who are unwilling to contribute to their own betterment because they know that they are sure of liberation at the expiry of the maximum sentence.

The physical director's report contains an interesting summary of the average measurements, etc., of 2000 inmates, chiefly founded on the Bertillon system. The tattooed are 60 per cent., and some 9000 scars are recorded. Compared with Amherst students of the same age it is found that the Elmira inmates are inferior in every respect but length of head and length of forearm. The average excess in head length is one third of an inch; while the student tends to be brachycephalic, the Elmira criminal tends to be dolichocephalic.

The physician's report shows that among 1500 inmates there were 67 cases of tuberculosis admitted to the hospital, while 13 inmates were sent to the lunatic asylum. He remarks that an apparent increase in insanity is due to increasing liberality in the interpretation of insanity by the asylum authorities.

HAVELOCK ELLIS.

Del Libero Arbitrio (Concerning Free Will). By C. BRUSO. Florence: Barbèra, 1900, pp. 303, small 8vo. Price 3 lire, 50.

The question of free will has never appealed very strongly to the medical mind. Among the vast number of writers who have distinguished themselves in the discussion, it is difficult or impossible to find one of the masters of medicine. The great English philosopher who was most deeply imbued with the principles of a medical training—Locke—declared, with his customary sagacity, that to inquire whether the will is free is much the same as to ask whether sleep is rapid or virtue square. Yet this insoluble problem has exercised some of the keenest and subtlest minds of Europe for nearly three thousand years, and, moreover, the lucubrations of the philosophers have in their ultimate outcome and bearings very closely concerned, and, indeed, do still concern, the activities of the physician, and most of all the alienist. There may be some interest, therefore, for psychiatric readers in this very able critical history of the fluctuations of philosophic opinion on this question.

The volume seems to be printed for the author, and so far as appears, the author has no academic qualifications or position. He writes from Catania; and Sicily, it may be noted, has always been richly productive in men of philosophic mind. Certainly, whatever the author's position, his claim to deal with the subject he has undertaken cannot be disputed. Evidently a thinker of original and independent mind, he is strictly impartial, fairly representing all sides and views. Although clearly no great lover of ecclesiastical philosophy, he has devoted a considerable part of the book to the exposition of ecclesiastical doctrine; indeed, a special feature of the book may be said to be the full recognition shown of the great part played in the constitution of the doctrines of free will and responsibility by the mediæval and earlier theologians. The author's erudition is remarkable; he seems to be most defective as regards a knowledge of very recent writers, but since the recent writers

can scarcely be said to have revealed any new aspects of the old problem, this is of little moment. Not less remarkable is the skill shown in condensing the history of so long and important a chapter in human thought into so small a volume, and the orderly manner in which the whole discussion is marshalled.

A sufficiently clear idea of the scope of the work will probably be obtained by outlining its scheme, and then briefly stating the author's own conclusions. The work is primarily divided into three books: the first containing a classification and exposition of the various doctrines of free will; the second, the criticism of these doctrines; and the third, a statement of the author's own point of view. Socratic determinism is expounded first, with the opinions of Plato and Aristotle, and the revival of these at the Renaissance; incidentally the author remarks that possibly Havet was right in asserting that Hellenism played a larger part in Christianity than Hebraism. This remark is made in connection with the discussion of theological determinism, in which Thomas of Aquinas is the chief figure. The next chapters deal with sensual and ideal determinism (Locke, Condillac, Leibnitz, Kant, Schelling, Fichte, Hegel, etc.), and indeterminism (Epicurus, Cicero, the fathers of the Greek Church, Duns Scotus, the Jesuits, Reid, etc.); then follows the consideration of astrological fatalism (Greeks, Romans, Arabs, Priscillian and the theologians, mediæval courts and modern superstition), and physical fatalism (especially among the Stoics). A chapter on theological fatalism follows (the Manicheans, Predestinationists, Wiclif, Huss, Luther, Calvin, Jansenists, etc.), and finally a chapter on physiological determinism or autodeterminism (the philosophers of the Renaissance, Bruno, Bacon, Hobbes, Spinoza, Helvetius, the Positivists, and many other modern philosophers).

The second book is really a fresh historical discussion of the same ground, introducing references to many other philosophers who were passed over in the first book, and though somewhat freer and more critical, its object is still mainly intended to elucidate the history of the doctrine of free will.

In the third part of the work, though even still to some extent making reference to the views of others, the author sets forth his own point of view, and deals with the social and practical bearings of the doctrines of free will as they are especially expressed in penal law. He thinks that the best justification of the penal law is that—suggested by Romagnosi, and developed by Ferri—by which it is regarded as the right of social defence. It is thus a social reaction independent of any criticism of moral liberty or moral guilt. It has no ethical value or retributive justice, but is imposed purely and simply by the necessity of social conservation, such necessity being equally imperative whatever may be the psychic state of the individual who has injured society. Of the various justifications of penal law which have been proposed this seems to Biuso the best, but at the same time he points out that any modern justification whatever for a prehistoric practice which arose under altogether different conditions of life and belief can be at most but “a pious interpretation or an elegant lie.” The real direct natural cause which determines and justifies punishment is force. Society instinctively exercises force against its weak members,

and criminals are always among its weak members. "The right of punishing is equal to the force of punishing. Social dynamism is not different from physical dynamism. To explain so simple a fact we require neither the moral responsibility of the criminal, nor the hope of his amendment, nor the example of his punishment, nor distributive justice, nor the *lex talionis*, nor the necessity of social defence."

So that if it is said that we are thus brought no nearer to any fundamental principles on which we may rest securely when asserting that one man is "responsible" and must go to prison, while another is not and must go to the asylum, the author would reply that that is inevitable, since no such fundamental principles can be found. His concluding chapters are an eloquent tribute to the mission of psychiatry. The freedom of the will he finds to be an inevitable social illusion, just as the immobility of the earth is an inevitable physical illusion, and it must be our chief concern to develop the scientific principles of psychic hygiene. Such hygiene, which it is the future task of psychiatry to control, is necessary for all. "It cannot be too often repeated that no line of division can be drawn with mathematical precision between sanity and pathological states." That fact is alone sufficient to demonstrate the impossibility of any rigid distinction between the prison and the asylum. It is also sufficient to show the great part to be played by "psychic hygiene, which may be called social hygiene *par excellence*." The healthy and happy man is, on the whole, more disposed to fine actions than the diseased or melancholy man, and "morality in its true sense is nothing else but sanity raised to the highest power."

These are the main ideas of a book in which a powerful and sincere thinker seeks to make clear that part of metaphysics with which an alienist, whether he will or not, cannot avoid entangling himself. It is thirty years since the brilliant author of *Erewhon* satirised the popular notions of responsibility by setting forth a state of society in which the subjects of disease were brought before the courts, condemned and sent to prison, while crimes were treated privately by medicine; yet these same notions still rule among us. The alienist is compelled by tradition, as well as by motives of philanthropy, to flounder more or less helplessly among ideas of "responsibility," or, even worse, "partial responsibility," which are altogether outside the sphere of medicine. These ideas arose in prehistoric days, were formulated by mediæval schoolmen and ecclesiastics, and handed down to the present by the science of law, the least progressive of all the sciences.

Such a book as this of Biuso's may help the alienist to realise into what a quagmire he is adventuring himself when he endeavours to translate the ideas of medicine into the terms of an antiquated metaphysics. It may not enable him to avoid that swamp, but may usefully suggest caution when approaching a region in which, if he quite knew where he was, he might rather wish not to be.

HAVELOCK ELLIS.

Sensation et Mouvement: Études expérimentales de Psycho-mécanique.

Par CH. FÉRÉ. Second edition, revised. Paris: Alcan, 1900, pp. 170. Price 2 fr. 50 c.

It is now thirteen years since this extremely interesting little volume was first published, and, while its reputation has long since been made, it is only now that a new edition has been called for. Although the book has been entirely reprinted, the revisions are very trifling. We have carefully compared the two editions, and have only found a few slight verbal alterations and the addition of half a dozen foot-notes, chiefly references to later literature. The author seems to have felt, and no doubt justly, that any attempt to rehandle the questions dealt with would mean an entire change and enormous enlargement of the volume, and that it was wise to leave the original record of his pioneering experiments practically untouched. It is unnecessary, therefore, for anyone who possesses the original edition to acquire the second.

At the same time we may take this opportunity of recommending the book to those who do not already possess the earlier edition. That it is of any immediate practical value can scarcely be claimed; at the most it is helpful in making clear the rules of moral and physical hygiene. But for all those who are interested in the more subtle relationships of mind and body these "experimental studies in psycho-mechanics" are in the highest degree suggestive and valuable. So far as there is any central thought underlying the various subjects discussed, it may be said to lie in the proposition: "When we say that the brain thinks, it is the whole being that becomes active." Some of the experiments here recorded (and illustrated by 44 curves) have been criticised, and, as the author himself states, some of his subjects were hysterical, but on the whole the experiments remain very instructive, and even the hysterical subject often presents us merely with an exaggerated degree of a normal reaction. The experiments illustrate the delicate manner in which mental representation influences movement, how a strong excitation of sight, hearing, smell, or taste reinforces muscular power; they indicate that the various colours (especially red) possess dynamogenic power; they show the influence of tobacco. The effect of such influences on the blood-vessels is also shown by Féré by means of plethysmographic tracings. He attempts to explain "maternal impressions" by the muscular response of the uterine walls to emotional and other shocks. As also throughout his later work, Féré insists on the large part played by conditions of exhaustion and anæmia in the production of morbid nervous and psychic states. The volume is throughout an argument for the study of psychology by the methods of general biology. There can be few workers in either psychology or psychiatry for whom this little book contains no new and suggestive ideas, and it is to be hoped that the second edition will find a wide circle of readers among those who neglected to procure the first.

Les Criminels. Par le Dr. CHARLES PERRIER. Paris: Masson, 1900, pp. 380, large 8vo. Price 10 fr.

This work is written by the chief medical officer of the Central Prison at Nîmes, already known as the author of a very elaborate study of tattooing among criminals, published in the *Archives d'Anthropologie criminelle*.

The present work is also issued under the auspices of Professor Lacassagne, since it appears in the *Bibliothèque de Criminologie*. It is a work of great value, but one that appeals entirely to the expert. To the ordinary reader, even the medical reader, it will be almost entirely unreadable, for it is largely made up of detailed facts and measurements concerning 879 criminals, which the author never summarises or uses for the purpose of deducing general conclusions. The only generally attractive portions of the book are some passages near the beginning dealing with the characteristics of various groups of criminals. It is noteworthy that real anarchists are rare in French prisons, in spite of the prevalence of so-called anarchist outrages; six out of eight so-called anarchists, remarks Dr. Perrier, are not really anarchists at all, and the real anarchists belong to the most genuinely estimable part of the prison community. It is somewhat amusing to find that the English criminals in French prisons do their best to maintain the character of their country. "Cold and correct," writes the author, "these gentlemen have only one aim—to obtain comforts. They are careful about their property, and they perform their toilet before the common pump with as much gravity as if they were operating in front of a luxurious washstand, nor do they neglect the care of the teeth and hands. They are looked after, assistance reaching them daily. Their chief ambition is to have 'clean' work and to live in peace. A detail to be noted is that the mother country still watches over them, and that they have only to express the wish and the Embassy sends them books."

Not the least valuable part of the work is constituted by its seventy illustrations; of these thirty-nine are portraits of inmates, drawn by one of the inmates of the prison, a Spaniard, from photographs; they form a marvellous gallery of criminal types. The remaining illustrations are mainly reproductions of criminal art, tattoo designs, etc., nearly all of a highly expressive character.

It does not seem impossible that Dr. Perrier might have put his work into a more effective and readable form without sacrifice of its scientific quality, but it remains a worthy monument of his energy and his intimate knowledge of the prisoners in his care. We might be well content if our English prisons yielded scientific work half as thorough.

HAVELOCK ELLIS.

The Psychological Index. Compiled by H. C. WARREN. New York: Macmillan, 1900, pp. 174, large 8vo.

The issue of this bibliography for 1899 (published in connection with the *Psychological Review*, and sold separately, price not mentioned)

reaches us this year before the *Année Psychologique*, in which it is also regularly included. In one form or the other it is almost indispensable to every serious worker in psychology or psychiatry. There are 2584 entries in the present issue, which must represent a considerable amount of labour on the part of Dr. Warren and his coadjutors in New York, Paris, Berlin, and Lausanne. The entries are divided into eight main groups with numerous subdivisions; the last group, with nine subdivisions and some 550 entries, is devoted to the "abnormal and pathological" literature for 1899. Every other group will, however, be found to contain numberless references that are at least on the borderland of psychiatry. The question of classification is, indeed, beset with many difficulties, and it can by no means be said that the compilers of the index have solved these difficulties; we find, for example, to take two instances out of many, that two papers of a similar character on the same subject (Modesty) have to enter different subdivisions, while the author of a little note on voluntary movement of the cremaster may smile to see his observations worthy of entry between two massive ethical treatises on the doctrine of virtue among the ancient Greeks, and on the foundation of morals. The literature of the senses is, again, awkwardly treated, "Physiology of the Nervous System," including the sense-organs, being given in a different group from "Sensation." We note that the date of *Hampa*, the latest work of Salillas, is given as "(1899?)," although the date, 1898, is clearly printed three times over on the distinguished Spaniard's work. As a section is devoted to anthropology, it is unfortunate that no mention is made of Deniker's monograph on the cephalic index in Europe, containing the most important contribution to anthropology issued in Europe during the year. There are numerous little misprints, but, so far as we have observed, always of a trifling character. Minor defects of this kind are inevitable in a bibliography which would lose much of its value if not issued speedily.

HAVELOCK ELLIS.

L' Ideazione Geniale. Un esempio: Augusto Comte. Prefazione di C. Lombroso. (The Ideation of Genius. An example: Auguste Comte.) ANTONIO RENDA. Turin, 1900, 8vo, pp. 205.

This book is a fresh attempt to illustrate the old theory of Morel, advocated and amplified by Professor Lombroso. The main facts about the derangement of Auguste Comte and the eccentricities of his later years are dwelt upon in a somewhat disquisitional fashion. Though Mr. Renda sometimes loses sight of the French philosopher, he never loses sight of his theory about the relation of insanity to genius. We should wish those who discourse after a somewhat mysterious fashion about genius would give a clear definition of it. Nothing is more erroneous, Renda tells us, than to believe that genius consists in a potential increase of the logical faculty, or to confound it with a capacity for doing things with greater ease and perfection than most people can. Genius is a faculty *sui generis*; it works unconsciously, though it can revise and improve upon its own efforts. Men of genius are either insane or on the verge of insanity. They are degenerated, have always

something pathological about them ; and this, instead of hindering their mental manifestations, seems absolutely necessary to them. In fact, a good many men of genius who figure in Lombroso's gallery seem to have nothing which would make them rank as men of exceptional ability, save some nervous derangements, often of a trifling character. In a long preface to this work, Lombroso dwells upon a few instances which he thinks confirm his theory. Amongst others we have Goethe, who had an unsymmetrical head, and could not be got to return objects of art or curios which his friends lent him. We learn it is necessary to genius that there should be a morbid stimulus to the brain. This stimulus may be chemical—wine, ether, or opium, as with Poe or Hoffmann. In others the stimulus is pathological, as is proved by the platycephaly of Paracelsus, Meckel, and Humboldt. The early synostosis in the skull of Dante, the cranial asymmetry of Schiller and of Kant, gave us the *Divina Commedia*, the historical dramas, and the *Critique of Pure Reason*. The cause of Helmholtz's genius seems to have been hydrocephaly, which exercised a certain pressure upon the brain so as to produce epileptiform attacks. Alexander the Great, we are told, was afflicted with moral insanity and "gamomania," which he showed by making ten thousand of his soldiers marry Persian women. The professor's theories have been subjected to some searching criticisms in the *Annales Médico-Psychologiques* and the *Revue Philosophique*, but he returns to the charge as undaunted as ever. He has had an opportunity of examining the brain of the celebrated anatomist, Giacomini. Lombroso finds in his old colleague a striking narrowness of the temples, great development of the jaw, a large brain, finally struck by epilepsy, like that of Helmholtz, something wrong about the fissures of Rolando (sdoppiamento), which is owing to pressure in the embryonic condition. Thus he triumphantly records great cerebral anomalies in a man of genius, who in spite of the anomalies, or in despite of the genius, combated Lombroso's theories. It is impossible to deny that some men of very great mental powers have been afflicted with insanity and nervous disorder ; but this, so far from helping the exercise of their genius, generally acted to its detriment, and sometimes extinguished it altogether. It cannot be said that the nervous troubles of Comte helped the evolution of his ideas, or assisted him in his study and classification of the sciences ; quite the contrary, they checked the correct working of his intellect, and led him in the end to folly and extravagance. It does not seem at all wonderful that men recognised to have great mental power, who are led by the pressure of events to exert them to the utmost, should feel the strain where the tension is hardest. If many brain-workers die of apoplexy, surely this is but what might be expected. We are suspicious of Lombroso's uncritical array of anecdotes and gossip about celebrated men. The difficulty of coming to a conclusion whether nervous disorders are more common amongst them than amongst ordinary people consists in the want of a comparative scale. After all, nervous disorders and insanity are common enough amongst some quite mediocre people. I have counted how many such derangements occurred amongst several families whose life-histories are well known to me, and it seems as if such disorders are quite as frequent as with families well known for their great mental

power. What we should call genius implies the highest functional vigour of several mental faculties, and this we cannot think to be the result of unhealthy nutrition or of degeneration. WM. W. IRELAND.

Anatomie clinique des Centres nerveux. Par le Dr. GRASSET, avec 2 figures dans le texte. Paris, 1900, 16mo. Prix 1 fr. 50 c.

In this little manual Dr. Grasset takes for granted an acquaintance with ordinary descriptive anatomy. He treats the structure of the nervous system in relation to its functions: thus the optic nerve appears as one trunk, whereas it is known to consist functionally of two hemioptic bundles of nerve-fibres answering to homonymous segments of the two retinas. The author begins by describing the histological structure of the nervous centres, and gives the most recent views about the neurons and their connections with one another. According to Bethe and Cajal, the passage through the body of the nerve-cell is not indispensable for the conduction of the nervous influx from a protoplasmic prolongation to a cylindraxile. The neuron, to exercise its function, must be complete in its parts and prolongations; some hold that the cell has only a trophic function. After describing the anatomical elements which make up the nervous system, Dr. Grasset goes on to give the special anatomy of the nervous centres, and the distribution and development of the nerve-cells and fibres and the different symptoms which result from their lesions. It is curious to observe how much we have advanced beyond the rough topographical anatomy of forty years ago. We remember asking Professor Goodsir, then thought, at least by his pupils, the first anatomist of his day, about Solly's tracing the fibres in the medulla oblongata and brain; to which Goodsir sententiously replied, "The fact is that a good dissector can trace the nerve-fibres any way he wants." This would certainly be thought a strange answer for a teacher of anatomy nowadays. It is wonderful what an amount of information the distinguished professor of Montpellier manages to give in less than a hundred pages, and the subtle questions of nerve function which he manages to treat. The physician who deals with brain and nervous diseases will find such a book highly useful. The descriptions have all that clearness of definition characteristic of French scientific writers, which is aided by the admirable precision of the French language. Nothing of importance is left out, and on every difficult or debatable point the learned Professor has taken occasion to study all the separate treatises of those who have made special researches. For example, we wanted light on the question whether the fibres of the optic nerve and of the nervus cochlearis ran right in an uninterrupted course to the visual and auditory spheres in the brain cortex. We looked up some bulky works without finding the point clearly stated; on consulting Grasset's little book we learn that some of the fibres do not pass through the basal ganglia on their way to gain the cortical auditory centres, and that this also holds good with the optic fibres passing to the occipital lobe.

WM. W. IRELAND.

The Nervous System of the Child, its Growth and Health in Education.
By FRANCIS WARNER, M.D. New York: The Macmillan Company. London: Macmillan and Co., Ltd., 1900, crown 8vo, pp. 233. Price 4s. 6d.

This book is intended for the use both of medical men and of teachers, and of all who take an intelligent interest in the training and education of children. Dr. Warner remarks that during the past century much has been accomplished in the study of mind connected with the evolution of brain-action, as observed in the child through close observation and inference.

Though child-life was always an object of interest and attention, it has within the last twenty years been studied in a more systematised manner. In this field the author is well known as a close and accurate observer. He may be said to have extended our knowledge of the physiognomy both of healthy and of diseased action. The whole book is evidently written upon the object, not taken from other men's sayings and studies. The author not only gives the result of his own accurate observations, but he stimulates others to observe, and shows them what to look for. As the title indicates, he deals principally with the child undergoing education. He shows the phenomena which accompany the mental evolution of children, and gives the interpretation of these phenomena. He explains the method by which the senses, muscular system, and mind may be cultivated up to adolescence. Altogether the book is useful and instructive and full of original ideas. The style is graphic, and successfully conveys the meaning, though it needs polish here and there.

We have been much struck by Dr. Warner's observations upon spontaneity in the child, which lessens at seven or eight years of age as co-ordinated action gradually increases. While the faculty of self-contained or spontaneous thinking lasts later in the life of the brain than the spontaneous vivacity of movement in the body, inhibition of movement may be noticed in the infant of four or five months when spontaneous action is momentarily arrested under the stimulus of sight or sound. "You ask the pupil a question: he pauses a moment, and is still: if he answers in reply to your direction, you know that some brain process of thinking occurred during the period of inhibition.

"The pause period does not, then, mean absence of brain activity—as in sleep—but a new kind of action among the brain-centres. The faculty of inhibition of movement becomes rapidly manifested under good training."

Dr. Warner's idea of training and education is much more comprehensive than the reading, writing, and arithmetic which form the staple of the ordinary pedagogue. He observes that, while much attention is given in early school days to training through the eye and ear, too little care is bestowed upon exercising the brain by impressions received through the muscular sense. He would also have children exercised in judging of distance by sight. This is especially required for town children, who do not get the same chances as those in the country for looking at distant objects. We think he should have said something about the recognition and treatment of short-sightedness in children.

This deficiency, which is common with town children, is not readily noticed by the schoolmasters. This is often the cause of loss and confusion to the child. We do not notice that Dr. Warner gives his views on the proper age to send children to school; we think that five years is too early to force their attendance. Few of the countries on the Continent make compulsory attendance at school begin till the age of six years.

To the chapter on hygiene and feeding we can offer no objection, save that we have much misgivings about the prominence given to animal food in the dietary for children. Dr. Warner reproduces some tables from Dr. Clement Dukes, in which figure such articles for breakfast as sausages, broiled ham, dried fish, pressed beef, cold ham, and brawn; and for dinner the most stress is laid upon butcher's meat—mutton, beef, roast or salted pork, and pies. Dr. Warner recommends that sugar or salt should be supplied at choice with the porridge, and does not mention milk. He observes that sugar taken with food is a useful heat-former, and aids brain nutrition. He thinks that delicate and ill-developed girls are more apt to suffer in health from adverse circumstances in education than boys. He observes that there is apparently more difficulty in recovering from injured health among women than among men, and that "anæmia with neurosis is liable to follow neglect of the health, and to become confirmed as a form of nervous dyspepsia. This has incapacitated many women otherwise intellectually fitted for a business or professional life." Dr. Warner observes that "it would be interesting if intelligent persons could describe their own early difficulties and analyse them, so as to see what was lacking; whether their teacher tried to connect ideas that did not exist in their heads, or used words that had no meaning to them at the time." We are afraid this is still done to some extent; but there has been a great improvement in educational methods during the last thirty years. Children not only get a better and more varied training; the instruction is conveyed in a less harsh and mechanical manner, and the teachers take more trouble to explain what is taught. The improvement in school furniture, diagrams, and illustrative pictures is very great. We are pleased to see that Dr. Warner lays stress upon the cultivation of the faculties of observation. He shows how this may be done by making the children observe the germination of seed and the growth of plants.

En l'origine de la Pensée et de la Parole. Par M. MONCALM. Paris : Ancienne Librairie, Germer Baillièrre et Cie. Félix Alcan, Éditeur, 1900, pp. 316. Price 5 fr.

This is a study of the evolution of speech and thought through the various ages of humanity; and as it may be said that we know nothing absolutely concerning any question if we ignore its beginning, it is especially with the origin of thought that the author is concerned.

Although so much has been written on this subject, a point which he insists upon is that our real knowledge is but slight, owing in a large measure to the arbitrary manner in which words are used and their

meaning perverted. Speech is undoubtedly responsible for the origin and spread of error. In studying history carefully it is possible to identify the periods in which errors, more or less generally recognised as such, first appeared in the world ; but one may look in vain for the times when truths were first uttered. Does not this silence in history show that the truths of which one seeks the origin were revealed to man before the dawn of history ?

Hence the various chapters in the book deal with the results of his researches into early history of humanity, that history which was told from one generation to the other—not written, for speech came before writing—and his researches into the oldest literatures of peoples. It is there that is to be found the truest information concerning the manner in which our distant ancestors represented to themselves a divinity in its relations to mortals ; for instance, there are the Old Testament of the Hebrews, the sacred books of the Hindus, the mythologies of the Aryan family, etc.

Comparative philology, so much enriched by the work of Max Müller, to whom the author repeatedly acknowledges his indebtedness, has been an instrument of the greatest utility to Moncalm in his studies,—“a powerful telescope enabling him to define outlines and figures where unaided he could detect nothing but clouds and fogs.”

In the chapter on the philosophy of language he dwells on the fundamental law of reason—the unity of speech and thought ; and while criticising the abundance of terms in philosophical language, which leads to confusion of ideas, regrets the absence of a word corresponding to the Greek “logos.”

Comparative philology confirms the view that word-roots were originally used in a purely material sense, although they may now help to form words for the most abstract concepts ; and when by the combination of predicative roots and demonstrative elements words were used to distinguish between the subject acting and the object produced, the passage from perception to conception was accomplished. Some of the most interesting pages of this work are those which show how conscious perception, which does not exist outside words, advances step by step with the progress of language.

The Vedaic hymns, which are full of information concerning the thoughts of the human mind thousands of years back, and from which we judge that human feelings have scarcely varied, are frequently referred to in the course of Moncalm’s inquiries, and, as he justly observes, deserve at least as much attention as the most profound speculations of the best modern philosophers.

This work may be pronounced patchy, but must prove very interesting to any student of the evolution of the human race. H. J. MACEVOY.

Judicial Statistics, England and Wales, 1898. Part I: Criminal Statistics. London: Eyre and Spottiswoode, 1900, 4to, pp. 204. Price 2s. 8d.

The Criminal Statistics for England and Wales for the year 1898 have been prepared under the direction of Mr. C. E. Troup, who so

successfully inaugurated the improved series of these returns in 1893. The lapse of a period of five years since that date has suggested to the editor a somewhat fuller review of criminal problems than has been attempted in the immediately preceding volumes, and on that account the present issue is of peculiar interest.

Before referring to the larger questions dealt with by Mr. Troup in his Introduction, we may note briefly a few of the salient points in the statistics for 1898.

Owing to the possibility of fortuitous oscillations in the amount of crime, the returns for any particular year do not, *per se*, possess much significance. Therefore, though in all the categories of indictable crime the figures for 1898 are higher than those for the two preceding years, it cannot be assumed that this indicates a definite tendency to increase, except in those offences, such as sexual crimes and attempts to commit suicide, where the upward movement is traceable over a considerable period.

With regard to criminal proceedings it is noted that the proportion of convictions to the total number of prosecutions was unusually high during 1898; this was not, however, an effect of the Criminal Evidence Act, as it was more marked in the earlier part of the year in question, before the Act came into operation. Both in the superior courts and in the courts of summary jurisdiction the recent tendency to lenient sentences continues. This is particularly evident in the increase of the number of persons ordered to enter into recognisances.

Non-indictable offences show their usual increase, largely due to the multiplication of cases of a quasi-criminal character—offences against the Education Acts, against bye-laws, etc. Prosecutions for drunkenness were in 1898, absolutely and relatively to population, very much more numerous than they have been for some years past.

The number of criminal lunatics received during the year was 209, of whom 160 had committed indictable crimes. Amongst these latter the existence of insanity was established before sentence in 71·7 per cent. of persons accused of homicidal crimes, in only 30 per cent. of those tried for other offences. This result, which is observable every year in the returns of criminal lunatics, suggests the need of fuller medical examination in non-homicidal cases.

During the year there were 2849 suicides, and 2084 attempts to commit suicide, as compared with 2769 suicides and 2004 attempts in 1897.

We now turn to the larger questions discussed in the Introduction to the statistics. Of these the first is the present tendency of crime. To determine this point Mr. Troup has been at pains to trace through a period of forty years, from 1858 to 1898, the movement of crime in this country, including in his review not only all indictable offences, but also as many as possible of those non-indictable offences which are in substance of a criminal character. His conclusions, which are more exactly set out in tabular and in diagrammatic form, are—"That the actual number of crimes brought into the courts has diminished appreciably during the last thirty years; that if the increase of population is taken into account, the decrease in crime becomes very marked; that if we also take into account the increase of the police forces and

the greater efficiency in the means of investigating and punishing crime, we may conclude that the decrease in crime is even greater than the figures show ; and finally, if we take into account the fact that habitual criminals are now for the most part imprisoned only for short periods, and have more frequent opportunities than formerly of committing offences, we must hold that the number of criminals has diminished in an even greater ratio than the number of crimes." On the other hand, all these conclusions must be qualified by regard to the fact that now-a-days there is much greater reluctance than formerly to prosecute.

With regard to the question of juvenile crime it is shown by a series of tables based on the figures for the last six years that the number of juvenile offenders has diminished with the general diminution of crime, but that they still bear the same ratio as before to the total of criminals.

The geographical distribution of crime during the past five years is also dealt with, and illustrated by maps and tables corresponding to those published in 1893, based on the figures for the preceding quinquennial period. There appears to be in England, as in the rest of the United Kingdom and in France, a marked predominance of crimes of every sort, but especially of crimes of violence in the great seaports ; crimes of acquisitiveness generally prevail most in urban districts ; crimes against morals, which in France are most rife in cities, predominate in rural districts in England ; prosecutions for drunkenness are most numerous in the northern counties.

The maps and diagrams illustrating the volume are excellently lucid. Regret may be again expressed that it is not possible to give in the English tables that detailed information regarding the criminal individuality which is so useful a feature of the Continental statistics.

Diagnostic des Maladies de la Moelle—Siège des lésions. Par le Dr. GRASSET. Paris : Librairie J. B. Baillière et fils, 1899, 1 vol. in 16mo, pp. 96 and fig. Price 1 fr. 50 c.

Within the compass of a small volume Prof. Grasset, of Montpellier, here contributes a most useful guide to the diagnosis of the seat of the lesion in diseases of the spinal cord—the physiological diagnosis. It is divided into two chapters, the first dealing with the symptoms and signs connected with affections of the various systems of the cord (anterior cornua, posterior cornua, posterior columns, etc.), and the second with the diagnosis of the extent of the cord involved. He has included the latest views on localisation, metamerism, etc., and for those in search of fuller information concerning these, numerous references are given to various works which contain it.

In dealing with the systematic affections of the cord, after a description of the signs and symptoms of the diseases in which the various systems are affected, exclusively or in combination with one another, an attempt is made in each case to give the synthesis and pathological physiology of the syndroma characteristic of the affection. Thus, in considering affections of the posterior columns, the sign of Romberg is

discussed. This, Grasset shows, is not a consequence of the abolition or loss of the muscular sense. Stimuli from the muscles divide in the spinal cord; some go to provoke spinal reflexes, others ascend to the higher centres and produce the impressions of the muscular sense. The former alone may be arrested by the tabetic lesion, causing inco-ordination and the sign of Romberg; while the others may reach the brain, and hence the muscular sense persists. So also, in discussing affections of the lateral columns, he concludes that no satisfactory theory accounts for the relations between them and contracture. Grasset suggests the existence of some *automatic* centre in the bulb which regulates the muscular tonus (inhibiting it), the suppression of which brings about contracture. In this way he explains the difference in the occurrence of contracture of spinal origin and late contracture from some cerebral lesion. The question of dissociation of sensibilities, so-called "syringomyelic," is well considered under the heading of Affections of the Centro-Posterior Grey Matter.

In the second chapter the author considers, in addition to the symptoms arising from a limited affection of the spinal cord corresponding to the level of definite nerve-roots, *e.g.* syndroma of affection of dorsal cord corresponding to the origin of dorsal nerves (second to twelfth), etc., the metameric or segmentary syndroma corresponding to affection of a defined section of the cord, and characterised by its definite segmentary distribution (*e.g.* as in the anæsthesia "en gigot," so called by Charcot), on which so much light has been thrown by the observations of Brissaud and others on the distribution of herpes, the anæsthesia of syringomyelia, etc.

The Care and Treatment of Epileptics. By WILLIAM PRYOR LETCHWORTH, LL.D., ex-President of the New York State Board of Charities. New York and London: G. P. Putnam and Sons. Royal 8vo, pp. 246.

About ten years ago we reviewed Letchworth's book, *The Insane in Foreign Countries*, and have now the pleasure of calling attention to an even more interesting work by the same author *On the Care and Treatment of Epileptics*, a subject which has only recently attracted attention in our islands. We are indebted to Dr. Letchworth for collecting so much information about what is now being done for this most unfortunate class. Though it does not enter into pathology and therapeutics, the book, so far as its scope extends, is very comprehensive. The author has evidently exhausted all available sources of information both in North America and the European continent. The writing is clear and pervaded by a kindly tone of feeling, which in some passages rises to eloquence. Where could one find a better description of the miseries that beset the victim of this malady than the following?—"The epileptic holds an anomalous position in society. As a child he is an object of solicitude to his parents or guardians. The street to him is full of danger, and if sent to school he is liable to seizures on the way or in the class-room. At school his attacks shock his classmates and create confusion. He cannot attend church and public entertainments,

nor participate in social gatherings with those of his own age and station. In consequence of his infirmity, the epileptic grows up in idleness and ignorance, bereft of companionship outside of the family, and, friendless, he silently broods over his isolated and helpless condition.

“If the epileptic succeeds in learning a trade, business men are reluctant to employ him, and artisans will not work with him, especially if sharp-edged tools are used. I shall never forget the shock experienced, when I was a lad, in seeing a journeyman workman, a tall, manly, but sad-faced young man, fall at his bench with keen-edged tools within his reach, his dazed fellow-workmen moving in awe about him as he struggled in convulsions, with open eyes, set teeth, and foaming mouth. He was an ambitious young man, of good character, and a skilful workman; but he was obliged to leave his position on account of his infirmity and seek a new situation, where, undoubtedly, he had to go through the same experience. In such cases there is but one result—the breaking down of hope and energy.”

After a general description of the character of epilepsy and its causes, and suggestions for its prevention, the author gives us an account of what is being done in the United States within the last few years, which is most praiseworthy, the Ohio Hospital for Epileptics, the Craig Colony in New York State, and the Hospitals for Epileptics in Massachusetts, New Jersey, and Texas, Pennsylvania. He then gives us a shorter account of what is being done in the same field of charity in Maryland, Missouri, California, Michigan, Minnesota, Wisconsin, West Virginia, Ohio, Illinois, Connecticut, and Virginia.

Coming to England, Dr. Letchworth has less to say, but this is not his fault. We have, however, a friendly account of the Home for Epileptics at Maghull and the colony at Chalfont, the outcome of the efforts of the National Society for the Employment of Epileptics, and the Meath and St. Luke's Homes. Nothing whatever has been done in Scotland for the relief of this unfortunate class, though epileptics are not uncommon, and the people of the Lowlands are quite as rich as the English.

Perhaps the most interesting chapter in the book is the concluding one, in which the author gives an account of the different institutions for the special care of these unfortunates in Germany and Switzerland, of which there are now as many as twenty-eight. The first successful effort on a large scale to better the lot of epileptics, and to render them helpful to one another, was made by Pastor von Bodelschwing. The Colony of Bethel was begun near Bielefeld in 1867 upon a small farm with four patients.

On the 1st of July, 1898, the epileptics in this colony numbered 1516 including children. Most of these patients came from Northern Germany. The establishment is supported by gifts from the charitable and by the boards paid by the provincial councils, for though a good deal of work is done by the inmates, the colony is not self-supporting. It is necessary that the health and well-being of the boarders should be the first consideration, but much is done to give the epileptic children a fitting education, and to utilise the working capacity of the adults. “Labourers without employment have here been able to return to the calling that was dear to them, and to enjoy a sense of independence

which comes from self-support, although in many instances they overestimate the pecuniary value of their services." In the asylums in Great Britain the epileptic lunatics are generally the strongest, and often do a good deal of work. Though epileptics suffering from only temporary mental derangement are still retained, more severe cases are sent to the lunatic asylums. In 1898, at Bielefeld, 25 per cent. of the patients were without any perceptible signs of disease, 33 per cent. had only slight mental defects, 17 per cent. were classed as mentally disturbed, and 25 per cent. as imbecile. One useful feature of the book is the knowledge derived from the experience of such institutions as the Zurich asylum about the diet, regimen, gymnastics, and scholastic treatment which have been found most serviceable in the treatment of the patients. The work is well printed, on good paper, and is illustrated by a large number of engravings, which add much to the interest about the places described in the text. Altogether, Dr. Letchworth's book is one which does much credit both to the head and heart of the philanthropic author.

WILLIAM W. IRELAND.

Der Alkoholismus, nach Wesen, Wirkung, und Verbreitung (Alcoholism, its Nature, Influence, and Distribution). Von ALFRED GROTJAHN. Leipzig: Wigand, 1898, pp. 412, 8vo. Price 6 marks.

The *Bibliothek für Socialwissenschaft*, edited by Dr. Hans Kurella, has already given us several volumes of the highest merit, dealing with questions of contemporary interest, and informed with a rigidly scientific spirit.

In Dr. Grotjahn's work on Alcoholism the reputation of the series is fully maintained. The book combines in a high degree the exactitude and omniscience of the German with that lucidity of thought and neatness of expression which are rather attributes of the Gallic mind. These qualities are never very common; to the English reader, at least, they will appear doubly remarkable in their present connection. For in this country the subject of inebriety has exercised such a potent attraction on amateur moralists of the emphatic sort, that its discussion has been more usually associated in our minds with excess of zeal than with accuracy or reason. Other countries have not suffered from these disabilities; and in Germany, notably, the scientific literature of alcoholism is extensive and valuable. It is in accord with these better traditions that Dr. Grotjahn has written this admirable summary of our present knowledge on the question.

The work is prefaced by an historical sketch of alcoholism in ancient and modern times. In this connection the author lays stress on the fact that different drinking customs differ in the degree in which they further the development of alcoholism. The earlier forms of drinking—drinking at meals and at social gatherings—did not tend to manufacture inebriety on a large scale; on the other hand, in modern times alcoholism has acquired an enormous development, and has become a grave social question through the prevalence amongst the labouring

classes of the practice of drinking concentrated alcoholic liquors with the object of supplying deficiencies in diet, or counteracting the effects of a depressing physical and social environment.

The action of alcohol on the organism forms the subject of the first part of the book. The influence of moderate doses of the drug on the different functions is discussed. In regard of psychic effects, concurrence is expressed with Kraepelin's view that alcohol, even in small doses, retards sensory and intellectual functions, but induces a real though temporary acceleration of psycho-motor processes. In all cases it increases the feeling of well-being.

The symptoms of drunkenness are subsequently discussed; their predominantly paralytic nature is insisted on; it is pointed out that the phase of psycho-motor acceleration in drunkenness is very brief.

The chapters dealing with chronic alcoholism in its clinical and pathological aspects, and with the position of alcohol as a medicinal agent and as an article of diet, are carefully written, and give an adequate *résumé* of present views on these points.

The second section of the work treats of the causes of alcoholism. The author is inclined to assign an important part to neuropathic organisation in the genesis of inebriety; and he believes that it is in a large measure through dependence in common on conditions of nervous degeneracy that crime and suicide are found in such frequent association with alcoholism. He admits, however, that chronic intoxication is capable *per se* of producing these phenomena. In the same connection the author discusses the influence of alcoholism on racial degeneracy; he holds that chronic alcoholism in the parents may cause somatic and psychic inferiority in the offspring, and may so be an agent in racial deterioration; but he considers that on the whole inebriety is more often a symptom than a cause of this degeneracy.

After a brief review of such bio-social influences as race, climate, character of national beverages, etc., the author devotes a long and important chapter to what he regards as the chief factor in inebriety—the influence of industrial conditions. By reference to personal observations and to the extensive German literature dealing with the hygiene of occupations, it is shown that alcoholism stands in close relation to the form of labour, the rate of wages, length of working hours, home conditions, quantity and quality of food, etc. This thesis is maintained with much ingenuity, though the author's interpretation of the facts is perhaps a little coloured by his partiality for the economic doctrines of Karl Marx.

The third and last section of the book deals with remedial measures. For confirmed inebriates, restraint in special asylums under exclusively medical control is indicated as the sole treatment. From the various prophylactic measures—legal punishments for drunkenness, taxation of alcohol, licensing restrictions—the author does not anticipate much result, as they leave the main causes of the evil untouched. He considers, however, that the Gothenburg system has had some real influence in replacing spirit-drinking by less objectionable alcoholic beverages.

A review of the present distribution of alcoholism in the different countries of Europe and in the United States brings the work to a close.

Considering the extent of the matters dealt with, there are singularly few errors. We have noted only one or two of any importance. In the chapter treating of the chronic intoxication, epilepsy is mentioned as one of the frequent effects of that condition; except in cases of absinthe poisoning this is hardly in accord with the more recent observations. Again, in reference to crime and alcoholism in the State of Maine (p. 160) the author has overlooked the fact that, as the U.S. Commission on the question has reported, "Prohibition in Maine has had no effect on the consumption of alcohol."

A commendable feature of the work is the summary of the main conclusions appended to each chapter.

W. C. SULLIVAN.

NOTES ON BOOKS RECEIVED.

The Mental Affections of Children—Idiocy, Imbecility, and Insanity.
2nd edition. By WILLIAM W. IRELAND, M.D. London: J. and A. Churchill, 1900. 8vo, pp. 442. Price 14s.

Dr. Ireland's classical treatise may now be said to be in the third edition, and we have to congratulate him on the ready sale which it commanded when presented to the public as an enlarged work two years ago. By the removal of less important passages and shortening others the latest results of recent research are introduced without increasing the size of the volume. For instance, Hirsch's observations on the pathology of amaurotic genotoxic idiocy have not been overlooked, and the advance in developmental studies in regard to the brains of infants has been utilised to clear up the position.

Dr. Ireland is, as ever, keenly alive to the adoption of every practical hint in reference to the prevention of idiocy. He quotes Kocher's recommendation as to the utilising of rain water, or the boiling of suspicious water which is to be drunk, in districts where cretinism is endemic, and Kocher's statement that this practice has been successful in preventing goitre. We also find a summary of the case of Helen Keller, an idiot by deprivation, who made a remarkable appearance at an examination including English, Latin, and German, having been successful in every subject, with honours in English and German. She is now at Cambridge (U.S.A.), studying with a tutor. The literature of juvenile general paralysis is brought up to date, and an adequate index completes the work. It is late in the day to commend Dr. Ireland's book to those who are concerned with the problems with which he deals. We are rather desirous of noting a few of the improvements which this new edition permits, emendations which show that Dr. Ireland's natural force has happily not abated. We trust that yet another edition will soon be called for, and that he will be as active in capturing for his great purpose whatever is of value to the physician who is charged with the care of the unfortunate class to which Dr. Ireland has devoted the best years of his useful life.

Asylum Retrospects.

We have of late received several publications of definite interest, presenting historical surveys of the care and treatment of the insane in various localities. These cannot fail to be useful as documents of achievement in medico-psychological practice; they are valuable and suggestive records, which will be referred to when scattered facts are collected and arranged by the historians of the future.

The History of the Pennsylvania Hospital for the Insane from 1751 till 1895 is set forth in a sumptuous illustrated volume of 575 royal 8vo pages, by Dr. Thomas G. Morton and Dr. Frank Woodbury. The authors entered on their work with an enthusiasm which has carried them through with great credit. References to the labours of Dr. Rush, and many others famous in the annals of Pennsylvania, are to be found set forth in detail, for the early records of the institution were fortunately found in an abandoned closet some fifteen years ago, and these invaluable documents formed the basis of this publication. The contributors to the Pennsylvania Hospital determined that a fund should be raised for the preservation and perpetuation of the records of an institution which was the first of its kind in America, and which was so intimately connected with the medical progress of the State. Letters from Lieutenant-Governor Hamilton to the Penns, from Dr. Fothergill, of London, and from Benjamin Franklin, are given for the first time; the managers and physicians are well represented in admirable portraits; and the work abounds in illustrations of deep and abiding interest. We are tempted to make large extracts from this noble record of philanthropic work, but space forbids, and we can do no more than commend it to those who are in any way interested in the care of the insane.

The Crichton Royal Institution, Dumfries, is one of the charitable foundations of which Scotland is justly proud. Mr. James Carmont, who acts as Treasurer and Secretary to the Crichton Institution, has presented us with an interesting and handsome volume giving an account of its history. The book is uncommonly well illustrated with portraits and views of the various buildings. Although the general outlines of the history of this well-known asylum are already familiar, we gladly receive a detailed account of its progress from 1839 onwards. The book should have a wide circulation in order to arouse the interests of wealthy philanthropists who may be stimulated to go and do likewise, and in order to show how much can be accomplished in the development of a modern asylum by the application of the principles of self-help. The ratepayers of the south-western district of Scotland have very largely benefited by the operations of the Crichton Institution, and the private patients under treatment have been attracted from a very wide radius. We congratulate Mr. Carmont on having brought into moderate compass the long and honourable history of the asylum he serves, and we trust that his book will reach many readers. To those of us whose work is concerned with the insane it cannot but be an instructive and encouraging volume.

A Sketch of the Care and Treatment of the Insane in the Parish of Paisley. By DONALD FRASER, M.D.—This brochure deals with an

interesting period, and shows the changes which have occurred in parochial methods since 1749. Dr. Fraser divides that period as follows: the early days of the town's hospital, from 1749 till 1818; the later years of the town's hospital, from 1818 till 1845; from the passing of the Poor Law Act, from 1845 till 1867; from then till the erection of Riccarton Asylum, upon a report of the committee in 1871. This historical survey is supplemented by statistics of medical interest and references to cases and causes of insanity. The question of parochial *versus* district asylums was at no distant date, and even still is a thorny one to handle, but Dr. Fraser presents the case for Paisley in moderate terms. His work is not of merely local interest; it opens an attractive field for consideration and discussion, and we hope that it will be as widely read as it undoubtedly deserves.

A Short Account of the Origin and History of the Glasgow City Parochial Asylum, with a note on the System of Boarding-out the Insane.—Dr. Alexander Robertson, on retiring from active service in this institution, which is now replaced by the new asylum at Gartloch, presented the public with this brief *résumé* of his experience in the old place. We cannot but regret that he did not treat his interesting subject at greater length, but he has given a good account of his personal opinion and methods, which we gladly welcome. Dr. Robertson claims a recovery rate of 47 per cent. upon the admissions of the ten years ending with 1888, and a freedom from serious accidents which is worthy of all praise. Our readers are already familiar with the methods adopted by him, and we need only add that his note on boarding-out seems to approve the aggregation of these cases in certain rural localities.

Die Heil- und Pflege-Anstalten für Psychisch-Kranke des deutschen Sprachgebietes am 1 Januar, 1898.—We have received the new edition of this useful book by Dr. Heinrich Laehr and Dr. Max Lewald. The first edition was published in 1852, and the last in 1891. Successive editions have shown the distinct value of such a work, as we indicated in this JOURNAL for October, 1898. With the increase of asylums this record keeps pace, and we can only regret that no one has yet attempted to write a similar account of the asylums of English-speaking countries. We strongly recommend those of our readers who intend to travel in Germany to obtain a copy of this book before setting out. It is published by Mr. Georg Reimer in Berlin, and costs only a few shillings. A map inserted at the end shows the geographical situation of each asylum.

The Attendant's Companion. By CHARLES MERCIER, M.B.—Dr. Mercier's useful companion reached a second edition in 1898. He retains the form which it at first took from his hands, and desires it to be understood that its scope is essentially practical. It was intended to supplement rather than to displace more ambitious treatises, and to put before attendants in a homely way subjects of importance. We need not revert to Dr. Mercier's little book further than to say that his emphatic and well-considered advice should find attentive readers in every asylum. The modest price of 2s. brings it easily within reach, and we congratulate Dr. Mercier on having found it necessary to re-issue it within a few years.

Part III.—Retrospects.

ASYLUM REPORTS FOR 1898.

Some County and Borough Asylums, England.

Carmarthen.—Dr. Goodall reports two cases of insanity following cranial injury, both of which made a good recovery. In another connection he writes :

Syphilis was traced as the cause of the brain lesion in only one case, but this has no bearing upon the influence of syphilis in producing brain disorder. In examining the bodies of persons dying in asylums one observes the comparative frequency of degeneration of the blood-vessels (arteries), especially of the brain, and I quite subscribe to the view expressed by eminent authorities, that syphilis is the most frequent cause of organic brain disease in persons not much past middle life. In an asylum drawing largely from a rural population, such as this, one does not expect to find much evidence of the after-effects of syphilis, but any towns in the asylum district are sure to supply their quota of general paralysis and organic brain disease ; and it is precisely in this class that a careful inquiry into the personal history of these cases often discloses the existence of hereditary or acquired syphilis in a surprising degree.

Derby County.—Dr. Legge mentions a case in his report which illustrates the risks, not always personal merely, attaching to asylum service :

An inquest was held in February upon the body of J. W. M—. This case was remarkable from the fact that another patient (C. P. M—) made a strongly expressed and elaborate statement before the coroner, in which he accused an attendant of having murdered the deceased. The coroner's jury, however, accepted the Medical Officers' opinion that death was due to natural causes. The matter was also investigated by the committee.

Devon County.—This is the last report to come from the pen of Dr. Sanders. The committee in their report mention that he has retired after thirty-eight years of able and faithful service on a pension of £742 10s. The present average residence is practically double what it was when he first took charge, while both recovery and death ratios have decreased considerably. We note six out of sixteen admitted and eight out of twenty-six remaining general paralytics are females. This proportion is remarkable in view of the fact that Plymouth has its own asylum.

Gloucester.—Dr. Cradock adverts to the "uselessness, not to say absurdity, of most of the vaunted nostrums for checking the spread of insanity or for curing the insane," and derives some pleasure from noting at last an effort in what he considers the right direction. This is refusing to people with strong hereditary taint permission to marry. The practical application of this principle is said to have come from America, but we think that we have heard before of the principle itself. In fact, we have always thought that while it is absolutely correct from an Utopian point of view, in practice it is only another vaunted nostrum. Prohibition of marriage will not, except, perhaps, in the case of a few exalted cases, stop marriage, especially in those to whom heredity brings strong impulses with weak control. Compulsion, unless it is backed up

by the bistoury, is hopeless ; and the bistoury is rightly *tabu*. Moral suasion and education are the only possible weapons wherewith to fight the genesis of insanity, and these under the circumstances are of little account.

Hants.—We are glad to note the award of the full pension of £250 to the Clerk, who retires from continued ill-health. The following bit of economy is worth notice :

In last year's report I mentioned the completion of the Water Softening process, erected by Messrs. Maignen, of Regent Street, London, and said it was a great success. I am now able to state that, in addition to the economy in soap and soda in the laundry, and the labour and expense expended in replacing pipes that were choked, a very considerably less amount of water is used, and that therefore the engines run daily for twelve hours instead of fourteen, as they did when the water was hard, and in this way a large amount of coal is saved.

Hereford.—Dr. Morrison brings before his committee the proposal to combine with other asylums for the purpose of joint pathological investigation. He is quite right in protesting as follows :

I desire to draw the attention of Boards of Guardians to the lax, unreliable, and absolutely worthless manner in which many relieving officers fill in the statement of particulars accompanying the order of admission. If this information is inaccurate, it may easily prejudice the nature of the treatment and care that has to be adopted on the admission of the patient, besides prejudicing a portion of the future history of the case as recorded in these statistics.

Lancashire—Prestwich.—The following extract comes from the report of the committee :

At the same time the committee must not be taken to agree in the theories held by the Commissioners as to the size of asylums, as practical experience appears to be altogether in favour of large asylums, as securing a better classification of patients and a more complete subordination of officers and attendants, besides affording greater scope for the study of insanity in all its phases, with a view to its treatment or amelioration.

Now-a-days there can be no division of opinion as to the benefits to be obtained from the Association's system of training attendants. Nevertheless, as coming from a superintendent with such unrivalled experience as Mr. Ley has, the subjoined reference to it by him deserves recording.

I wish to record my appreciation of the interest taken by the medical officers in this important work. There can be no doubt that the successful care and treatment of the insane largely depends upon the experience and character of those who are in immediate charge of them. Our aim has been to perfect a staff of experienced attendants, imbued with an intelligent appreciation of their responsibilities and duties, for without such a trained and experienced staff no system, however good, can be successfully carried on.

Middlesborough.—This is the first report of a new asylum, and we are very glad to note that Dr. Pope has, like Dr. Kidd of Chichester, worked in a full and detailed account of the design, building, fitting, and furnishing. The particulars given cannot fail to be of use to committees and medical superintendents advising them, who have to undertake similar work hereafter.

For particulars we must refer our readers to this valuable report itself, and plans attached thereto. That things have been well and

efficiently done is evidenced by the fact, communicated to us by Dr. Pope, that no hitch whatever has occurred during the two years in which the asylum has been at work.

We are glad to see that the Association tables are adopted in their entirety.

Newcastle.—The ratios of general paralytics for the year, always high in this asylum, are remarkable.

	<i>Admitted.</i>			<i>Died.</i>			<i>Remaining.</i>		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
G.P. .	28	8	36	15	7	22	32	14	46
Total .	77	61	138	35	32	67	242	274	516

Alcohol in 61, and venereal disease in 5 out of 138 admissions are assigned as causes.

We regret to notice from the report the death of the former medical superintendent, Dr. Wickham, who for many years was a member of the Association.

Suffolk.—We note that this county has followed the example of Lancashire in availing itself of Section 26 of the Lunacy Act. It sends patients under that section to Mildenhall Workhouse. It is possible that the capacity of workhouses throughout the country has been seriously let down since the 4s. stampede commencing twenty-five years ago, but it is impossible to believe that a determined effort could not bring into use for lunacy purposes some of the accommodation which is being vacated by the decrease in indoor pauperism. Dr. Whitwell urges that the word "asylum" should be dropped in favour of the term "hospital" in connection with public institutions for the insane. He has extended the principle of demonstrating facts by charts by introducing new ones, showing the admissions and residua year by year in respect of each of the unions in his area. Beyond the possibility of some one working out valuable scientific deductions from them, we cannot but think that there is a special value attaching to them, from the probability that the various unions and their officers will be led to take a more intelligent interest in their own lunacy production.

Sussex, West.—It is somewhat alarming to read in a second report of a new asylum that accommodation so recently provided is actually being increased by 66 per cent., but so it is in Sussex. When this is finished, and East Sussex has its asylum for 1100 patients or more, and Brighton is in sole possession of the 900 beds at Hayward's Heath, nearly 3000 beds will be provided where 400 was considered ample forty years ago.

Dr. Kidd has gone one better than Dr. Whitwell in inducing the committee to call their institution Graylingswell Hospital for unofficial purposes. The report shows that thus soon Dr. Kidd has got everything into perfect working order, a fact which was clearly substantiated by the inspection of those members who attended the meeting there in February last. The impression left then was that Graylingswell was a cheerful, efficient, and orderly place, in which it will be good for a pauper lunatic to live.

Wilts.—In view of the serious block arising from many workhouse cases being sent to the asylum unnecessarily, the committee took the

step of addressing through their chairman a letter of strong protest to the authorities of each union. It is very satisfactory to read that it has had an excellent effect.

Dr. Bowes records the fact that the number of relapsed cases is twice what it was ten years ago. He offers no explanatory theories.

West Riding.—The statistics in relation to the admission of general paralysis into the three county asylums present a contrast that is worth reproducing.

Asylum.	General Paralytics.			All Admissions.			Percentages.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
Menston .	29	17	46	255	317	572	11·2	5·3	8
Wadsley .	14	5	19	227	232	459	6·1	2·1	4·1
Wakefield .	28	9	37	191	151	342	14·6	5·9	10·8

The following are some of the assigned physical causes :

Asylum.	Alcoholism.			Sexual Intemperance.			Venereal Disease.			Self-abuse.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Menston .	54	21	75	5	2	7	17	3	20	3	0	3
Wadsley .	49	27	76	2	0	2	1	0	1	0	0	0
Wakefield .	57	19	76	7	1	8	11	4	15	13	0	13

It will be seen that drink pressed heavier on the Wadsley and Wakefield cases, and that sexual troubles were much lighter at Wadsley than at the other two places. A comparison of urban and rural sources of the admissions and a comparison of "previous occupations," while they might be of use in comparing the West Riding with all other counties and boroughs, do not seem to throw any light on the differences between the three asylums in regard to this particular disease. Some of the large towns, such as Leeds and Halifax, share their new patients between Menston and Wakefield, but Wadsley has Sheffield and Huddersfield to itself. The senile and congenital admissions were ratably rather more frequent at Wakefield, as was the case with dementia. There was, therefore, a smaller proportion of active insanity admitted.

Scottish District Asylums.

Argyll and Bute.—Dr. Cameron notes the curious fact that the number of patients chargeable to the latter county exceed those chargeable in 1882 by one only. Those from Argyll seem to increase a good deal faster, but both counties together do not show the increase found elsewhere.

Fife and Kinross.—Dr. Turnbull strongly advocates the discharge to private care or boarding out of those who have improved but have not recovered. Of the seventy-two discharged no less than thirty-four are returned as relieved only. He finds that in many such cases after a time the patients cease to be chargeable on the rates. We note that out of four general paralytics admitted three were females.

Glasgow District—Garloch.—The "Hospital" here is reported to fulfil the expectations entertained in regard to its usefulness. Dr. Oswald has not found treatment with animal extracts as successful as it has been with others, but in a few cases it had led to recovery. The amalgamation of the two parishes of Glasgow has brought this and the Woodilee

asylum together. New cases are admitted into each in alternate weeks.

Govan District.—Here, too, the “Hospital” is well spoken of. The Sutton bacterial form of sewage disposal has been adopted and found to work economically and efficiently.

Lanark District—Hartwood.—The extension has been completed, and there is now accommodation for 950 patients, which Dr. Clark thinks may suffice for eight or nine years.

Referring to treatment by spleen extracts he gives the following results:

	<i>Recovery.</i>	<i>Improvement.</i>	<i>Physical Improvement.</i>
Females .	19 per cent.	12 per cent.	36 per cent.
Males .	33 “	11 “	25 “

The treatment was applied to forty-two female and thirty-six male cases. He thinks it fair to point out that it was used when other means failed. The most striking results are found in young, especially male, persons. Only 7 cases in 133 males and none in 123 females of general paralysis were admitted. No less than £5344 of work in making roads and laying out the estate has been done by the patients in a little over three years.

Royal Asylums.

Crichton.—Of 176 cases admitted (98 male and 78 female) there were 8 male cases of general paralysis. A careful examination of facts showed that with the exception of two it was impossible to eliminate syphilis as a factor. The two exceptions were both traumatic, from injury to the head. One of these cases is particularly interesting. The injury was caused ten years before death, and was at once followed by change of manner, headaches, dyspepsia, etc. The patient managed to do his work, and kept his appointment till four weeks before admission. On admission he had the usual motor signs, with aural hallucinations and marked mental weakness. He died within a year, and on post-mortem examination it was found that no injury had occurred at the seat of the blow, but the results had been produced by *contre-coup* and in the line thereof.

In consequence of fresh arrangements being made for the Glasgow District patients, the admissions fell from 423 in 1892 to 176 in 1898. The recovery rate was 50·6 on all admissions, including 15 transfers.

Dundee.—The following extract from Dr. Rorie’s Report shows that his experience proves what common sense and knowledge of asylum life suggest; and it is impossible to believe that quiet homeliness is to succeed only in private cases. This element of quiet homeliness is likely to be missed in the grand “villas” which are, thanks to official requirements, now becoming the most advanced form of decentralisation in pauper asylums.

Gray House, which has so frequently been referred to in high terms of commendation by Her Majesty’s Commissioners in Lunacy, continues to prove a valuable adjunct in the treatment of the private patients, and to afford a quiet and homelike place of residence for such as do not require the rigid supervision of an institution. Several ladies have recently left it recovered, who, I feel sure, would not have done so had they been placed in less favourable surroundings.

Dr. Rorie gives some valuable additional tables, which we lately published. In them are given some statistics of the 6000 patients admitted since the opening of the asylum in 1820. One can here see how the proportion of mania cases has dwindled down from 51 per cent. for the first twenty-eight years, to 31 in the last seventeen, melancholia from 22 to 18, while dementia has risen from 10 to 21, monomania from 11 to 23, and general paralysis from 2 to 3'39. Other interesting facts are given as to the ages on admission, which will repay perusal.

James Murray's, Perth.—Dr. Urquhart, in stating that the present report is his twentieth, shows that the total number of patients has risen from 66 in 1879 to 131 in 1899, in these numbers there being included 1 and 7 voluntary boarders respectively. This great increase has been accompanied by a satisfactory recovery rate and a reasonable death rate. More satisfactory still is the financial aspect, which shows a moderate balance on the right side for the year's working, with a substantial and progressive reduction in the capital indebtedness incurred by reason of the extra accommodation and furniture provided.

The Tables of the Medico-Psychological Association.

Having finished now our perusal of many asylum reports for 1898, we feel constrained to say that we find more and greater departures in the handling of these tables in Scotland than in England. Those who rigidly adhere to them are in the great majority everywhere, while not a few give additional yearly tables of value and interest. We venture to plead for catholicity, especially in new asylums. It may be probable that an individual superintendent has good reasons of his own for scepticism as to the value of any or all of the tables; possibly it may be that these reasons are better than those of the able gentlemen who drew the tables up, but in any case figures extending over the whole of our area are better than those falling short. As a concrete example, we find that in a few reports there is no table of forms of disease on admission (No. XI). Those—and there must be several—who are closely following the fell march of general paralysis are thereby baulked from a full inquiry into facts. Beyond this is the fact that the greater and the more complete the bulk of opinions expressed by figures, the more are the extremes of variation in personal opinion eliminated. One has only to glance at the elaborate statistics of the English Commissioners as to the causation of insanity to establish this. New men with strong ideas come in and report, but the averages of the mass of opinion vary but little from year to year, and in consequence are of more established value.

1. Anthropology.

The Cephalic Index in Europe [L'index céphalique]. (Les Races de l'Europe—Assoc. Franç. pour l'Avanc. des Sc., 1897, appearing in 1899.) Deniker.

Dr. Deniker, of the Paris Museum of Natural History, has for some time been engaged in preparing a monograph of great importance on the races of Europe. The eminent French anthropologist has expended a

very large amount of labour and learning over his task, and the coloured map, which is the chief feature of the present part (the letterpress being mainly an elucidation of the map), reveals in the clearest manner the distribution of the cephalic index in Europe. The broad-headed or brachycephalic populations are shown in various shades of red, and the long-headed or dolichocephalic populations in various shades of blue. It is at once apparent that the populations of Europe lie in three layers—southern, central, and northern; the first and the last being long-headed, and the central broad-headed. The broad-headed portion is wedge-shaped, with the basis lying along the Asiatic frontier of Russia, the apex (broken into by the Bay of Biscay) being in Brittany, and to a trifling extent on the northern coast of Spain. Thus Central France, Switzerland, Northern Italy, Austria, much of Germany, and nearly the whole of Russia are more or less broad-headed, while the rest of Europe is mainly long-headed. Dr. Deniker refrains from drawing any general conclusions, but his map shows how easy it is to conceive that the broad heads all come from Asia, while the long heads all come from Africa, according to the theory now tending to prevail. It is clearly visible in any case that there are three main races, the northern race being distinguished from the southern by greater blondness and stature, necessarily not apparent in a map of the cephalic index. The greatest range of variations exist in Italy and France; but while, however, in the former country the transition from extreme broad-headedness in the north to extreme long-headedness in the south is gradual, in France regions strongly contrasting in index may be found side by side. Great Britain is fairly uniform throughout, with an index usually between seventy-seven and seventy-nine. Spain is also very uniformly long-headed, while Russia on the whole shows a moderate broad-headedness.

HAVELOCK ELLIS.

The Brain of Hermann von Helmholtz [*Ueber das Gehirn von Helmholtz*].
(*Ophth. Klin., Stuttg.*, 1899, *iii*, 43—45. *Zeits. f. Psych.*, 1899.)
Hansemann.

The examination of the brain of Hermann von Helmholtz, who died at the age of seventy-three in September, 1894, was made by Prof. David Hansemann and three other physicians. The head was decidedly brachycephalic. The circumference with the skin was 59, without 55 cm. The greatest breadth of the skull was 155 mm., the greatest length 183 mm.

The weight of the encephalon, including the blood coagulum, was 1700 grammes. This being removed the brain weighed 1540; but so much blood remained that it was estimated that 100 to 120 grammes should be deducted. This would reduce the brain weight to 1420—1440 grammes. There was sclerotic degeneration of the vessels of the base of the brain, which was more marked on the right side. Helmholtz's height was 169.5 cm. (5 feet 6 inches). Prof. Hansemann observes that the relation of the form of the brain to the mental capacity has been a subject of investigation since the days of Erasistratos, and it is clear little knowledge has as yet been gained. He mentions a number of brain weights of celebrated men, the lowest given being that of Ignatz von Döllinger, the celebrated Catholic

theologian, which weighed 1207 grammes. Helmholtz's brain was not much above the average weight, which Bischoff has stated to be 1358 for men, and 1220 for women.

There are two plates given of the brain, from which it appears that it was not finely convoluted; in fact, we notice nothing to explain the great mental superiority of Helmholtz, whose wonderful researches in optics entitle him to be placed in the first rank as a scientific investigator. The only thing remarkable, in the outcome of this investigation, is that it confirms what Helmholtz himself believed, that he suffered, when young, from a slight hydrocephalus. We are told that Perls believed hydrocephalus, when arrested in childhood, to act favourably for the growth of the brain, by widening the skull and allowing more room for the increase of its contents. This notion Hansemann declines to adopt, but he is disposed to believe that there may be some connection between an arrested hydrocephalus and a powerful and active brain,—on what grounds he does not state. He thinks that the hydrocephalus in Helmholtz's case may have helped the development of the association spheres, as described by Flechsig. At any rate, the only unusual development of Helmholtz's brain lay in the central region, which Flechsig has styled terminal areas, and designated with the numbers 33—40. These spheres in the frontal, parietal, and temporal lobes, and in the præcuneus, especially the regions 33, 39, 36, 37, 40, and 34, were much fuller than in the brains of ordinary men, the sensory spheres of which are most developed, while the association spheres fall behind. "Sometimes, however," remarks the Professor, "we see one or another of these large spheres especially well formed in the brains of ordinary persons. Flechsig has already stated that he had seen the gyri between the first temporal and the subangular as well developed in a clever woman of humble condition as in Helmholtz, and during the last few weeks I have found this development in four brains of men who showed no uncommon mental capacity. I have repeatedly observed in the brains of ordinary men a considerable development of the association centres, but it is rare to see the præcuneus so divided as in Helmholtz's brain."

W. W. IRELAND.

Craniometric Observations in the Post-mortem Room. (Journ. Anat. Physiol., vol. xxxiv.) Waterston, D.

A method is described of taking the measurements of the unmeasured skull by means of a modification of Hepburn's calliper, the lower limb of the instrument being so constructed as to enable it to reach the basion through the nasal cavity.

Pathogenesis of the Delusional State in General Paralysis [Pathogénie du délire de la paralysie générale]. (Ann. Méd.-Psych., January, 1900.) Lalande.

To the four characteristics which Falret notes as belonging to the delusional ideas of general paralysis (multiplicity, variability, absence of ground, contradictoriness), Lalande proposes to add three more—a tendency to the unlimited, a loss of the elementary notions of space and time, and finally, what he proposes to call auto-psychism. He labours to show that the general paralytic reduces everything to an

absolute here, an absolute now, an absolute I. The egotist thinks of his own advantage, and of what can aggrandise himself. Not so the general paralytic, who, far from wishing to secure his own advantage, is conscious of nothing but self, and is his own object as well as subject; hence the name auto-psychism. The location of objects or events in space or time depends upon the function of comparison. Relativity lies at the bottom of our notions of time and space. When comparison is in abeyance, sensations, cœnæsthetic and other, are translated into absolute ideas. Hence the unlimited nature of the general paralytics' notions, who is god, everything, unborn, nothing, and so forth; who is Cæsar and Napoleon; who is in London and at the Cape in the same breath.

Lalande argues that our knowledge of the morbid anatomy of general paralysis shows that the most distinctive lesion therein resides in the most superficial portion of the cortex occupied by the small cells of the molecular layer and by the tangential fibres of Exner. He argues from anatomical reasons that this layer may plainly be supposed to be the seat of the faculty of comparison, and concludes that, hallucination being excepted, the delusional state in general paralysis is entirely explicable by the gradual loss of the faculty of comparison, localised in the molecular layer and carried out by the small cells which occupy that region.

C. N.

[*This Retrospect should appear under Section 5.*]

2. Neurology.

The Progress of Neuropathology [*Le progrès de la neuropathologie*].
(*Rev. Scient.*, Nov., 1899.) *Vires*.

The author passes in review the principal landmarks in the history of neuropathology from the beginning of the nineteenth century down to the time of Charcot. Then follows an epitome of the more recently acquired data of the anatomy and physiology of the nervous system, especially of the ectodermic elements, which are classified into—

- (a) The supporting tissue.
- (b) The specific nervous tissue.

(a) The supporting tissue is considered under the headings of (1) the ependymal cells, and (2) the neuroglial cells and fibres.

(b) The specific nervous tissue consists of innumerable distinct elements known as neurons. Each neuron consists of a cell body, an axon, and several dendrons.

The cell body contains the nucleus, and in the perinuclear mass two elements may be distinguished, viz.—

- (1) The achromatic fibrillar trophoplasm.
- (2) The chromatic granular kinetoplasm.

The axon is always single, fibrillar in structure, and becomes enclosed in a myelin sheath shortly after leaving the cell body; it is cellulifugal, and gives off a small number of collaterals.

The dendrons are numerous, and situated at the opposite pole of the cell body to the axon. They are protoplasmic granular cellulipetal ramifications with a large number of collaterals.

In a scheme of the central nervous system we have to recognise physiologically two classes of neurons, viz. projection neurons and association neurons.

Projection neurons serve for the transmission of nervous impulses from the skin, etc., to the cortex cerebri (sensory neurons), and from the cortex cerebri to the muscles, etc. (motor neurons). In each of these classes we have to distinguish between the peripheral or proto-neuron, and the central or deuto-neuron.

The cell body of the sensory proto-neuron is in the posterior root ganglion ; its dendritic prolongation is the sensory nerve from the skin ; its axon passes up the posterior root to the posterior cornu, the medulla, or the optic thalamus. This last connection is probably indirect. Here it ramifies among the dendrons of the sensory deuto-neuron, whose axis-cylinder reaches the cortex cerebri. This is the direct path.

There is also an indirect path by way of the cerebellum. Here the proto-neuron passes up to Clark's column, and the deuto-neuron sends its axon to the cerebellar cortex or dentate nucleus, there to ramify among the dendrons of deuto-neurons whose axons reach the cortex cerebri.

The cell bodies of the motor deuto-neurons are in the Rolandic areas of the cortex cerebri ; their axons form the pyramidal tracts. The cell bodies of the motor proto-neurons are in the anterior cornua, and their axons form the anterior spinal roots whose component fibres are distributed to the muscles.

Here, again, there is also said to be an indirect path, the motor deuto-neurons extending from the cortex cerebri to the cortex cerebelli, and again from the cortex cerebelli to the anterior cornual cells. [If this latter statement be true, this descending cerebello-spinal tract must be still further broken up, probably at Deiter's nucleus, since we now know that destruction of the cerebellum alone causes no descending degeneration in the spinal cord.]

The association neurons connect projection neurons with one another. Association is in the spinal cord mainly subserved by collaterals. In the cerebrum, however, there are special systems of association neurons. These have connection with three chief centres in each cerebrum (association centres of Flechsig), an anterior one in the frontal lobe, a middle one in the island of Reil, and a posterior one in the temporo-parietal region. From these centres association fibres pass to all parts of the brain.

W. H. B. STODDART.

On the Structure of Brain Cells and their Degeneration in General Diseases. (Lancet, May 27th, 1899.) Campbell Thomson, H.

Dr. Thomson gives a *résumé* of the neuron theory of the structure of the nervous system, and also of the fine anatomy of the nerve-cell. He then looks at Marinesco's work on the influence of artificially produced high temperatures on the structure of the nerve-cell protoplasm in animals, and quotes Marinesco's opinion that a temperature of at least 41° C. is necessary in man to produce the appearances of artificial hyperpyrexia got in animals.

Dr. Thomson gives illustrations of three cases of meningitis with hydrocephalus. The nuclei of the cells are lost together with the

chromatophile differentiation, and patchy staining of the cells is shown. In one cell the nucleolus is displaced, while in another a dark band is shown in the cell body similar to that which occurs occasionally in artificial hyperpyrexia. In two of the cases moderate pyrexia was present during life, in one case it was never present at all.

An illustration is given from a case of acute septicæmia with a temperature of 106° F.; in this there was swelling and deformity of the cell, diffuse staining of the cell body and nucleus, and disappearance of nucleoli. Cells from a case of tetanus are shown. In these there was extensive chromatolysis, and the body of the cell appeared spongy; this occurred mainly in the motor cells of the brain and cord, and probably corresponds to the network described by Ramon y Cajal and Marinesco, on the meshes of which the chromatic blocks of the cell are built.

W. F. PENFOLD.

Notes on the Arrangement and Function of the Cell Groups in the Sacral Region of the Spinal Cord. (Journ. Nerv. Ment. Dis., August, 1899.) Onuf, B.

Onuf confirms Waldeyer's observations with regard to the gross structure of the grey matter of the sacral region—the changes in configuration at the second sacral segment, etc., considering that structurally the first sacral segment belongs more properly to the lumbar than to the sacral portion of the spinal cord.

He describes the arrangement of the cell groups in the various segments of the sacral portion of the cord, which he believes is characteristic, so that a study of a number of consecutive transverse sections will reveal fairly exactly the level or segment from which they are taken.

The conclusions to which he has arrived regarding the functions of the various cell groups in the sacral region of the spinal cord are enumerated.

H. J. MACEVOY.

On the Development of the Axial Fibres of the Brain [Ueber Markscheiden Entwicklung des Gehirns und ihre Bedeutung für die Localisation]. (Allgem. Zeits. f. Psychiat., B. lv, H. 6.) Siemerling.

Dr. Siemerling gives here a report on the development of the myelin of the brain, and its significance for localisation. He quotes Vogt's remark that all men who have studied the structure of the brain fibres are from their observations opponents of Flechsig's views, and only those who have not this advantage subscribe to them.

He cites the observations of Righetti: in the new-born child fibres provided with medullary sheaths are found in the cortex of the median convolutions and in the paracentral lobules. At the beginning of the second month they are also to be found at the foot of the frontal gyri, in the orbital part of the first and third frontal, in the cuneus, the lobulus lingualis fusiformis, in the second and third parietal and the first and second temporal, the gyrus hippocampi, the cornu Ammonis, and the insula. In the third month the fibres are mature in the other parts of the frontal and parieto-temporal lobe. The radiating fibres become mature in all the convolutions excepting the insula, where the superficial fibres appear at the same time. The tangential fibres of the deeper layers of the cortex are already completely formed at birth in the upper

third of the median gyri. In the second month of life they appear in the insula and in the cornu Ammonis, and in the third month round about the calcarine fissure. The superficial tangential fibres, at first formed in the second month of life, appear in the insula and the cornu Ammonis, and in the third month round the calcarine fissure. The middle tangential fibres are more early developed in the cornu Ammonis than in the other part of the cortex,—that is to say, at the beginning of the third month.

From the observations of Monakow upon the brains of new-born children, it appears that other nerve-fibres besides the projection ones are mature at birth.

Dr. Siemerling has examined twelve brains of infants at different ages. As the result of his researches he has come to the conclusion that although the completion of the development of the nerve-fibres takes place in certain parts, it does not remain long circumscribed, but goes on in quite distinct regions. He, however, admits that, as a general rule, in certain regions of the brain the development of the nerve-fibres is fuller and earlier. He agrees with Righetti that it is the radiating fibres which first take on the medullary sheaths. At the end of the third month of infant life there is scarcely any part of the brain in which mature fibres are not found. He considers it too bold to assume that all these axis-cylinders surrounding themselves with myelin are purely projection fibres. The only way to reproduce some of the statements and considerations advanced by Siemerling would be to translate entire the passages in his report. Microscopists are far from agreeing in their descriptions of the brain structure. Siemerling grants that differences may be made out in the distribution of the anatomical elements, and it is reasonable to suppose that these differences in structure imply differences in function. The principal objections to Flechsig's views lie in the limited extent which he allows to the fibres of the corona radiata, against which both Siemerling and Sachs bring their observations and arguments.

W. W. IRELAND.

The Function of the Cerebellum [Zur Lehre von den Functionen des Kleinhirns]. (Jahrb. f. Psychiat. u. Neurol., B. i, H. 2, 1899.) Pineles, F.

We have read many such papers as the above without learning much. Assuredly this great mass of nervous tissue must have something to do, and yet what is assigned to it amounts to little. After wading through forty weary pages we find the following passage:—"The cerebellum, with its three powerful connecting crura, belongs to the subcortical portions of the brain, and plays an important part in the innervation of movements, especially those which are automatic. Through what part the connecting fibres of the cerebellum join with the grey matter of the spinal cord cannot at present be decided. What is noticed after loss of the cerebellum is an impairment of the regulation of voluntary movements which affects the hemisphere of the cerebrum on the opposite side." The regulating power of the cortex is much greater in man than in the lower animals. Dr. Pineles thinks that the quicker recovery in hemiplegia from paralysis of the leg over the arm is owing to the leg receiving more innervation from subcortical parts of the encephalon.

It has been noted that diseases of the cerebellum in man do not always lead to disturbances of movement. The observations of the last twenty years, in which clinical observation has been closer, have shown that injuries of movement are much more frequent. Observations upon cases of softening of the cerebellum or circumscribed hæmorrhage are too few to give a decided inference. On the other hand, in a number of observations in cases of deficiency of the cerebellum and scleroses, there is no doubt that even the most trifling clinical symptoms were wanting. This holds good especially of defects acquired in early life, in which we may assume that the want of the cerebellum is made up for by the compensating action of other parts of the encephalon. In those cases of complete deficiency of this organ which have been published within the last ten years, the symptoms almost without exception consisted in a reeling, trembling, and wabbling of the whole body.

W. W. IRELAND.

The Functional Cells in the Cerebral Cortex. (Journ. Comp. Neur., June, 1899.) Thompson, Helen.

This is a valuable paper, being the result of an investigation as to the total number of functional cells in the cerebral cortex of man, and the percentage of the total volume of the latter composed of nerve-cell bodies calculated from Karl Hammarberg's data, together with a comparison of the number of giant-cells with the number of pyramidal fibres. The most elaborate and reliable work upon the cells in the cortex of the human cerebrum, as is well known, is Hammarberg's *Studien über Klinik und Pathologie der Idiotie*. The conclusions reached by Miss Thompson are that—(1) the total number of functional nerve-cells in the cerebral cortex of the adult man is, in round numbers, 9,200,000; (2) the proportion of the total volume of the cerebral cortex of the adult man composed of functional nerve-cell bodies is only 1.37 per cent.; (3) the number of giant-cells in the cerebral cortex of man is almost the same as the number of pyramidal fibres passing to the spinal cord. These results are in some respects so startling that Miss Thompson enters into a detailed critical investigation of the methods by which they are reached, as well as of the results of other workers, and finds that there cannot be very large room for error. Prof. Donaldson appends a note on the significance of some of the results, especially as to the small volume of the nerve-cell bodies in the cortex. His conclusions may thus be stated:—(1) The weight of all the nerve-cell bodies in the human encephalon is less than 27 grammes. (2) When comparison is made of human encephala grouped according to race, sex, mental power, stature, and age, the differences in weight within each group are always more than twice that of the nerve-cell bodies, and hence these differences depend mainly on variations in the medullary substances. (3) Small variations in the mass of the nerve-cell bodies (though physiologically highly important) escape detection by the method of weighing, or may be masked by the greater growth of the medullary substance.

HAVELOCK ELLIS.

Rigidity of the Spinal Column. (*Journ. Nerv. Ment. Dis.*, Nov., 1899.)
Zenner.

A review of published cases and additional cases are given. The various theories of spinal root affection, arthritic nature, etc., are propounded, but the author inclines to the view that, in his own cases at least, the trouble was primarily of muscular origin.

A Case of Internal Hæmorrhagic Pachymeningitis in a Child of Nine Years, with Changes in the Nerve-cells. (*Journ. Nerv. Ment. Dis.*, Nov., 1899.) *Spiller, W. J., and McCarthy, D. J.*

The central nervous system is studied microscopically, and changes in the cortical and spinal cells and of the blood-vessels are described and figured. The authors give a *résumé* of the literature of this condition in childhood, and enter into a full discussion of the ætiology of pachymeningitis, the views of a large number of writers being adduced. The conclusion is drawn, partly from experimental evidence, that the new membrane is formed by cellular changes in a subdural blood-clot originating from the under surface of the dura. The degeneration in the nerve-cells may result either from the pressure of effused blood or disturbance in the nutrition produced by intense proliferation of new tissue.

Alveolar Sarcoma of the Right Middle Fossa of the Skull. (*Journ. Nerv. Ment. Dis.*, Nov., 1899.) *Lewis, M. J.*

The tumour arising from the dura caused a large depression in the temporo-sphenoidal lobe and involved certain cranial nerves. Right-sided anæsthesia of the face and tongue was produced. Diagrams and photographs are given.

Multiple Cavernous Angioma, Fibro-endothelioma, Osteoma, and Hæmatomyelia of the Central Nervous System in a Case of Secondary Epilepsy. (*Journ. Nerv. Ment. Dis.*, July, 1899.) *Ohlmacher, A. P.*

A single case presenting this remarkable combination of lesions is admirably summed up by the author as follows:—"Adult male—Secondary (Jacksonian?) epilepsy of comparatively recent origin—Spinal paraplegia, rapidly progressing—Terminal pneumonia. Anatomical Diagnosis:—Right lobar pneumonia—Acute splenic tumour—Fibro-endothelioma (psammoma) of cranial dura, pressing into Rolandic sulcus—Cavernous angioma of callosal gyrus, of optic thalamus, and of cervical spinal cord—Hæmatomyelia—Osteoma of spinal arachnoid." The paper is illustrated by macro- and micro-photographs, and the nature and origin of the neoplasms are discussed.

3. Physiological Psychology.

The Rôle of the Blood-supply in Mental Pleasure and Pain. (*Dubl. Journ. Med. Sc.*, Feb., 1900.) *Dawson, W. R.*

The researches of Flechsig, in particular, indicate that some two thirds of the cortex cerebri are employed neither in receiving sensory

impressions nor in sending motor impulses, but in "weaving into the complex tissue of thought" the infinite variety of sensations received—the brain is thus rehabilitated in the eyes of the world. The structure of the neuron has been shown by recent investigation to admit of vastly complex associations, and the inner structure of the cell body of the neuron, as revealed by Nissl's method, multiplies still further the potential powers of nerve structures and the marvel of the cortex cerebri. The rich blood-supply of the cortex, and the intimate relations between the capillaries and the nerve-cells, suggest an important functional rôle as belonging to the cerebral circulation. Dr. Dawson labours to establish a definite connection between the blood-flow and certain emotional states—of pain and of pleasure. He brings forward evidence to show that states of malnutrition associated with general anæmia are attended by mental distress, melancholia being the prevailing mental attitude. On the other hand, the blood-pressure in mental depression rules high. Anæmias rapidly produced and considerable in degree are often attended by states of mental exaltation, and in these states the blood-pressure rules low. To what actual rate of flow through the cortex do these physical conditions correspond? Here comes the great difficulty, for there is no trustworthy evidence at disposal, the physics of the question being exceedingly complicated. It is obvious that, other things being equal, a high blood-pressure must mean an increased rate of flow through the capillaries, but other things do not remain equal, for raised blood-pressure is attended by arteriole contraction and this may become so great that a given area is actually starved in its capillaries. The paper is well worth reading, but the subject needs more elaboration and is in too speculative a region at present. Meanwhile, as practical physicians, we should take note of the raised blood-pressure in melancholic states, of the low blood-pressure in exalted states, and in our treatment attack these attendant phenomena.

HARRINGTON SAINSBURY.

4. Ætiology of Insanity.

Biological Conditions of Families of General Paralytics [*Conditions biologiques des familles des paralytiques généraux*]. (*Arch. de Neur., Feb., 1900.*) Béchét, G.

Ball and Regis, in an article on this subject (*Encéphale*, 1883), came to the conclusion that general paralysis should be classed among the cerebral diseases and not among the insanities. Dr. Béchét, as a result of his study of forty families of general paralytics, comes to an opposite conclusion. These families were studied from four aspects:—(1) Longevity; (2) Natality; (3) Vitality; (4) Morbidity. The history of four generations (grandparents—children) was traced. He finds that:—(1) The duration of life is superior in the ancestors of general paralytics to that found in normal families. (2) The average of births is higher in the families of general paralytics than in normal families. In the second generation the natality is a little inferior. There is a tendency more pronounced among general paralytics to sterility than

in normal individuals. (3) Vitality is much inferior in the families of general paralytics to that observed in normal families; this is especially noticeable in childhood. (4) Morbidity, that is the frequency of various diseases in the families of general paralytics, presents notable differences from that observed in normal families. While the first place must be given to congestive (cerebral) heredity in the ætiology of general paralysis, insane heredity comes close upon it. General paralysis, therefore, takes place with the other insanities, and no special heredity is concerned in its production. Alcoholic heredity is also an important ætiological factor.

H. J. MACEVOY.

Heredity in General Paralysis, with regard especially to the Hereditary Transmission of this Disease itself [*De l'hérédité, et en particulier de l'hérédité similaire dans la paralysie générale*]. (*Ann. Med.-Psych., May and June, 1900.*) Ameline.

The writer's remarks are based upon the statistics of the admissions to the Parisian Asylum Sainte Anne from the beginning of 1895 to the middle of 1889—forty-two months. These supplied him with 238 cases, in whom heredity was absent in 104, doubtful in 14, and present in 120. In the latter total are included 97 cases in which heredity was said to be partial, *i. e.* in which mental disease existed in one relative, or in which alcoholism or nervous disease (epilepsy, hysteria, hypochondriasis, etc.), or grave nervous accidents (infantile paralysis, apoplexy, or hemiplegia, when not concomitants of very old age, etc.), occurred in the antecedents. In 23 cases, on the other hand, in which heredity was heavy or double, there was insane taint on both sides, or collaterals were engaged as well as ancestors. Only 34 cases of the partial class showed actual insane heredity. The word heredity is used by M. Ameline in a wider sense than that which is general in these countries.

In 7 of the grand total (238) there was like heredity, *i. e.* general paralysis followed general paralysis. In 4 of these father and son were attacked, in 2 mother and daughter, and in 1 maternal uncle and nephew. The author observes that in none of these cases was heredity of general paralysis the sole ætiological factor which could be assigned. In 5 alcoholism existed on the patient's part, and in one of these a paternal aunt was insane, while the father was a general paralytic. In another case of paternal general paralysis two uncles and an aunt died paralysed. In yet another such case the mother suffered from ordinary insanity. In one case there was a distinct personal history of syphilis. In others it was probable but unproved. None presented the form of juvenile general paralysis, the youngest of the second generation attacked being about thirty years old. In one case it is noted that general paralysis in the father appeared at thirty-seven (the son being then 13) and in the drunken son at 35.

M. Ameline details two other interesting cases. In one, two brothers at the respective ages of forty-one and forty-five became affected with what at first appeared to be chronic alcoholism, and turned out to be general paralysis. In another a drunken brother suffered from general paralysis, a sister from tabes on which supervened mental enfeeblement with absurd delusions of grandeur.

C. N.

5. Clinical Neurology and Psychiatry.

A Contribution to the Statistics of General Paralysis [Beitrag zur Statistik der allgemeinen progressiven Paralyse]. (Psychiat. Wochens., No. 18, 1899.) Svenson, F.

Mr. Svenson, in a series of general paralytics, found 12 per cent. suffering from melancholia, 28·5 per cent. from simple mania, 18 per cent. from acute mania, and 41·5 per cent. from dementia.

Compared with Kraepelin's results, they show the same number of the demented type but a large excess of the agitated and expansive forms, and a correspondingly small number of the melancholic type. Mr. Svenson thinks this may be due to a personal error. This explanation is surely not required, since the type of general paralytic is well known to differ clinically and pathologically in different districts. In 134 who died 97 males and 28 females were examined post mortem. The signs of general paralysis found differ in no way from the ordinary. The pia was not adherent in 20 of the cases. Pachymeningitis was present in 17 of the cases. In some English asylums this is practically never found, while in others it is exceedingly frequent. In only 4 of the pachymeningitis cases was there an alcoholic history. Gross softenings were found in 4 cases, while in 8 the cerebral vessels were atheromatous.

The average weight of the brain was found to be 1273·3 grms. for men and 1129 grms. for women; the weight was taken after dissection. This weight is compared with the normal weight and the weight in general paralysis as given by other authors.

Lung troubles were frequent, mostly hypostatic pneumonia, phthisis, and pleurisy. Mr. Svenson draws special attention to the frequency of chronic aortitis.

W. J. PENFOLD.

General Paralysis in the Later Years of Childhood [Fall von Dementia paralytica im späteren Kindesalter]. (Arch. f. Psych., B. xxxiii, H. 1.) Gaumpertz.

A lad of fifteen presented the symptoms of general paralysis together with infantilism (a combination noted by Fournier, Mott, and others). He had been an odd child, but had got through school work fairly and only broke down when put to learn a trade (apparently between fourteen and fifteen). At fifteen years he presented no signs of puberty and his build was childish. Owing to this fact the author holds that the case can be fairly called infantile. No history of syphilis could be obtained, and Gaumpertz seems to think it can be excluded; but the mother's only other pregnancy ended in abortion. Mother's father was a drunkard, and patient's father committed suicide. Patient had always been dull and odd, and perhaps considerable mental weakness had existed and been unnoticed. Gaumpertz inclines to the belief that a severe attack of influenza two years before the definite beginning of paralytic symptoms, together with the altered mode of life consequent on his apprenticeship, may have been considerable factors in the production of the illness, and he reminds us that Althaus has described dementia paralytica after influenza (*Arch. f. Psych.*, xxv). [It must be said that Althaus's two cases are not wholly con-

vincing. One case that author only seems to have seen when *in articulo mortis*, and there is no record of an autopsy; the other presented some conditions certainly very rare in general paralysis, for example, a degree of convulsibility so extreme that the production of the knee-jerk was followed by alarming consequences; and this latter case is recorded as incipient general paralysis which recovered.]

C. N.

Two Cases of Juvenile Organic Psychosis depending on Hereditary Syphilis [*Zwei Fälle jugendlicher organischer Psychosen auf Grundlage von hereditärer Lues*]. (*Zeits. f. Psych.*, B. lviü, H. 1.) Kaplan and Meyer.

In the case first described the patient broke down mentally at eleven years, and suddenly became worse after trifling injury to the head. Symptoms resembled general paralysis. The anatomical finds were endarteritis, with foci of softening, periencephalo-meningitis, interstitialis diffusa chronica anterior, and that rare condition called by Köppen periencephalitis angiomatosa (*Arch. f. Psych.*, B. xxvi, H. 99). [Köppen's patient was a man of thirty-eight, showing some physical signs of syphilis (denied), who suffered from symptoms resembling general paralysis. Köppen notes that the changes found in the brain were, on the whole, similar to those found in dementia paralytica, and that distinct syphilitic lesions were wanting.]

Kaplan and Meyer's second case became ill at fifteen years and died at almost nineteen. The symptoms seem to have been quite characteristically those of general paralysis. Post-mortem appearances were found, both macroscopic and microscopic, perfectly typical of general paralysis, but besides, the authors note the existence in the pia of bodies having the structure (finely granular with evident indications of breaking up of nuclei) characteristic of infective granulation tissue, and these they believe to have been truly gummatous.

C. N.

A Case of Juvenile Tabes [*Demonstration eines 13-jährigen Mädchens mit den Symptomen einer incipienten Tabes*]. (*Zeits. f. Psych.*, B. lxxv, H. 2 u. 3.) Kutner.

In this case the sufferer was a girl of thirteen years, whose illness had commenced at the age of ten. Her mother suffers from advanced tabes dorsalis; her father has died of progressive paralysis in an asylum; he contracted syphilis two years before marriage. The girl's illness began with lancinating pains in the legs, difficulty of micturition, and inequality of pupils with active light-reflex. At the time of demonstration she showed paralysis of light-reflex, girdle zones of hypæsthesia and hypalgæsia round the thorax, slight ataxy of the lower extremities, with bladder troubles and lively knee-jerks.

C. N.

A Case of Juvenile General Paralysis [*Un cas de paralysie générale juvenile*]. (*Ann. Med.-Psych.*, May and June, 1900.) Marchand.

In this case there was no hereditary or personal history of syphilis. The patient was nineteen years old. He had been a boy of strong memory and unusual success at school up to the age of fifteen, when

his memory began to fail. He made great efforts, but fell behind his coëvals, and at seventeen broke down at his (Baccelaureat) examination. He then met with a railway accident in which he received a tolerably severe scalp wound, but apparently no further injury to the head. After this his gait became much engaged, his speech much embarrassed, he became generally tremulous, he grew incoherent and began to entertain delusions of grandeur and of persecution. He took to accumulating rubbish and he became unclean. When exhibited he appears to have been in a happy demented state, and to have shown physically indications of general paralysis with an unusual accentuation of ataxy.

C. N.

Suicide in General Paralysis [*Contribution à l'étude du Suicide dans la Paralyse générale*]. (*Ann. Med.-Psych., March and April, 1900.*)
Monestier.

The writer gives details of three original observations. In the first, the patient before admission threw himself across a railway line, and after admission threw himself out of a window; but on each occasion it was doubtful how far he was animated by any real suicidal intent. This patient was generally exalted, though he had from time to time delusions of negation. In the second true delusions of culpability existed, and caused the patient to attempt suicide by drowning. In the third the patient showed no tendency to suicide. He had been arrested for shop-lifting. He showed the usual signs of general paralysis and had grandiose delusions of a silly character (was very rich, a great singer, had three voices—a baritone, tenor, and bass, etc.). He was very violent, and ceaseless in his clamour for discharge. Quite unexpectedly he hanged himself in his cell one night. Post-mortem appearances verified the diagnosis of general paralysis. Dr. Monestier further refers to the case reported by Dr. Sizaret ('*Ann. Med.-Psych.,*' 1892). [This is probably the most remarkable case of suicide in general paralysis on record. Consecutively to what was diagnosed as tabes the patient developed general paralysis, with at first exaltation, and then hypochondriac terrors and delusions of culpability. The latter persisted, and ideas of persecution, conspiracy, and mystic influence also appeared. During a short sojourn at home he attempted suicide by shooting himself with a revolver. In the asylum, he wounded himself in the chest with a table knife which he had secreted, and eventually destroyed himself by thrusting a piece of green wood into the pericardial sac.]

C. N.

Senile Dementia and Marriage. (*Alien. and Neur., Oct., 1899.*)
Kiernan, J. G.

He gives firstly the symptoms of senile dementia, as loss of memory for recent events, irritability, garrulity, restlessness, and a tendency to wander, and occasionally erotic manifestations which may lead to unsuitable marriages and to perverted sexuality. He further states that acute insanities coming on in old age must be carefully distinguished from senile dementia, and in doing so the physical signs of senility must be taken into account. This may be of medico-legal importance.

Dr. Kiernan quotes an interesting case in which he gave evidence. An old man who had made a fortune during a life of hard work began to decline mentally and physically. He gave up business, and became slovenly and childish, and would appear semi-nude in public. His literary tastes, religious habits, and family affection all changed. He became restless and wandering, and determined to go to Europe. During his tour in Europe he spent his money lavishly on useless trash. Soon after his return his wife died, on which occasion he sent for a fiddler to play merry tunes. He then proposed to an old servant, who pronounced him mad. He showed physical signs of senility. No conservator was appointed, because publicity was feared. He then married again. His second wife, previous to her first marriage, had had an illegitimate child and had been immoral for gain, which facts were unknown to the old man. The marriage was partly brought about by undue influence used over the groom by the uncle of the bride, and by his misrepresentation of the character of the bride. On finding that the bride was of bad character the old man left her, and she entered suit for maintenance and to set aside certain trust deeds. A decree of nullity of the marriage was, however, obtained for the following reasons:—(1) One of the contracting parties was insane. (2) Undue influence had been used to effect the contract. (3) Fraud was also used, in as far as the uncle of the bride represented her as being a suitable wife.

Judge Fully was of opinion that what applied to contracts in general applied also to the marriage contract, and that consequently the above marriage was no contract at all.

W. J. PENFOLD.

Mental Dissolution. (*Lancet*, Feb. 10th, 1900.) *Savage, G. H.*

Dr. Savage points out that dissolution is not exactly the reversal of evolution—that it simply means separation into constituent parts. In speaking of the duration of mental dissolutions, he states that a permanent mental dissolution, following on repeated transient mental disturbance, will have as its characteristics those of the transient states. The signs of dissolution enumerated in the paper are simply the commoner mental symptoms. The dissolution of mind occurs in different cases on different lines; single faculties may be picked out and may decay—*e. g.* memory or the inhibitory faculties,—and the nature of the dissolution is determined by the inherited and acquired peculiarities of the whole nervous system.

Individual symptoms are discussed, but the subject is dealt with in exceedingly general terms.

W. J. PENFOLD.

Pellagrous Insanity. (*Arch. di Psichiat.*, vol. xx, fasc. 4.)

This number contains a report of the deliberations of the National Congress of the Provincial Commission on Pellagra, held in April, 1899. Since this formidable disease is known to be owing to intoxication from a fungus, it would seem to be easy to prevent it. Nevertheless it is still common in Northern Italy. Professor Seppilli calculates that there are about 2320 persons affected with pellagra, of whom about 5 per cent. become insane. The difficulty evidently is to get the poor people to give up the use of damaged maize. Some members of the Congress

think that the only way to put an end to the disease is to abolish the cultivation of Indian corn altogether. This seems an extreme measure, especially as the prevalence of pellagra is diminishing. Maize is a very productive grain; and though the taste is seldom agreeable to those not brought up to it, it is much relished in North America and in India, and forms a very nourishing food. We do not hear of pellagra in these countries, but a form of this disease appears in Egypt. It is proposed to abolish the sale of diseased grain, and to try to induce the peasants to cook the preparations of maize more thoroughly. In Egypt it has been noted that of those affected with pellagra, about 39 per cent. were unaffected in mind, 24 per cent. were stupid and apathetic, 31 per cent. were melancholic, and 3 per cent. were affected with secondary dementia, loss of memory, ideas of persecution, poisoning, or suicide.

W. W. IRELAND.

Pellagrous Insanity with Criminality [*Pellagroso criminale*]. (*Arch. di Psichiat.*, vol. xx, fasc. 4.) *Bresadola and Cobelli*.

Drs. Bresadola and Cobelli describe a patient suffering from this disorder, who had been put into prison. He was a man *æt.* 52 years, whose mother and uncle had suffered from pellagra. He presented the symptoms of discrete erythema on the back of the hand, the tongue red at the margin, capillary injection upon the point of the nose, stupidity, and an air of distress. He suffered from mental confusion and headache. A depression was found in the cranium and the left temporo-parietal region, with a cicatrix, the result of a fall. There was a slight inequality of the pupillary reaction to light. The man was transferred to the hospital, where he was found to be in a depressed and fatuous condition. The movements were uncertain and tremulous; he frequently required to be fed by force, was restless and would not stay in bed during the night, and wandered about the room.

The author describes the leading characteristic symptoms of pellagrous insanity as obtuseness of the moral sense and a greater irritability of temper, so that a trifling insult or threat makes him lose all measure of temper. A pellagrous lunatic believes himself damned because he has missed going to a mass, or is in despair because a companion has made game of him. This answers to the general law that a weak organ is more easily irritated and hurt. Perversion of the affective faculties is rare with the pellagrous.

W. W. IRELAND.

Self-accusations [*Beitrag zur forensischen Würdigung der Selbstanklagen von Geisterkranken*]. (*Allgem. Zeits. f. Psychiat.*, B. vi, H. 4.) *Kreuser*.

In no quarter is the skill of the physician more clearly tested than in dealing with criminals who may or may not be of unsound mind; and perhaps the most perplexing of all are the self-accusers. It is rare that any crime is committed, which strikes the popular mind, without some persons giving themselves up to the police, stating that they are the guilty parties. It is probable that some of those who suffered for witchcraft in the old times were insane persons addicted to self-accusation. In the above paper Dr. Kreuser has described in detail a case in

which the habit of self-accusation was the principal feature in the mental derangement.

E. M—, æt. 33 years, had two full brothers and sisters and three half-brothers and sisters who presented nothing abnormal, but his father's brother was insane. When three years old he suffered from inflammation of the brain. He was said to have been an ill-behaved boy, but got on pretty well at school. He learned the trade of a butcher, and took early to drinking, which induced him to steal from his father. During the time of his military service he twice deserted, for which he was punished. After a weak attempt at suicide there was an inquiry made as to his mental state, but the military surgeons did not make him out insane. At the end of his military service he was sent to America, but soon came back, saying that he had been put into an asylum at Cincinnati after heavy drinking. He returned twice more to America. On coming back to Germany the third time he was, in 1893, imprisoned for stealing. From 1893 to 1898 he appeared before the courts seven times for larceny, he himself being the accuser. The authorities began to be doubtful of these accusations, and on one occasion he accused himself of arson, but was set free, as his confession did not agree with the facts of the case. In 1895 he gave detailed confessions of three fires of which he was the originator. These were found not to agree with the known circumstances. He then gave himself up on a confession of a murder, saying that he had robbed a man, stunned him, and thrown him into a river. The authorities were doubtful whether such a crime had ever been committed, when he got angry because he was not sentenced to death. A physician employed by the court to examine him declared the man deeply insane, on which he was committed to the asylum at Schussenried. He was found to be of good stature, but very much emaciated. No anomalies were noticed in the shape of the head. He complained of shortness of breath and violent headaches. He was troubled with persistent sleeplessness, which he attributed to the pangs of conscience and to being persecuted by spectres all night, whom he described both in words and writing. As soon as he lay down at night to sleep five figures came from behind. The first was the man he had murdered, who spoke in a whimpering tone, as he had done when he struck him down. The second was a person who had been, though innocent, seized for arson which E. M— had committed. Then there were the executioner and his two assistants. The last three wore red garments, and carried everywhere with them a chest with their tools. At first the only figure that haunted him was the murdered man, who followed him even to America, and hunted him from place to place; the second figure appeared later, and the three others about the end of 1896. After he had returned from the Criminal Court under the impression that one of his dreadful crimes had come to light, he said that it was his conscience that drove him to those repeated accusations. He got angry and abusive when the truth of his confessions was questioned. His stories were plausible and circumstantial, and he could not be involved in contradictions. He thought that if he were punished he would be free from the pangs of conscience. These were the principal features of his insanity; otherwise his intellect was

logical enough, and he was generally quiet and orderly. He was angry at being thought insane. This was a clear case of paranoia.

W. W. IRELAND.

A Case of Family Periodic Paralysis. (*Amer. Journ. Med. Sc.*, Feb., 1900.) Putman, J. J.

The author makes the case, which has come under his own observation, the subject-matter of a discussion of the condition as a whole. The case is very fully described, and portrays the principal points of the clinical position, *e. g.* in a severe attack the completeness of the paralysis—"if the head slips off the pillow, or the arm off the bed, it must remain until some one comes to replace it." In the history there is one point of great interest, *i. e.* that, before the condition became developed, a weakness was noticed in the group of muscles which are now first affected in the paralytic seizure.

The second part of the paper contains an interesting exposition of an original causal theory. The ideas are full of ingenuity and not without much proof in their favour. There is still, however, a beyond; if the disturbance of the normal balance between inhibition and its opponent influence be the actual change, what morbid influence is at work to produce this? The author suggests that it is to be found in some chemical alteration, either in the nervous system or the parenchymatous muscular tissue. The paper contains many instructive points bearing on the question of the altered relationship between these two great forces which are the outcome of nervous action.

G. A. WELSH.

Contribution to the Study of the Relationship of Mental Confusion to Infectious Disease [*Contribution à l'étude des relations de la confusion mentale avec les maladies infectieuses*]. (*Pro. Méd.*, Sept. 23rd, 1899.) Stanceleanu et Baup.

A young man *æt.* 27, with a strong neurotic taint derived from his maternal ancestors, has been addicted to drink sufficiently to have produced headaches, hallucinations of vision (animals), and the sensation of falling down precipices. He gets an attack of scarlet fever and becomes delirious. Otitis media supervenes, and the patient becomes stuporose. Concomitantly with the recovery from the otitis the stupor passes off, and the patient ultimately recovers completely.

W. H. B. STODDART.

Idiocy resulting from Hypertrophic Nodular Scleroses [*Idiotie symptomatique de Sclérose tubéreuse ou hypertrophique*]. (*Prog. Méd.*, Oct., 1899.) Bourneville.

Bourneville here records one of these cases—the seventh of his own series. With some history of neurosis in the family, the patient was apparently normal till six months of age. In the following year the patient had epileptic fits almost daily. The fits gave place at the age of seventeen months to attacks of crying out—like some animal, according to the mother's account. These cries disturbed the patient's sleep. Grinding of the teeth developed later, and there was apparently some blunting of the senses of taste and smell.

The child was never able to stand properly; at its best attempts it

swayed to and fro. The power of grasping objects properly never developed. She was dirty in her habits; her attention could never be fixed; there was never any sign of intelligence, and facial expression was absent. The patient died at the age of two and a half years from bronchitis.

Post mortem there were found numerous nodules of sclerosis on the surface of both cerebral hemispheres and in the lateral ventricles. Histologically, it is found that the nodules always start in the neighbourhood of a blood-vessel as a number of much-enlarged spider-cells. A hyperplasia follows, which leads to the formation of the nodule.

There is a table of ten other cases of the disease, and there are accurate measurements of the head during life at different ages, and after death.

W. H. B. STODDART.

Nervous Symptoms in the Early Stages of Chronic Bright's Disease [*De quelques accidents nerveux observés au cours de petit Brightisme*]. (*Prog. Méd.*, Dec., 1899.) *Fleury*.

This is a record of two cases occurring in the author's practice. The first is the case of an active man of sixty-six, who came under observation for mental confusion, loss of memory, difficulty of articulation, and a trivial amount of right hemiplegia. Albumen was found in the urine, and the patient was treated dietetically for chronic Bright's. All his nervous symptoms rapidly cleared up under this treatment.

The second case is that of a married woman *æt.* 45, who suffered from pruritus and anæsthesia vulvæ. As a result she developed the delusion that her husband had formed an attachment to another woman, and that he had given the patient poison to produce these symptoms. Albumen was found in the urine, and she, also, was treated dietetically and subsequently with pilocarpine, with the result that she rapidly recovered her normal mental condition.

W. H. B. STODDART.

Mental Excitement and Mental Depression in Relation to Epileptic Attacks [*De quelques phénomènes d'excitation et de dépression mentales en relation avec l'attaque d'épilepsie*]. (*Prog. Méd.*, March 10th, 1900.) *De Fleury*.

Dr. de Fleury gives notes of cases illustrating the marked modifications which take place in the affective and intellectual states of epileptic patients before and after the attacks. In one case, that of a barrister, during the period preceding an epileptic attack the patient was excited, insolent, exalted, pointing to some irritation of the grey matter; while after the attack he betrayed marked asthenia, being depressed, self-accusing, fearful, etc. Such cases, although one frequently sees the opposite conditions, are often noted, and are of much interest concerning the question of the genesis of affective phenomena. Soury, Janet, etc., favour the view that the emotional state depends upon some intellectual state, some idea; Large, James, Dumas, etc., believe that the emotional state is primary. De Fleury is not prepared to reject either hypothesis as false, but he gives numerous instances in which, under the influence of an elevation or a lowering of vital activity, emotions of joy or anger, fear or depression appear, giving rise to a related or corresponding intellectual state, to "ideas of justification" (Malebranche).

While Janet and others who have especially studied hysterics cannot fail to adopt the view that a fixed idea is the precursor of the affective state, those who observe neurasthenics, melancholics, and epileptics inevitably must tend to admit the priority of the affective state.

H. J. MACEVOY.

Psychical Disorders in Malaria [*Sur les troubles psychiques d'origine paludique*]. (*Gaz. des Hôp.*, Dec., 1899.) Tikanadsé.

Three cases with notes are given, and the author refers to the work of other writers (Pasmanik, etc.). Melancholia is more frequently referred to as the form of insanity associated with malaria; the onset usually occurs after feverish attacks.

Psychical disorders of malarial origin are rare, but of 444 soldiers under treatment with malaria Tikanadsé had one case, and out of 1416 patients treated in the district of Osourghethy, two cases of insanity. These three cases are—

(1) Woman æt. 26, hereditarily predisposed to nervous disorder, who developed mania with delusions of suspicion.

(2) Woman æt. 23, affected with mania (excitement, delusions of identity, hallucinations, etc.).

(3) A soldier who after a short period of excitement became depressed, and then more or less stuporous.

All these cases had fever at the onset; they suffered unmistakably from malaria, and recovered from their insanity fairly quickly.

The prognosis is generally good in these cases, and the best form of treatment is by hot baths and the administration of quinine (large doses).

H. J. MACEVOY.

Classification of Mental Diseases [*Classification des maladies mentales*]. (*Rev. de Psychiat.*, Feb., 1900, No. 2.) Toulouse, E.

Dr. Toulouse shows that the various classifications suggested by alienists are not logical, being based on a variety of factors, and that with our present knowledge symptoms can be our only guide in classification, *i. e.* psychical symptoms. Physical signs in their relations with various insane conditions are not sufficiently defined to help us in differentiating fundamental groups, but may help in establishing secondary divisions. If we accept symptoms as characters of our classification, we must accept them alone. Moreover in establishing the first division the most important character must be utilised, and for the first subdivision the character next in importance to that, etc.

The new classification which Dr. Toulouse proposes is, therefore, symptomatic. Mental diseases (mania, melancholia, etc.) may also be grafted with more or less different characters on various intellectual bases. *Psychias* is the name he gives to the fundamental mental states, and *psychoses* to the morbid forms.

In the intellectual basis, all faculties, and especially judgment, must be considered. Accepting the definition of insanity as a disorder of the intellectual faculties which prevents the individual from living in society, it follows that this intellectual basis is never intact in insanity. Obsessions and impulsions depend upon morbid emotionalising; hallucinations to which patients give credence presuppose a disorder of the mechanism

of sensation and judgment ; and in melancholia without delusions there is disorder of judgment and feelings. So that psychia means disorder of the basis, just as psychoses signifies morbid forms.

As we cannot conceive the possibility of *increase* or *exaggeration* of judgment in insanity, and as in the case of the memory, emotions, and the will, exaggeration is accompanied with perversion, we need only consider as disorders of the fundamental faculties—diminution and perversion ; that is, the psychia may present itself as intellectual weakness (*menippsychia*) or simple disorder (*dyspsychia*). This determination must be made in moments of calm or semi-lucidity.

The morbid forms may be divided by two principal characters, according to the emotional tone prevailing (expansion or depression), or according to the degree of cohesion of ideas (coherence and incoherence). The more important, or more fixed of these characters—the emotional state—is selected for the first division of psychoses ; the second character (coherence) is used in the subdivision.

Although the fundamental morbid species of this classification in some instances do not correspond to well-defined clinical types, they constitute provisional symptomatic groupings, useful for purposes of study, and they offer this advantage that they do not prejudge the real nature of the diseases, which will some day be more clearly understood. The classification is also simple and logical. H. J. MACEVOY.

Transitory Mental Disorder in Hemicrania. (*Alien. and Neur.*, Jan., 1900.) V. Krafft Ebing (translated by McCorn).

The author gives a detailed account of the cases, previously recorded, which bear on this subject, and in addition a description of cases he has personally observed. His aim is to determine the actual relationship between the psychical disorders which accompany hemicrania and the hemicrania itself ; whether it can be said that these manifestations are the outcome or allied to the hemicrania ; or whether the whole condition is an epileptic manifestation. There is no case quoted where an inference could be drawn that would give actual proof that the mental disorder and the hemicrania were the outcome of the same condition. On the other hand, there is abundant proof, in the minority of cases not so clear, in the majority of the cases quite decided, that the ophthalmic migraine and the various psychical states are manifestations of epilepsy, or hysteria and epilepsy combined. In some of the recorded cases the actual diagnosis was not made for some years, the condition originally looked like an attack of migraine with ophthalmic accompaniments, but as it developed stigmata of epilepsy showed themselves. These were distinct loss of consciousness, and the classic attacks of *petit* or *haut mal* with pre- or post-epileptic excitement.

Viewing the clinical evidence as a whole, most of it is unmistakably against the existence of such a condition as the title of the paper ; only 3 cases are quoted out of 21 where there is any real connection between the mental symptoms and migraine, particularly ophthalmic. In these cases there are phenomena closely associated with an epileptic state, and in the author's opinion they are psychico-epileptic

types. He is inclined to agree with Féré that ophthalmic migraine is an epileptic manifestation.

G. A. WELSH.

Narcolepsy: a Contribution to the Pathology of Sleep. (*Amer. Journ. Med. Sc.*, Feb., 1900.) *McCarthy, D. J.*

This is a critical examination of the term "Narcolepsy" to determine how far it can be called a distinctive neurosis, and how far it ranks only as a symptom of an existing pathological state. The author, while stating that the published work of Dana points to its existing as a distinct neurosis, from his own experience negatives such a theory, and states that if a careful examination of each case be made, the clinician always finds proof of an already existing definite lesion. He says that the chief causes are hysteria, epilepsy, and toxæmic states, and to exemplify these he quotes several cases of great interest. They give abundant proof that a diagnosis cannot be made till the fullest inquiry and examination has been made into the history and morbid phenomena of the case. Altogether he brings forward strong negative evidence to support his views. The first case mentioned seemed, on primary examination, to be an example of the idiopathic state, till subsequent examination revealed hysterical hypæsthesia.

In his differential diagnosis no new points are brought forward, his one aim being to teach that an exhaustive examination of every suspected case is necessary. He quotes no case where, in his experience, one of the above causes was not made out, but mentions that Dr. Weir Mitchell had such a case where post mortem, no change was found.

G. A. WELSH.

Diseases of the Optic Nerve in the Early Stage of Multiple Sclerosis [*Ueber Erkrankungen der Sehnerven im Frühstadium der multiplen Sklerose*]. (*Monats. f. Psych. u. Neur.*, Feb., 1900.) *Bruns and Stilling.*

The writers look first at the history of the eye symptoms of the above disease. Their diagnostic value was partly recognised in the sixties. Oppenheim, in 1887, emphasised the fact that optic neuritis, accompanying a spastic spinal paralysis, was frequently a sign of multiple sclerosis. He pointed out, in 1894, that optic neuritis was occasionally the first sign of multiple sclerosis. A series of cases are given to illustrate this point. In the first case, headache, giddiness, vomiting, and fainting occurred, but no certain signs of multiple sclerosis, then a double optic neuritis and papillitis arose with marked amblyopia; this disappeared and the visual acuity returned to normal in one eye and to four sixths in the other; the neuritis was followed by definite signs of the essential disease. The second case showed as a first sign a unilateral papillitis with almost total blindness, followed by normal visual acuity and normal appearance of the fundus; other symptoms did not arise for two years. This case showed later Brown-Séquard's symptoms. The third case was a retro-bulbar neuritis without papillitis; the dimness of vision came on gradually and was attended with dyschromatopsia. The visual acuity subsequently returned to normal almost. Years intervened before other symptoms

arose. Then follow nine cases in which the neuritis was not observed by the writers of this paper, but simply taken from the history. In the first of these a papillitis preceded the other symptoms by five years. In the next case two attacks of amblyopia occurred, one affecting each eye; the amblyopia improved only slightly. The first attack of amblyopia took place four years before the other symptoms of the disease developed. In the next case a left-sided optic neuritis preceded the first weakness of the leg by eight years. Other cases are given in which the interval between the eye symptoms and other definite signs of multiple sclerosis varied greatly and was as long as eleven and twelve years. It is considered that, even in these cases with such long intervals, the neuritis was an early symptom and not a separate disease.

W. J. PENFOLD.

On Sensori-motor Palsies of the Musculature of the Face, with Remarks on the Ocular Palsies of the Early Stages of Tabes. (Journ. Nerv. and Ment. Dis., Oct., 1899.) Fraenkel, J.

As long ago as the times of Bell and Majendie an interdependence between motor and sensory nerves was recognised. Bell even supposed the fifth nerve to be a motor nerve of the face in some respects. Attention has been more recently drawn to this interdependence by some experiments by Mott and Sherrington in this country, and by Korniloff on the Continent, which went to show that an animal was unable to move a limb from which the posterior spinal roots had been severed.

In the above paper, Fraenkel discusses the question whether some of the ocular palsies of tabes may not be due to disease of the fifth nerve. The discussion was primarily suggested by two cases of tabes with ataxic overaction of one side of the face. Twenty-two other cases of tabes are tabulated, and the author concludes that disease of the fifth nerve may interfere with motility of the face. In the cases under consideration the kinæsthetic sensibility of the face was usually found to be at fault. The effect of disease of the fifth nerve upon the motility of the eyes appears to be similar to that upon the motility of the face, and some of the ocular palsies of tabes are probably sensori-motor palsies.

W. H. B. STODDART.

Contribution to the Study of Babinski's Sign—Extensor Response to the Plantar Reflex [Contribution à l'étude du "phénomène des orteils" de Babinski]. (Gaz. des Hôp., Nov. 23rd, 1899.) Cestran, R., and Le Sourd.

While a number of observers have supported the view that Babinski's sign is pathological and reveals some disorder of the pyramidal tract, Schüler, Cohn and others deny this, and hold that it may be met with in hysteria and normal individuals. Cestran and Le Sourd have studied the plantar reflex in several hundred subjects, some healthy, others suffering from various diseases (not nervous), and others from nervous affections. Their conclusions are given in this article.

They have never met with an extensor response in a normal adult. (In children under a year it is perhaps the rule.) In organic hemi-

plegia there is nearly always an extensor response; in hysterical hemiplegia the plantar reflex is normal. The presence of hemianæsthesia may interfere with the phenomenon in the former.

Babinski's sign is more faithful, more delicate than ankle-clonus, in revealing an alteration of the pyramidal tract in cases of chronic paraplegia. It is found in disseminated sclerosis, syringomyelia with involvement of lateral columns, cases of cerebral diplegia, etc. When polyneuritis of the lower limbs is present the plantar reflex is absent, so that no extensor response may be found in cases of degeneration of the pyramidal tracts if polyneuritis be superadded.

The presence of Babinski's sign may be the only one to indicate an affection of the pyramidal tract associated with locomotor ataxy or general paralysis, for the knee-jerks are absent on account of posterior sclerosis. Hence also we find it in Friedreich's disease.

These results fully confirm the original views of Babinski.

H. J. MACEVOY.

Sensory Disturbances in Epilepsy and Hysteria. (*Journ. Nerv. Ment. Dis.*, Nov. 18th, 1899.) *Fisher, E. D.*

The author found bilateral anæsthesia in both conditions, which was of a permanent character and probably of cerebral origin.

Interesting Hysterical Phenomena—a Transfer of Tactile to Visual Sensations. (*Journ. Nerv. Ment. Dis.*, Aug., 1899.) *Fry, F. R.*

Dr. Fry details a reproduction of Kineb's experiments in a hysterical girl æt. fourteen years, who had been the subject of undoubted hysterical manifestations. He seems to have been at pains to exclude all sources of fallacy in his investigations.

The girl being directed to look at the wall (a plain white surface) on the left side of her bed and name the objects she would see there, was able to recognise various figures traced on her anæsthetic (right) arm (triangles, squares, letters, numerals, etc.), and various simple objects placed in the right hand (match-box, silver dollar, etc.). So that while the subject could not recognise in the ordinary way certain sensory impressions (tactile), she could interpret them by the aid of another sensory function (visual).

H. J. MACEVOY.

On Loss of the Knee-jerks in Gross Lesions of the Præfrontal Region of the Brain. (*Glas. Med. Journ.*, Nov., 1899.) *Williamson, R. T.*

In three out of five cases of præfrontal lesion both the knee-jerks were lost; one of these was from bilateral præfrontal sarcoma, the other two were due to right præfrontal disease. He looks at the literature of the subject shortly, and shows that this sign occurs in about 20 per cent. of the cases.

W. J. PENFOLD.

Retardation of Pain-sense in Locomotor Ataxy. (*Journ. Nerv. Ment. Dis.*, July, 1899.) *Muskens, L. J. I.*

A zone of retardation of pain-sense on the border of the analgesic areas is stated to be always present and an early symptom of the disease. This important statement is based upon an examination of thirty-one cases.

Meralgia Paræsthetica (Roth), with the Report of Ten Cases. (*Journ. Nerv. Ment. Dis.*, Jan., 1900.) *Müsser and Sailer.*

Meralgia paræsthetica is "a disturbance of sensation on the external surface of the thigh, characterised by various forms of paræsthesia, associated with dissociation and more or less diminution of sensation." Ninety-nine cases have now been reported, which are all tabulated in the present paper, and there is a complete bibliography.

It occurs more frequently in men than in women and between the ages of thirty and sixty. It is sometimes hereditary, there is a frequent history of neurosis in the family, and in a few cases the father and even the grandfather have suffered from the same condition.

The symptoms are these:—In the region of the femoral external cutaneous nerve, the patient suffers from various paræsthesiæ—tingling increasing to actual pain, a feeling of numbness, cold, or wet, or of aching. Sometimes there is tenderness of the part; and there is always some loss of sensation, especially to pain and to electric stimulation. The pain is increased by pressure in the region of the anterior superior iliac spine, and in women it is increased during menstruation. Patients usually complain of one thigh only, but careful examination, as a rule, reveals also some disturbance of sensation upon the opposite side.

Differential diagnosis must be made from *akinesia algera* and *apraxia algera*, in which there are hysterical stigmata and more irregular distribution of the sensory disturbance which is purely subjective.

Intermittent claudication occurs later in life or (according to Charcot) in diabetics. Here there is rapid fatigue of the limb, increasing to paræsthesia and pain in the leg at first, and later, in the thigh. It is associated with arterial sclerosis.

Meralgia paræsthetica may get well in a few months, but, as a rule, it must be looked upon as a chronic disease with remissions, ameliorations, or exacerbations. It can, however, never seriously affect the general health of the patient.

The treatment is unsatisfactory. Most success has been attained by the application of the faradic wire-brush. Should this and other means of counter-irritation fail, the patient being in good general health, recourse should be had to resection or stretching of the external cutaneous nerve.

The attributed causes of the disease are so various that it is difficult to fix upon the right one. The favourite view is that it arises from some traumatism to the external cutaneous nerve, which runs a very superficial course, and is, therefore, liable to injury.

A somewhat large proportion of the patients have been soldiers or volunteers, and one suggestion is that the disease is caused by pressure of a heavy army belt on the nerve, or by its being struck by a dangling sword.

In the one case which came to autopsy, there was a fusiform swelling of each nerve where it crossed the crest of the ilium.

W. H. B. STODDART.

Hysterical Breast with Melanodermia of the Nipple [*Sein hystérique avec mélanodermie du mamelon*]. (*Extrait des comptes rendus des Séances de la Société de Biologie, Oct., 1899.*) *Féré, Ch.*

This unusual case concerns a woman thirty years of age, subject to hysterical manifestations since the age of puberty, predominating on the left side (neuralgia, hemianæsthesia, tender spots about the articulations of the limbs). Married at twenty-two, she has had three abortions, and was subject to painful swellings of the breasts at the menstrual periods. Four years ago she had a fall, followed by insomnia, and on the fifth day by pain in the left breast with tenderness. This pain was accompanied a few days later with a brownish tint of the skin of the breast; the periodical swelling became almost confined to the left breast, which was now the seat of severe paroxysmal pain occurring several times daily. Becoming deeper with each menstruation, the skin of the nipple and areola assumed a deep brown colour like that of a negro's skin.

Under hydro-therapy the pains disappeared, but the pigmentation remained three years later.

H. J. MACEVOY.

Note on the Mechanical Excitability of Nerves in the Insane [*Note sur l'excitabilité mécanique des nerfs chez les aliénés*]. (*Extrait des comptes rendus des Séances de la Société de Biologie, Oct., 1899.*) *Féré, Lutier, and Dauzats.*

Biernacki's sign, analgesia of the ulnar nerve, although found in tabes dorsalis and general paralysis, is found in many cases of insanity, and is not in any way characteristic. Lutier and Dauzats find that the same is true with regard to the mechanical excitability of nerves in various forms of insanity. Anæsthesia may be found in some half of the cases taken at random and excluding general paralysis, but motor reaction is never absent. This holds with regard to their experiments with both the ulnar and external popliteal nerves. It therefore affords little or no help in diagnosis.

H. J. MACEVOY.

Two Cases of Nerve Deafness. (*Polyclinic, Jan., 1900.*) *Grant, D.*

Both these cases seem to have been hysterical, and became more or less spontaneously well.

(1) Woman, 18 years of age, had bilateral deafness, coming on gradually for three years, but suddenly worse after tooth-extraction. Rinne's test was positive. In air-conduction maximum loss was for *deep* tones. Bone-conduction was diminished (mastoid). Under treatment there was little or no improvement, but she rapidly got well two years later when laid up in bed for a fortnight with a complication of ailments.

(2) Woman, aged 40, who for years had suffered with chronic suppurative otitis of the left ear, had become suddenly deaf with the right ear. She had signs of nerve-deafness, but the hearing for the highest-pitched tones was comparatively well preserved (bone-conduction diminished, Rinne's test positive). In testing with tuning-forks with air-conduction, deafness was most marked for middle tones. She had in addition comparative right hemianæsthesia, diminished pharyngeal

reflex, and highly exaggerated knee-jerks. She was ordered valerian internally, and very rapidly improved. H. J. MACEVOY.

Psychical Disorders in Huntington's Chorea (Hereditary Chorea) [Des troubles psychiques dans la Chorée dégénérative]. (Arch. de Neur., Féb., 1900). Ladame, P.

Dr. Ladame excludes from consideration all cases of chorea (e.g. chronic chorea) which do not conform to the type described by Huntington in 1872; the three leading characters of hereditary chorea being: (1) The disease is hereditary. (2) The onset of chorea begins in the usual way; the disease becomes aggravated, and ends fatally. (3) The affection does not begin in youth, but generally between the ages of thirty and forty. He gives the notes of a typical case with marked heredity, general choreic movements, affection of speech, etc.

The leading psychical symptoms were:—Irritability, outbreaks of violence, threats of suicide, gradual intellectual enfeeblement, childishness.

Reviewing the work of other observers of this affection, he concludes that irritability of character is the essential and fundamental feature of the psychical condition, and often accompanies the onset of the disease. It is commonly associated with progressive enfeeblement of the mental faculties. Although these patients are often said to attempt suicide, a careful examination of the notes of recorded cases corroborates his own view that threats of suicide are common, but attempts rare. Melancholia is not so very common at the onset. The mental enfeeblement is accompanied with progressive loss of memory, and frequently ends in complete dementia. Attempts have been made to relate this dementia with general paralysis, but there is a fundamental difference in the two conditions from an ætiological point of view, and the pathology is different. Of the pathological anatomy of hereditary chorea, Ladame intends to treat at some future date.

H. J. MACEVOY.

Association of Verbal Images and Aphasia in Children [Les associations d'images verbales et l'aphasie chez les enfants]. (Gaz. des Hôp., Jan. 13th, 20th, 1900.) Bernheim, F.

While motor, visual, and auditory images are of the first importance in the study of normal and pathological language, not enough stress has been laid upon the associations which become established between these various images, and which are indispensable to the functioning of each. Bernheim shows that in the development of these images as they appear, they become closely related to each other, and the various memories of images are united to one another by close chains. In childhood verbal associations are especially of the highest importance, and the pathology of aphasia shows the important part the association of images takes in speech.

Although the subject of aphasia is not dwelt upon by some writers on the diseases of children, Bernheim cites a large number of cases drawn from various sources. In the case of idiots and deaf-mutes, the clinical examples to which he refers show that disorders of speech are due to arrest of development in the paths for verbal associations, to the

want of the necessary incitations for bringing these paths into play if they exist, or to lesions interfering with the transmission of verbal images.

As regards the acute infections causing infantile aphasia, typhoid fever is especially important; the condition arises at the end of the illness or during convalescence. In curable cases the aphasia lasts from a few days to a few weeks; when unaccompanied by paralysis it is ephemeral, but it is more or less prolonged when there is paralysis. Its incidence with the exanthemata, embolism, endocarditis, traumatism to the skull, meningitis, abscess of the brain, and other less common causes, is next referred to.

The clinical picture in these cases is very varied and polymorphous, and in view of the limited number of complete autopsies recorded, we must at present be contented with a psycho-physiological interpretation. The history of cases of infantile aphasia shows that speech totally lost for a more or less prolonged interval of time not unfrequently returns suddenly, so that a slight modification in one of the paths of association affects others readily, no doubt because the associations of verbal images are recent and constantly called into play. That a cure takes place shows that the associations of verbal images persist, their function being merely temporarily inhibited (by microbial infection, etc.).

Bernheim's conclusion is that the associations of verbal images are of fundamental importance in the acquirement, development, and perfecting of normal speech in children, and that by their disorders is brought about infantile aphasia.

H. J. MACEVOY.

A Case of Echinococcus of Brain, Liver, Diaphragm, with a Comment on Late Epilepsy [Ein Fall von Echinococcus des Gehirns, der Leber und des Bauchfells, nebst einer Bemerkung zur sogenannten Spätepillepsie]. (Psychiat. Wochens., No. 42, 1900.) Krüger.

The clinical history of this case showed that a woman, healthy previously, became disinclined for conversation, and wandered about aimlessly. Epileptiform attacks followed, which ceased for a time, and then returned. She became demented, and her speech was considerably affected. Giddiness was very persistent. Later, the speech defects disappeared, but she spoke little. Post mortem: Under the left rib arch a tumour the size of one's fist was present in the peritoneum, also one the size of a plum at the apex of the left lobe of the liver. In relation to the uterus there was another the size of a child's head. The pia mater was thickened, and adherent to the left angular gyrus, and also around the origin of the Sylvian fissure, and here fluctuation was present owing to a cyst the size of a plum. In this region some convolutions were cartilaginous and calcareous. Krüger was of the opinion that the invasion took place with the first mental change, since the liver cyst and the brain cyst were both calcareous, and evidently of about the same age, and were the first formed. Krüger then draws attention by means of three different cases to the value of epilepsy starting in advanced life in the diagnosis of brain tumour.

W. J. PENFOLD.

The Causation of Abortive Epileptic Attacks [*Zur Casuistik der abortiven epileptischen Anfälle*]. (*Monats. f. Psych. u. Neur.*, February, 1900.) *Strohmayer, W.*

Dr. Strohmayer divides these into two classes:—First, attacks with unconsciousness without motor disturbance; secondly, attacks with motor disturbance without unconsciousness. The first type being frequently and fully described, he confines his remarks to the second variety.

His first case showed three varieties of attack:—(a) Temporary aphasia and speech difficulty, with perfectly retained consciousness; (b) vaso-motor disturbances, such as local sweating, pallor of face, palpitation, dilatation of the pupil, and the like; in these also consciousness was retained; (c) these attacks were typical ordinary fits, and developed out of variety b, which they retained as a vaso-motor aura.

The second case described showed:—(a) Typical fully developed fits; (b) motor disturbances, with slight clouding of consciousness. (c) Fully developed but atypical attacks, e. g. a tonic spasm arises and then clonic twitching, and after these consciousness is fully lost; (d) Motor disturbance of various characters, with completely unaffected consciousness.

The third case showed (a) typical fits; (b) abortive fits of different type, e. g. the angles of the mouth would be drawn, and a spasm of the glottis would occur, with sensation of strangulation, or sensations of heat and anxiety occurred, and tonic extension of the arms, or clonic spasms would affect the arms, legs, face, or the whole body. A similar fourth case is given.

Different opinions and explanations relative to the production and nature of the above fits are shortly dealt with. Dr. Strohmayer is of opinion that they are of infra-cortical origin. W. J. PENFOLD.

Contribution to the Symptomatology of Intra-cranial Disease. (*Journ. Nerv. and Ment. Dis.*, July, 1899.) *Fraenkel, J.*

This is a report of two cases. In the first the diagnosis was made of tumour of the optic thalamus, with great probability of being correct, but there was no autopsy. In the second case the post-mortem findings appear to have been too trivial to account for the nervous symptoms. W. H. B. STODDART.

The Clinical Features of Beri-beri. (*Dubl. Journ. Med. Sc.*, January, 1900.) *Conolly Norman.*

This paper is the result of Dr. Conolly Norman's experience of Beri-Beri at the Richmond District Asylum, Dublin. His experience differs but little, if at all, from that of observers of this disease in the East, but it is extremely interesting and satisfactory to have a complete account of the disease as it occurs in Great Britain. It is none the less important that this paper forms the record of the personal experience of only one observer. W. H. B. STODDART.

Asthenic Bulbar Paralysis. (*Journ. Nerv. and Ment. Dis.*, Sept., 1899.) *Sinkler, W.*

About forty cases of this peculiar disease have been recorded, all of which are referred to in the present paper.

The disease occurs in the third decade of life, and although fifteen of the cases have come to autopsy and many have been microscopically examined by pathologists of experience, there is yet no morbid anatomy.

The principal feature of the disease is that the muscles generally become very rapidly fatigued, especially those muscles supplied by the motor cranial nerves. In later stages there is a certain amount of permanent paresis of the affected muscles, especially of those muscles which are continually in a state of tonic contraction and have little rest, such as the levatores palpebrarum, the masseters, and the muscles at the back of the neck. This rapid fatigue of muscles also occurs when they are stimulated faradically, and the knee-jerk tires on repeated stimulation. The fatigue is not entirely limited to the motor side, since prolonged stimulation of the special senses rapidly exhausts them.

The current view as to the pathology of the disease is that it is due to the deleterious influence of some unknown toxic agency upon the peripheral neurons.

[The condition is otherwise known as myasthenia gravis.]

W. H. B. STODDART.

Isolated Finger Paralysis. (*Journ. Nerv. and Ment. Dis.*, Sept., 1899.) *Browning, W.*

This is a careful report of the history and post-mortem examination of the case of an old gentleman who, three years before his death, ruptured some of the extensor tendons on the back of his right hand. There was insufficient exciting cause for such an accident—he was swinging a fishing-rod at the time. There are reprints of micro-photographs taken from the tissues on the back of the hand. The accident appears to have been due to some senile degenerative change in the affected tendons.

W. H. B. STODDART.

On a Case of Traumatism of Part of the Cauda Equina complicated by Alcoholic Neuritis. (*Scot. Med. Surg. Journ.*, Feb., 1900.) *Bruce, A.*

This is the report of a clinical lecture delivered to the class of clinical medicine in the University of Edinburgh. Full details of the case are not given, the lecturer having chiefly confined his remarks to the question of differential diagnosis. No reference, for instance, is made to the condition of the superficial and tendon reflexes. The diagnosis at which the lecturer arrived is given in the title of the paper.

W. H. B. STODDART.

Paraplegia from Acute Spinal Caries without Change in the Spinal Cord [*Paralysie potitique aiguë sans altération de la moelle épinière*]. (*Prog. Méd.*, Jan., 1900.) *Verger and Laubie.*

Pott's disease may cause paraplegia in two ways: (a) By compression of the spinal cord by the chronic abscess or by the thickened dura mater, this in turn giving rise to compression-myelitis; (b) by compression of the spinal roots resulting from tubercular pachymeningitis.

The authors here publish a case illustrative of the second of these two causes: The patient, a man fifty-six years of age, began in March, 1898, to complain of pain in the region of the sciatic nerve and later in the iliac fossa. Nothing further developed until the end of the following November, when he had retention of urine. By December 10th he had complete flaccid paraplegia with loss of sensation in both legs. Bedsores developed, and the patient died comatose four days later.

Post mortem there were found two chronic abscesses of the seventh to eleventh dorsal vertebræ. The spinal roots in this region were nipped by the thickening of the dura mater, but the cord was in no way compressed. Microscopical examination confirmed this observation.

The paper refers to some other cases of the same nature.

[Of course, the differential diagnosis between a paraplegia due to compression of the spinal cord and a paraplegia dependent on nipping of the spinal roots will depend on the question of flaccidity or spasticity of the lower limbs.]

W. H. B. STODDART.

Syringomyelia. (*Nouv. Icon. de la Salpt., Nov., Dec., 1899.*)
Sabrazès.

This is the report of a case of syringomyelia, which came under observation in November, 1898. The patient was then aged sixty-six years, and his disease first began to show itself at the age of eighteen. There was at first wasting of the muscles of the left arm, then of the right, and there was the usual history of chilblains and of painless whitlows.

When the patient was seen in 1898 there was complete paralysis of the muscles of the upper limbs and of the shoulder girdle, and some fibrous ankylosis of the elbow and shoulder. There was complete anæsthesia in the left ring and little fingers, loss of sensibility to temperature and pain in the left arm, and loss to temperature only in the right arm and hand—ulnar nerves anæsthetic. There was slight weakness and inco-ordination of the lower limbs. There was trophic change in the skin of both upper and lower limbs, and the hands were blue, cold, and tumid. The bones of the hands were also enlarged. There was also the usual cervico-dorsal kyphosis and dorso-lumbar scoliosis with concavity to the right. There are two good stereoscopic photographs of the case, but there is unfortunately no chart of the loss of sensation.

W. H. B. STODDART.

A Case of Cerebral Hæmorrhagic Pachymeningitis with Pseudo-bulbar Palsy. (*Journ. Nerv. and Ment. Dis., Oct., 1899.*) *Burr and McCarthy.*

This is the clinical and post-mortem record of an alcoholic male patient, æt. 43, in whom there co-existed left frontal tubercular tumours and internal hæmorrhagic pachymeningitis over the greater part of the left cerebral hemisphere, and also round the cervical portion of the cord.

The case was clinically one of left frontal tumour. The gross and minute morbid anatomy of the case are very carefully described.

In the remarks which follow, the authors attach importance to alcohol and tuberculosis in the causation of hæmorrhagic pachymeningitis.

W. H. B. STODDART.

Facial Paralysis, Congenital, Unilateral, and of Unique Distribution.
(*Journ. Nerv. and Ment. Dis.*, Oct., 1899.) *Langdon, F. W.*

This is a description of the case of a man, æt. 33, who had congenital facial paralysis. The unique distribution is probably to be explained by partial recovery of the condition.

W. H. B. STODDART.

Mal Perforant-Buccal. (*Rpt. Ann. Meet. Queb. Med.-Psych. Soc.*,
June 23rd, 1899.) *Chagnon.*

The paper contains a case of the above disease. The patient was admitted, in 1895, suffering from acute mania, which turned out to be due to general paralysis. He had had syphilis. In 1897, the teeth of the left upper maxillary became loose except the second and third molars. The loose teeth were removed and found healthy; two months after this, the alveolar margin came away as a sequestrum and a communication formed between the mouth and the maxillary sinus. The loosening affected the other teeth later, and during its spread, the first affected parts cicatrised.

W. J. PENFOLD.

Notes on Four Cases of Syringomyelia. (*Dubl. Journ. Med. Sc.*, Oct.,
1899.) *O'Ferrall, L. M.*

One of the four cases was interesting in showing no sensory dissociation. Another gave some difficulty in diagnosis, the deformities of the hand causing it to be looked on as progressive muscular atrophy, while at a later stage it was diagnosed as amyotrophic lateral sclerosis.

The cases showed otherwise athermia, analgesia, painless whitlows, joint troubles, spastic gait, muscular atrophy, and weakness and scoliosis.

W. J. PENFOLD.

Tumour at the Base of the Brain in the Pontine Region. (*Journ. Nerv.*
Ment. Dis., Feb., 1900.) *Lloyd, J. H.*

A tumour, the size of a hen's egg, connected with the membranes, lay in the sulcus between the pons and left cerebellar lobe, exerting pressure on these structures, causing some softening of the pons, and erosion of the petrous bone. The symptoms produced were increasing paralysis of both sixth nerves, and of the left seventh and eighth nerves. Optic neuritis with hæmorrhages caused total blindness. Inco-ordination of gait occurred, and finally stupor with death after a slow course of a year's duration. There was an absence of paralysis and loss of sensation in any region of the body.

Purulent Encephalitis and Cerebral Abscess in the New-born, resulting from Infection through the Umbilicus. (*Journ. Nerv. Ment. Dis.*,
Nov., 1899.) *Hinsdale, G.*

This is a brief note on a child of thirteen days dying with purulent exudation around brain, a pus cavity in left and a large hæmorrhage in right frontal lobe, which followed infection through the umbilicus.

Gastric Tetany, with an Account of the Microscopic Appearances found in the Medulla and Spinal Cord. (*Glasgow Hosp. Rep.*, 1899.)
Hunter, W. K.

An adult female, believed at first to be suffering from some form of poisoning, came under observation with headache and vomiting; she

became delirious and then apparently unconscious. At this time, she lay with eyes fixed and wide open, pupils of medium size and normal reactions. Spasmodic contractions with occasional twitchings of the facial, arm, and leg muscles occurred. The hands and feet assumed the characteristic attitude of tetany, and any attempt to straighten the arms led to violent muscular contractions. A small amount of albumen was present in the urine. She passed into a state of stupor with twenty-four hours coma before death, which occurred seven days after the onset of the illness.

The kidneys showed both an early interstitial and parenchymatous condition. There was great atrophy and disintegration of the mucous membrane of the stomach. The nerve lesions found were (1) excess of yellow pigment in the ganglion-cells throughout the pons, medulla, and cord, the Nissl bodies being often entirely displaced, and (2) marked hyaline degeneration in the majority of the vessels.

6. Pathology of Insanity.

A Contribution to the Pathological Anatomy of General Paralysis
[*Beitrag zur pathologischen Anatomie der progressiven Paralyse*].
(*Monats. f. Psychiat. u. Neur., B. vii, H. 1.*) Starlinger, J.

Dr. Starlinger begins his paper by recounting two cases observed by him in 1895. One of these is interesting from the fact, among other things, that there was a history of syphilis not acquired through sexual intercourse. In the other case syphilis was probable. Both cases presented the ordinary signs of general paralysis. Both suffered from convulsive seizures, followed by hemiparetic troubles, deepening after repeated attacks into hemiplegia. *Post-mortem* both presented unilateral degeneration of the white matter from the cortex of the central convolutions, where association and projection fibres were equally engaged, down into the crossed pyramidal tract of the cord.

Subsequently similar cases were described by Boedecker and Juliusburger, and by Muratow.

Starlinger now describes the result of his study of twenty-one later cases, which he carefully examined by the method of Marchi for degeneration in the pyramidal region. He divides them into three groups:—(1) Those which exhibited intense unilateral degeneration of the medullated fibres, six cases; (2) those which exhibited distinct degeneration in one or both tracts, nine cases; and (3) those in which degeneration was not certainly present, six cases.

The first six cases are given in detail and summarised thus:—Their common features were that in all paralytic attacks appeared one or two months before death, with clonic spasms exclusively or chiefly confined to one side, with or without subsequent permanent paresis or unilateral paralysis, and all exhibited similar anatomical conditions, inasmuch as in all there was an intense degeneration of the pyramidal tracts. The correspondence between the clinical phenomena and the microscopic appearances was further shown by the fact that the complete hemiplegias occurred in the cases of most profound degeneration. Commenting on these cases, Starlinger notes that four had certainly, and the other two

probably, suffered from syphilis—a circumstance which, taken in connection with the history of his earlier cases, he holds cannot be without significance.

In the second group, containing nine cases, the evidence of degeneration, though slight, was distinct, the dark coloration produced by the Marchi method being unmistakable, and the medullary sheath showing the characteristic moniliform appearance where seen obliquely or somewhat longitudinally, as at the decussation of the pyramids. Thus in fifteen out of twenty-one cases of general paralysis pyramidal degeneration was found. In a way this is not to be wondered at, considering the frequency of motor trembles in that disease, and the author throws out the conjecture that perhaps in degeneration of the pyramids a pathognomic criterion, hitherto wanting, may be found.

He holds that the degeneration in his cases is secondary for the following reasons:—The appearance of the degenerated fibres was the familiar form of parenchymatous change, such as occurs when a fibre is cut off from its ganglion cell. No trace of interrupting lesion (focus of softening, hæmorrhage, residual pigmentation, sclerotic patch, or the like) was found, though carefully sought. The degeneration was not compact, but showed intact fibres even amidst the most intensely degenerated. The degenerated fibres could be followed from one mass of grey matter to another, and in the interval no increase of the degeneration occurred, but there was merely to be seen the mass of degenerated fibres which issued from the grey matter; for example, from the cortical grey matter.

In the cortex, Starlinger points out, we have every reason to believe that the most vulnerable element is the nerve-cell, and that any generally noxious agent will exercise its injurious influence first upon the cells. The experiments of Stenson by tying the abdominal aorta, and of Rothmann, prove that before the nerve-fibres suffer, the ganglion cells of the cord show advanced and irreparable injury. Similarly, the experiments of Sukhonoff show that cerebral anæmia first affects the cells. Such facts and others demonstrate that generally noxious agencies act first upon the cells, and secondarily upon the fibres. Whether the detrimental factor in general paralysis be a circulatory disturbance or a direct poison circulating in the blood, the cells and fibres are equally exposed to it; but it strikes the cells first, as being more vulnerable. Hence there is scarcely a doubt that the degeneration in the pyramidal tracts shown by the Marchi method is secondary, and has its true source in the cortical cells of the central convolutions. With respect to the cortical or subcortical origin of the irritative and paralytic phenomena in general paralysis, the author notes that since he has himself watched closely the order of events in paralytic seizures, and instructed his staff to observe the precise course of the convulsive movements, he has found the more irregular and generalised convulsions less common, and the regular localised convulsive movements always more frequent.

As the result of his observations, Starlinger is inclined to contest the prevailing idea that general paralysis always represents a diffuse form of brain mischief. He mentions the change to be observed in the cells and in the vessels by the Marchi method, which is, however, ill adapted for

the study of either of these structures. He pleads for the systematic examination of the hemispheres in general paralysis by the Marchi method, and by means of a succession of frontal slices, followed up where degeneration is found by serial sections. Admitting the tedious and troublesome nature of the process, he believes that the results are commensurate with the trouble and time expended.

The paper is illustrated with several plates, one of which shows the author's instrument for cutting sections of the entire hemisphere. For a fuller description of the instrument he refers to his paper in the *Zeitschrift f. wissenschaftliche Mikroskopie und microscopische Technik*, B. xvi, p. 179. C. N.

Cerebral Atrophy in General Paralysis [*L'atrophie cérébrale dans la paralysie générale*]. (*Rev. de Psychiat.*, Jan., 1900.) Brunet.

In the last Report of the London County Asylums Dr. Mott drew attention to the difference in weight between the two cerebral hemispheres of general paralytics. He pointed out that, although the left hemisphere normally weighs more than the right, in general paralytics the right hemisphere weighs more than the left in the majority of cases.

In the above paper Brunet comes to the same conclusion from the examination of a much larger number of cases. In Brunet's series the right hemisphere was the heavier in 102 cases, the left was the heavier in 76 cases.

The author also demonstrates the general atrophy of the cerebrum in general paralysis. It is more marked in women than in men, the disease generally running a more chronic course in the former. He also points out that the atrophy is most marked in brains and in hemispheres where there is most adhesion of the pia to the cortex.

W. H. B. STODDART.

The Pathology of General Paralysis [*Zur Pathologie der Dementia paralytica*]. (*Psychiat. Wochens.*, No. 21, 1899.) Dees.

Dr. Dees first criticises the position of Dr. Lutz, who believes general paralysis to be characterised by mania, and its mental symptoms to be of great importance in its diagnosis. Meynert is quoted to the effect that general paralysis is more distinctly a separate entity anatomically than clinically. Meynert describes eight different clinical types. Mendel is further quoted to the effect that dementia paralytica is the most common clinical form. Lutz seems further to have gone astray in stating the general paralysis is characterised by "absolute paralysis," while its essential motor disturbance is a wide-spreading cortical ataxia, although paralysis may occur in the later stages (Meynert).

Dees gives a very interesting case in which a woman had an illegitimate child, and was infected with syphilis before her marriage. She was married in 1880. Her character changed in 1894. Dementia and inco-ordination showed themselves, the latter especially affecting speech. Pareses and paralyzes followed, and death occurred in 1896. The post-mortem showed typical appearances of general paralysis. A child born the year of her marriage became in 1891 demented, and showed speech disturbances. These remained stationary till 1894; they then became rapidly aggravated, and she died in 1897. Post mortem were found the

appearances typical of general paralysis. He makes this case the basis for discussing the time-honoured question of the syphilitic origin of general paralysis. Before closing his paper he shows how mercury produces on the nervous system effects similar to those of syphilis.

W. J. PENFOLD.

The Asphyxial Problem in Convulsive Seizures. (*Brit. Med. Journ.*, Sept. 23rd, 1899.) *Briscoe, J. F.*

The first part of this paper consists of a discussion of the post-mortem appearances in cases dying from asphyxia, their mode of occurrence, and the various fallacies which arise due to the methods of making the autopsy and to post-mortem changes. The writer finally gives adhesion to the views of G. Johnson (*Lancet*, April 11th, 1891) that the distension of the right side of the heart is due to contraction of the pulmonary arterioles, there being arterial anæmia of the lungs and corresponding defective blood-supply to the left side of the heart. He next goes on to state the conditions under which convulsions may occur, namely, (1) in cases where the arterial contraction is purely reflex-nervous; (2) in cases where similar contraction is due to blood poisoning. The former occurs in epilepsy, the latter in uræmia. When the healthy respiratory act is restored, the venous congestion of the various organs subsides. In status convulsivus, however, the venous system becomes gorged, and if unrelieved the patient dies from asphyxia. He is of the opinion that in this state it is not safe, and, in fact, almost impossible, to administer drugs. Only three things can be done; chloroform or nitrite of amyl can be used, or venesection performed. The former he dismisses summarily. Nitrite of amyl is objected to because it turns hæmoglobin to methæmoglobin, and thus hinders oxidation of the tissues. The final resource is venesection. He believes that the pulmonary spasm is due to disturbance of the vaso-motor apparatus in the bulb. The changes in the chromatic substance of the cortical pyramidal cells and the œdema of the perivascular and perineural lymph spaces described by Mott are, according to the writer, due to venous congestion. If this engorgement is not relieved extravasations of blood are prone to occur in various organs. He strongly advocates venesection.

J. R. LORD.

7. Treatment of Insanity.

Some Points connected with Sleep, Sleeplessness, and Hypnotics. (*Croonian Lectures, Lancet, June and July, 1899.*) *Bradbury, J. B.*

Under the "physiology of sleep" the remarkable achievements in the histology of the central nervous system are discussed. The "neuron," consisting of cell body with its branching processes (dendrons and dendrites) and its axis-cylinder (axon or axite), from which branchings also proceed, is fully described. From the description of the structural nervous unit, whose complex relationship to other units is set forth, we are led to theories of sleep based upon these new data. The theory of an amœboid movement of the neurons, whereby the

terminal branchings of the dendrites might be approximated or separated, has thus arisen, sleep being represented histologically by a retracted state of the neurons with consequent diminished facility of passage of the stimuli from one neuron to another. This is Lepine and Duval's theory. Lugaro, taking the same data, supposes sleep to be the result of an expanded state of the branchings of the neurons, which, causing an opening up of nervous paths, leads to an unrestricted flow of nerve impulses, manifesting itself by confusion of thought and loss of consciousness. The vaso-motor chemical and psychological theories of sleep follow. Then Dr. Bradbury deals with the question of hypnotics and the fascinating subject of the relation between chemical structure and physiological action,—here, of course, in respect of hypnosis. Nothing that might be called new light is here forthcoming, but the subject is intricate to a degree. Practice, alas! makes no very great figure after these brave theories have been passed in review. We learn that we must attack the causes of insomnia, and these are marshalled as (1) *irritative*, (2) *toxic*, (3) *psychical*, (4) *relative to change in the mode of life*. Germain See's divisions into *dolorous*, *digestive*, *cardiac and dyspnæal*, *cerebro-spinal and neurotic*, *psychic* (insomnia), *of fatigue*, *genito-urinary*, *febrile and toxic*, suggest, perhaps, a more practical grouping. Accepting Dr. Bradbury's classification, we find suggestive hints as to the treatment of the insomnias according to their causation. The insomnia of the insane is treated by bromides, chloral, hyoscine, hydrobromide, etc. In melancholia, where arterial tension is high, paraldehyde "in doses of from 40 to 90 minims or more" is described as a valuable hypnotic (is the dose of 40 minims ever effectual?), also morphine; but in certain of these cases Dr. Bradbury says that erythrol tetranitrate in 1-grain dose will often act better than anything else by its lowering of arterial tension.

Of treatments for the insomnia of delirium tremens, the use of capsicum, in a bolus containing 20 grains, is mentioned as a favourite remedy among medical officers of the American army; this treatment has been advocated elsewhere.

HARRINGTON SAINSBURY.

Sleeplessness. (Lancet, Jan. 27th, 1900.) Broadbent, Sir W. H.

The theories of sleep are passed by without discussion, though Sir W. Broadbent cannot refrain from asking the question, *re* the influence of the circulation, why are the arteries of the pia mater supplied with muscular fibres if there is no vaso-motor control, as Dr. Leonard Hill maintains? Broadbent states, moreover, that Dr. Alexander Morison has preparations showing very clearly the vaso-motor nerves of the pial vessels. The practical consideration of insomnia is discussed from the ætiological standpoint, and among the causes indigestion is stated to be "by far the most common." Much brain work, sedentary occupations, grief, and worry may all cause insomnia *viâ* a deranged digestion; nor need we be conscious of gastric or intestinal pain or of the distension of the alimentary tract by flatulence, for dyspepsia still to be the true disturbing cause. To dyspepsia Broadbent ascribes some of the cases of insomnia after tea and coffee, but to us he seems to put this more tentatively than is needful, for without doubt coffee or tea wakefulness is often conjoined with marked dyspepsia, and an appropriate dose of

alkali and carminative may then remove rapidly the palpitation, pulse excitement, and wakefulness.

To the value of hypnotics and soporifics in suitable cases Broadbent testifies, though he protests that "nothing is easier than to obtain a cheap kind of credit by prescribing a sedative, especially if its name is new;" and he goes on to say that he would rather be a victim to morphia or to opium than to chloral, or sulphonal, or trional. This is, indeed, a choice of evils.

HARRINGTON SAINSBURY.

Headaches and their Treatment. (*Brit. Med. Journ.*, Nov. 4th, 1899.)
Lauder Brunton, T.

The nature of headaches and of the associated phenomena—visual, auditory, linguistic (aphasia)—is first described, and then their dependence upon circulating toxins, peripheral irritations, intra-cranial tumours, periosteal inflammation, etc. The mechanism of the recurrent headache, its possible *rationale*, is suggested, and in particular the part played by the liver. Lauder Brunton always writes suggestively, and his theories are generally attractive. His treatment of headaches presents nothing very novel, but his view of the mode of action of salicylate of soda or of salicylic acid as an hepatic stimulant, "the most powerful cholagogue known," is scarcely the current clinical view. He finds great value in the use of salicylate of soda combined with a dose of bromide taken overnight as a preventive of headaches in those who are liable. Tincture of cannabis indica he finds useful in some forms of headache in the dose of 10 minims thrice daily, gradually increased. He concludes with the warning, whenever you get an intense headache which drugs fail to treat, look out for glaucoma.

HARRINGTON SAINSBURY.

The Pathology of Epilepsy, with an Introduction to a New Treatment.
(*Bull. of the Lab. Mount Hope Retreat*, 1899.) Hill, C. J.

It is to be regretted that a new treatment for so venerable a disease should be discussed so sketchily as is the case in the above paper. In the pathology of the disease the presence of a toxine is postulated, and the *modus operandi*, by way of a hyperæmia, induced by the toxine. In evidence of the toxine, experiments with the secretion of the epileptic are cited, e. g. with the gastric juice and the sweat, also experiments with the blood. Krainsky's experiments with the latter fluid are of particular interest, and they indicate that the blood of the status epilepticus is toxic, and capable of producing an epileptiform seizure. The toxic agent is carbonate of ammonium, according to Krainsky, who finds this substance greatly increased in the blood during the seizure. Voisin Jeron's investigation of the toxicity of the urine before, during, and after the seizures is of interest here. Krainsky explains the value of the alkaline bromides by supposing the conversion by double decomposition of the ammonium carbonate into bromide of ammonium, and sodium or potassium carbonate; but we may ask, Has ammonium bromide itself no value as an antiepileptic? and if so, what becomes of this theory?

The new treatment is by means of extract of supra-renal capsule, but upon what theory this agent, which raises blood-pressure, should act, we

are not told, Dr. Hill having previously explained the seizure as the result of a brain hyperæmia caused by a rise of blood-pressure. To his statement that he has obtained marked success no objection can be raised, but as no statistics are given the value cannot be gauged. To his formula one might take exception, since it combines with the supra-renal capsule extract, sodium bromide—the latter, it is true, in small dose, viz. 5 grains. From one or two statements as to results it is evident that the use of supra-renal extract must proceed very cautiously. To us the subject is very imperfectly dealt with.

HARRINGTON SAINSBURY.

Hydrotherapy and Balneotherapy. (*Allgem. Zeits. Psychiat., B. lv, H. 6.*) *Thompson, R.*

Dr. R. Thompson publishes here a long paper on the use of baths in mental diseases. Basing upon the experiments of Winternitz, he thus states the effect of baths upon the system :—Fleeting applications of heat to the skin heighten the sensibility of the parts, longer diminish it. Local cold applications induce narrowing of the blood-vessels, and increase the tone of the peripheral vessels. The cold shower-bath diminishes the calibre of the vessels of the skin, the pulse becomes slower and stronger, the blood-pressure is heightened, and the elasticity of the walls of the vessels is increased. This is succeeded by a widening of the vessels with heightened tone. A shower of cold water on the back has the same effect. A hot bath heightens the blood-pressure and increases the frequency of the pulse, which becomes fuller and softer. When the trunk of a vessel or nerve is affected by cold the vessel contracts, the temperature of the part affected sinks, and the nourishment and function of the parts involved are diminished. The area thus affected through the brachialis is the forearm, through the carotids the encephalon. All the vessels of the superficial parts are made to contract through a cold bath ; the blood is forced to the interior, and there is a plethora with alteration of function in the organs within the cavities of the body. The blood-pressure is increased, and when the cold is withdrawn there is a reaction, and the cutaneous blood-vessels again widen. Where the vessels of the internal organs are weak through disease, cold baths may thus be the cause of internal hæmorrhage. From the experiments of Naumann it appears that applications of cold and hot water act through the nerve terminations upon the nerves of the vessels. It was found that when heat or mechanical stimulation was applied to the skin of the leg in the frog, although the only connection between the limb and the body was through the sciatic nerve, there was acceleration of the circulation in the mesentery with narrowing of the vessels. When the vessels became dilated the circulation was slowed down to stagnation. After strong stimuli the temperature of the body was raised, again to fall. On cold application to the surface there is a slight rise of temperature in the deeper parts if the patient remains still. If he moves about the temperature sinks along with the number of pulsations. After the reaction, that is the return of heat to the surface, the central temperature, the blood-pressure, and the force of the heart-beats all sink.

The experiments of Schüllers upon the effects of hot and cold water

on the vessels of the pia in the rabbit are also cited. Cold compresses upon the belly and back diminish the calibre of the vessels of both the skin and mesentery, and by reflection there is a widening of the vessels of the pia and a slowing with increased force in the pulsation of the brain. Warm compresses widen the vessels of the skin and mesentery, and by reflection cause a narrowing of the vessels of the pia and increased frequency with weakening of the pulsations. Cold baths of the whole body act like cold compresses. If prolonged there follows narrowing of the pial vessels and sinking of the brain. This contraction of the vessels lasts a long time after the bath. Warm baths first cause a rapid dilatation, and afterwards a marked narrowing with sinking of the brain. Warm wrapping about 270° Réaumur causes a loss of temperature from 1° to 2° , which lasts from two to three hours.

After quick but fleeting dilatation the vessels of the pia become contracted, the brain sinks, and its heavings are slower. This lasts for hours. After unwrapping there is a strong dilatation of the vessels, then a return to the normal. Cold douches cause irregularity in the calibre of the vessels.

Dr. Thompsen thinks that all water-baths, especially cold ones, have a powerful effect upon the nervous system, on the blood-pressure, strength of the heart, and circulation. He observes that cold increases the exhalation of carbonic acid and the absorption of oxygen, while heat diminishes these processes. He recommends that hot baths be used in the treatment of all psychoses and neuroses. The temperature should be between 25° and 15° C., and the head and face should be cooled before the bath. It should last from six to eight minutes. He does not approve of the cold bath, but makes use of douches, which are so much valued by the French physicians. Dr. Thompsen remarks that washing (*Abwaschung*), the mildest of all hydiatic procedures, may be regarded as a preparation for other applications of this fluid for very sensitive persons. He uses the wet pack in all cases of irritability and excitement, especially in maniacal states. Kraepelin treats mania with warm baths which last hours, even days. If there be congestion at the same time he applies cold to the head. After the bath he uses cold affusions or rubbing. Dr. Thompsen rightly observes that our notions both of the pathology of insane states of the brain and of the means of treating them through baths are yet somewhat empirical. No doubt there is a wide difference between the delirium of acute mania, the excitement of general paralysis, epilepsy, delirium tremens, and paranoia, and the conditions of melancholy with stupor, paralytic and epileptic depression, and simple melancholia. We know little of the pathological substrata of these varying mental derangements to gain guidance for our therapeutic arrangements. In treating insanity by hydrotherapy we generally assume either a hyperæmia or an anæmia of the brain. Thus the affections most likely to derive benefit from such treatment are mania, melancholia, and the acute delusional form of paranoia. For apathetic and stupefied patients Dr. Thompsen uses warm baths followed by affusions of cold water. W. W. IRELAND.

The Practice of Bloodletting. (*Clin. Journ.*, Aug. 9th and Sept. 20th, 1899.) *Briscoe, J. F.*

In this brochure, the writer, in the first place, gives a general outline of "the past and present of bloodletting." He traces the practice from the time of Hippocrates down to the sixties, making a serious digression, dangerously controversial, as regards the prevalence of nervous disease, the struggle for existence, and the marriage of "degenerates," for which a very necessary apology is forthcoming. As regards a rational basis for bloodletting the following is given:—"Bloodletting will always occupy an important position, since capillary attraction, an important physiological function, is decidedly encouraged after a bleeding. The muscles and all the tissues of the body become obviously drained, and thus pathological depositions are carried along the gutters of the circulation. This, then, is the main object of venesection, namely, the relief of congestive areas." Two ounces form a maximum depletion with few exceptions, but in many cases a less quantity is stated to answer the object of the phlebotomist. He next describes the methods of bloodletting, and finally the conditions in which such are indicated, discussing also "status epilepticus."

J. R. LORD.

8. Sociology.

International Conference on the Prophylaxis of Syphilis and Venereal Diseases. (*Gaz. des Hôp.*, Sept. 12th, 1899.)

Fournier states briefly but very clearly the many ways in which syphilis threatens the individual and the community. Under individual liabilities he includes not only those morbid conditions directly attributable to the syphilitic poison and capable of specific treatment, but those indirect states—*e. g.* tabes, general paralysis of the insane, leucoplakia buccalis, etc.—which he names parasymphilitic, and which are not amenable to antisymphilitics. He urges that this social plague, which, with alcoholism and tuberculosis, constitutes "la triade des pestes contemporaines," should be combated as vigorously as the last two.

Drs. Verchère and Pilar, of Paris, regard prostitution as the primary and preponderating danger to the community, and they urge a more systematic and thorough regulation of State control. Professor Lassar, of Berlin, accentuates the many ways outside prostitution by which the disease is spread, and he calls for more dissemination of knowledge respecting the sources of infection among young people and parents. M. Blaschko, contrasting the results in those countries under State control with those where control is not, points out the extreme difficulty of obtaining really trustworthy comparable statistics. He thinks that all systems of control commit the error of regarding professional (registered) prostitution as the almost exclusive source of venereal diseases. He regards as an impossible task the efficient policing of clandestine prostitution, certainly in the larger towns; and therefore he holds it most important that State control should be supplemented by other measures—*e. g.* hygienic—which are at our disposal.

No general consensus of opinion as to the means of combating

syphilis was ultimately arrived at, with the exception that all were agreed upon the necessity for more systematic teaching and study of venereal diseases as an obligatory part of the medical curriculum. Most speakers advocated also the desirability of greater facilities for the treatment of this disease at the general hospitals.

HARRINGTON SAINSBURY.

Insanity in German and Anglo-American Law [*Geisteskrankheit in amerikanisch-englischer und in deutscher Rechtsprechung*]. (*Archiv f. Krim.-Anthropol. w. Kriminalistik, ix.*) Kornfeld, H.

The treatment of insanity from the legal standpoint varies widely in different countries. A striking example of the above is the recognition in England and America of a partial insanity, *i. e.* an insanity in which only part of the mind is affected, certain faculties remaining quite healthy. This is quite opposed to Continental ideas. If a man who has delusions, but is legally able to manage his property and make a will, commit a crime, in England he is responsible, in Germany he is not. Dr. Kornfeld takes up a number of points from Clevenger's *Medical Jurisprudence of Insanity*. He considers a large number of legal definitions of insanity which are interesting, but unsatisfactory. The indications of criminal responsibility are discussed at great length. Dr. Kornfeld remarks that moral insanity is not recognised legally in England, if a disturbance of the reasoning power as an inability to tell right from wrong, is not present.

W. J. PENFOLD.

Simulation of Insanity by a Criminal [*L'Odysée d'un délinquant simulateur*]: *Contribution to the Study of the Simulation of Insanity*. (*Arch. de Neur., Jan., 1900.*) Garnier, S.

An expert, who examines a criminal suspected of being insane, should always remember the possibility of simulation. Tardieu thought these cases rare, but Dr. Garnier has observed a number of cases in his experience as Superintendent of Dijon Asylum—criminals simulating epilepsy, mania with megalomania, sexual inversion, etc. One case had studied carefully the symptoms of impulsive insanity. The case (Cing—) described in this article by Dr. Garnier is that of a man who had passed himself off as a lunatic, and was in an asylum for two years. The insanity simulated was successively hysteria major with suicidal ideas, and then delusional insanity of persecution with megalomania. When examined by Dr. Garnier, on the occasion of a charge of theft some time after his discharge from asylum, the culprit confessed that he had “taken in” the expert on the first occasion.

The history of the individual's exciting career is one of repeated criminal acts (thefts, falsification of certificate, etc.). Incidentally, as showing the uncertainty of views concerning stigmata of degeneration, it is interesting to find that the first expert, who certified that Cing— was insane, drew attention to the signs of degeneration which he presented: Asymmetry of the face, microcephaly, irregularity of teeth, ogival palatine arch, and convergent strabismus. Dr. Garnier only agreed to the last two signs, but saw nothing abnormal about the head, face, and teeth.

As regards the hystero-epilepsy, it is noteworthy that the super-

intendent of the Asylum in which the patient remained two years never witnessed an attack. Dr. Garnier coaxed the patient into simulating a fit, which, although a fair imitation, could easily have been unmasked as an attempt at deception. Although irritable and cantankerous, Cing— was fairly well endowed mentally, his memory was good, and one could not even say that he was morally insane.

The polymorphous character of the insanity observed in Cing— was calculated to excite suspicion; for delusional insanity of persecution, associated with hysteria with a sudden transition to delusions of grandeur with varying hallucinations, is a rare clinical picture. After discussing the whole history of the patient, and after a careful examination of the man's antecedents and present mental condition, Dr. Garnier concluded that :—

1. Cing— was in the full enjoyment of his mental faculties.

2. That he had never been insane, and therefore that there were no circumstances to warrant an attenuation of his responsibility for his criminal act.

3. Justice must take its course.

The man was condemned to six months' imprisonment. Other incidents mentioned concerning Cing— support the view that he was a smart criminal and nothing more.

H. J. MACEVOY.

A Case of Morphinism associated with Theft. (Rpt. Ann. Meet. Queb. Med.-Psych. Soc., June 23rd, 1899.) Villeneuve.

Dr. Villeneuve communicates a medico-legal report on a case of theft committed by a subject addicted to the use of morphia.

The accused, whose reputation for honesty was always very indifferent, was caught in the act of purloining some small articles in a shop. The plea of irresponsibility was raised on the ground that the offence was committed under the influence of morphia intoxication.

From his examination of the accused Dr. Villeneuve concluded— (1) The morphia habit had originated from medicinal use of the drug, not from special neuropathic predisposition. (2) It had not produced a condition of definite alienation. (3) On the day of the offence the accused had had his customary dose, and had enough money to make further purchases of the drug, therefore he was not driven to the theft by craving for morphia. (4) His memory of the details of the offence was perfect, differing only from that of the witnesses in that he explained as accident what they attributed to criminal intent; thus the offence had not the character of an act committed in a state of cerebral automatism.

For these reasons the reporter rejected the theory of total irresponsibility, but at the same time admitted as an extenuating circumstance the undoubted morphinism of the accused. Effect was given to this view by special leniency in the sentence.

W. C. SULLIVAN.

On Criminality in Rome and the Provinces [La Criminalità a Roma e nella Provincia]. (Arch. di Psichiat., vol. xx, fasc. 4.) Veroni.

In the continuation of his elaborate paper on this subject, Veroni shows that crime cannot be treated as a result of atavism, neurasthenia,

or degeneration, or of faulty education, or bad social conditions, but that it is the outcome of many influences acting together. He shows by elaborate statistics that riches and crime stand in an inverse relation to one another, and that crimes such as robbery, extortion, revenge, arson, and damage to property are found to increase with the rise in the price of provisions, bread, meat, and wine. He finds that more spirituous liquor is consumed in the Romagna than in the colder regions of Northern Italy, and crimes against the person are commoner.

W. W. IRELAND.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

GENERAL MEETING.

A General Meeting was held at the Rooms of the Association, London, on May 10th, 1900, under the presidency of Dr. J. Beveridge Spence. A meeting of the Council was held earlier in the day.

Members present at General Meeting:—Drs. C. A. Mercier, J. B. Spence, H. H. Newington, W. R. Dawson, Robert Jones, James Chambers, R. D. Hotchkis, J. G. Soutar, R. Percy Smith, W. Crochley Clapham, J. Carlyle Johnstone, P. W. MacDonald, Fletcher Beach, H. A. Benham, David Bower, T. Outterson Wood, Ernest W. White, S. R. Macphail, T. W. McDowall, J. R. Whitwell, G. Braine-Hartnell, A. W. Campbell, J. Stirling Christie, W. Douglas, T. B. Hyslop, Maurice Craig, G. E. Mould, Guy Wood, H. C. MacBryan, W. Rawes, David Blair, H. J. Macevoy, C. Aldridge, R. Langdon-Down, J. F. Briscoe, Wilson Eager, Elliot Daunt, Rothsay Stewart, Herbert Smalley, R. Brayn, W. H. Kesteven, F. C. Gayton, G. F. Blandford, G. A. Waters, J. C. Corner, F. R. P. Taylor, T. Telford-Smith, L. W. Rolleston, L. A. Weatherly, F. G. Crookshank, W. C. Sullivan, C. K. Hitchcock, W. H. R. Rivers, A. N. Boycott, W. J. Donaldson, R. H. Cole, H. Rayner, John Baker, James Scott, Eric France, G. E. Shuttleworth, R. H. Steen, T. Seymour Tuke, G. A. Rorie.

Visitors:—Drs. W. J. Koenig, Francis Warner, F. E. Batten, A. P. Tredgold, Harry Campbell; Messrs. H. Langhorne Orchard, E. C. Benecke, Henry Power, Shadworth H. Hodgson, A. F. Shand, H. W. Carr, D. Milsom Rees, Earl Barns (Leland Stanford University, California), and Rev. F. Mann.

Apologies for non-attendance were received from the following members:—Drs. D. M. Cassidy, A. R. Turnbull, A. D. O'C. Finegan, A. R. Urquhart.

The following candidates were elected ordinary members:—Joseph Shaw Bolton, M.D., Sydney John Cole, M.B., Ernest Coleman, M.B., F. W. Edridge-Green, M.D., Harry Armitage Robinson, M.B., Ernest William Skinner, M.D., Esther Molyneux Stuart, M.B.

The PRESIDENT announced that the Council of the Association had that morning proposed a resolution congratulating Sir John Batty Tuke on the honour bestowed upon him by the electors of the Universities of Edinburgh and St. Andrew's in sending him to represent them in Parliament. On the motion of the President it was unanimously resolved that the congratulations of the Association be conveyed to Sir John Batty Tuke.

Dr. A. W. CAMPBELL gave a microscopic demonstration illustrating the arrangement of nerve-fibres and nerve-cells in the cerebral cortex of a series of idiots' brains.

A report of this interesting contribution will appear in a future number of the JOURNAL.

Dr. KOENIG read a paper entitled, "On Pupillary Anomalies in Paralysed and Non-paralysed Idiot Children, and their relation to Hereditary Syphilis." (See page 427.)

Dr. MAUDSLEY gave an address on "The New Psychology: Critical Remarks on its Methods and Aims, especially in Reference to Psychology of Children and Psycho-physical Research." (See page 411.)

Members afterwards dined at the Café Royal.

COUNCIL MEETING.

Present:—Drs. J. Beveridge Spence (President), H. Rayner, H. Hayes Newington, T. Outterson Wood, Fletcher Beach, Charles Mercier, J. G. Soutar, R. Percy Smith, A. M. Campbell, J. Carlyle Johnstone, W. R. Dawson, E. W. White, J. Chambers, R. D. Hotchkis, P. W. MacDonald, H. A. Benham, J. R. Macphail, H. T. O. Aveline, and Robert Jones.

Apologies were intimated from Drs. Turnbull, Urquhart, Cassidy, and Finegan.

At the meeting of Council it was resolved that the following members should serve on the Tuberculosis Committee:—Drs. D. M. Cassidy, A. Campbell Clark, T. S. Clouston, T. Elkins, E. France, Mr. G. T. Hine, Drs. F. W. Mott, Conolly Norman, R. Percy Smith, J. Beveridge Spence, L. A. Weatherly, J. R. Whitwell, and J. Wigglesworth. [This Committee had a preliminary meeting on the 22nd June, and arranged for a further meeting on Wednesday, July 25th, at 4 p.m. We are assured by a perusal of the names that it will set to work vigorously and formulate conclusions of definite value. No doubt there will be a very deep and widespread interest in the operations of a committee charged with such an important research.—Ed.]

SOUTH-WESTERN DIVISION.

A meeting of the Division was held on Tuesday, April 24th, at Bailbrook House, Bath, in response to an invitation by Dr. Weatherly, whose kind hospitality was warmly appreciated by a large gathering of members. The day being delightfully fine, the business proceedings took place on the balcony. Dr. Deas was voted to the chair, and there were also present Drs. Soutar, Noot Ligertwood, Weatherly, Forsyth, Aldridge, Stewart, Morton, Morrison, Wade, Eager, Rutherford, Benham, Aveling, Hartnell, Turner, MacBryan, Walters, and MacDonald (Hon. Sec.).

The minutes of last meeting having been read and confirmed, the following candidates were elected ordinary members of the Association:—David Lauder Lindsay, L.R.C.P. and L.R.C.S.Édin., Assistant Medical Officer, Devon County Asylum; John Ogilvie Veitch, M.B. and C.M.Édin., Assistant Medical Officer, Worcester Asylum; Harry Bacon Wilkinson, M.R.C.S., L.R.C.P., Assistant Medical Officer, Worcester Asylum; Herbert C. Manning, M.R.C.S., L.R.C.P., Assistant Medical Officer, Cotford Asylum, Somerset; Joseph S. Barnes, L.R.C.P., M.R.C.S., Assistant Medical Officer, Portsmouth Asylum.

It was resolved to nominate Dr. MacDonald as Hon. Sec., and the names of two members were submitted as willing to serve if elected on the Council.

The vacancies on the Committee of Management were filled by the election of Dr. Davis and Dr. MacBryan.

The Lunacy Bill was freely discussed, but no definite resolution on any of the clauses was submitted. The Hon. Sec. read a communication from Dr. NEIL, of the Warneford Hospital, with reference to Clause 17.

Letters of regret and apology were received from the President, President-elect Dr. Brayn, and others.

Dr. WEATHERLY opened a discussion "On the Care and Treatment of Phthisical Patients in Asylums for the Insane."

It was unanimously resolved that Dr. TURNER's paper on "Asylum Dietary" should form the subject of discussion at next meeting.

The members dined afterwards at the Grand Pump Room Hotel.

The Autumn Meeting will be held at Broadmoor Asylum towards the end of October.

NORTHERN AND MIDLAND DIVISION.

A meeting of this Division was held at the County Asylum, Whittingham, near Preston, on April 18th, 1900.

Members present.—Drs. Stanley Gill, Wilcox, G. E. Mould, C. Mabel Blackwood, Holmes, G. W. Mould, Hitchcock, Edgerley, Perceval, A. W. Campbell, Shoyer, Adair, Eades, Blair, and Crochley Clapham.

Visitors.—Drs. Simpson, Orr, Bresland, and Clark.

Dr. Perceval having been voted to the chair, the minutes of the last meeting were read and confirmed. Dr. Crochley Clapham was nominated for the post of Hon. Secretary, and Drs. Miller, of Warwick, and Header, of Wakefield, to fill vacancies on the Council of the Association.

The date of the autumn meeting was fixed for the first Wednesday in October, and its place left in the hands of the Hon. Secretary.

THE LUNACY BILL.

Dr. MOULD (Cheadle) opened a discussion on the new Lunacy Bill, which was joined in by Drs. Perceval, Gill, Holmes, Hitchcock, and others.

Dr. MOULD said he considered this subject was of the greatest importance, and proceeded to criticise the Bill in detail. He regarded the existing Urgency Order as a valuable provision. He thought there should be great facilities afforded for permitting certified patients in registered hospitals to have a change of residence on leave of absence for health. With regard to the boarding out of pauper patients, Dr. Mould thought it should be possible for as many as twenty to reside together in a suitable house. He considered that Section 14, which deals with "special inquiries as to lunatics," required amending. As to voluntary boarders, he was of opinion the provision for their reception met a decided want, and he said he had in practice given a liberal interpretation to it. When referring to Section 16, which deals with the number of patients to be received into existing registered hospitals, Dr. Mould said he could not understand why there was such a distinction made between county asylums and the hospitals. He criticised adversely the proposed change in the management of hospitals, and he did not consider it would be practicable to have "branch establishments" registered. He concurred as to the desirability of providing for cases of injury to the staff; but he thought the Workmen's Compensation Act would best meet such cases. He did not approve of the proposed method of dealing with incipient insanity. Finally, he expressed the hope that, as the latest attempt to amend the Lunacy Acts had itself so many imperfections, the whole matter should be thoroughly investigated with a view to obtaining decided alterations in the Bill.

Dr. GILL expressed approval of the existing Urgency Order. He was of opinion that any house in which insane patients are received should be registered.

Dr. HOLMES considered the proposed treatment of incipient insanity might prove beneficial.

After some further discussion by Dr. Crochley Clapham and Dr. Hitchcock regarding the admission of voluntary boarders into existing institutions, Dr. Mould said he hoped to see established separate hospitals or reception houses for boarders.

Dr. CATHERINE M. BLACKWOOD, of Wadsley, then read a paper on "A Glioma of the Corpus Callosum," and a paper contributed by Dr. F. O. SIMPSON, of Rainhill, on "Foreign Bodies in both Bronchi," was read by his colleague Dr. A. W. CAMPBELL. (See pages 512, 515.)

Previous to the business meeting the members were entertained at luncheon and shown round the asylum by Dr. Perceval, to whom a vote of thanks was given for both attentions. Members dined together in the evening at the Park Hotel, Preston.

SOUTH-EASTERN DIVISION.

The Spring Meeting was held at the City of London Asylum, near Dartford, Kent, on Wednesday, April 25th. From 11.30 a.m. to 1 p.m. the members inspected the asylum and grounds. From 1 p.m. to 2.30 p.m. luncheon was served. The Divisional

Committee then met, and at 3 p.m. the general meeting was held. There were present:—Drs. H. G. Hill, E. Daunt, C. Caldecott, E. W. White (Hon. Sec.), A. E. Patterson, J. P. Richards, R. P. Smith, F. R. P. Taylor, J. F. Briscoe, R. Worth, D. Bower, D. G. Thomson, J. Chambers, J. G. Havelock, A. S. Newington, F. Beach, P. E. Campbell, A. N. Boycott, H. Kidd, C. H. Bond, T. B. Hyslop. Visitors: Rev. O. Hewitt, Dr. P. Bayley, Mr. C. Fitch, and Mr. Stikeman.

Dr. Beach (President Elect) was voted to the chair.

Dr. WHITE read a telegram from the President regretting his inability to attend.

The minutes of the last meeting were read and confirmed.

Dr. BEACH expressed his regret that Dr. White was resigning the secretaryship after three years of office.

Dr. WHITE proposed that Dr. Boycott be asked to take the secretaryship. This was seconded by Dr. Percy Smith.

Dr. WHITE stated the time had come for him to resign; that Dr. Boycott, of the New Hertford Asylum, was fully qualified for the post, and had a great claim in view of his being a superintendent, and recently a medical officer, therefore in touch with both sections.

Dr. Boycott was duly elected.

Drs. Bower, Moody, and Thomson, three members of the Divisional Committee, retired by rotation, and Drs. Alexander, Alexander Newington, and Ernest W. White were elected to fill the vacancies. Dr. Gardiner Hill and Dr. Bond were nominated for the probable vacancies on the Council. The former was proposed by Dr. White and seconded by Dr. Thomson; the latter was proposed by Dr. Taylor and seconded by Dr. Bower.

The CHAIRMAN then proposed a vote of thanks to Dr. White for his services as Secretary for the past three years. He said the successful state of this division showed that their action in selecting Dr. White to be the first Secretary was right. There were now 170 members, which was entirely due to the energy displayed by Dr. White. He had practically worked up the Division from its initiation, and should be accorded a very hearty vote of thanks.

Dr. BOWER also added his word of thanks, and expressed appreciation of Dr. White's services, marked as they were throughout by tact and energy.

The vote was carried by acclamation.

Dr. WHITE, in reply, thanked the meeting most heartily for the kind way in which this vote had been passed.

In the consideration of the Lunacy Bill, 1900, and the Pensions question, the Chairman was of opinion that, as the matter was in the hands of the Parliamentary section, nothing could be done at this meeting. The members were, however, urged to oppose the Bill if the Pensions clause was not inserted.

Dr. Newington's invitation to hold the next meeting at Titchhurst in October was accepted.

Dr. WHITE then read a paper on "The Remodelling of an Old Asylum." (See page 457.)

After the discussion on Dr. White's paper, Dr. PATTERSON read a paper on "An Analysis of 1000 Consecutive Admissions at the City of London Asylum since 1892." (See page 473.)

The CHAIRMAN expressed regret that time would not permit a discussion of the paper, and this was accordingly adjourned till the next meeting.

Dr. BOYCOTT regretted that he was not present when elected to the secretaryship. He thanked them for the honour. He would accept the office with pleasure, and would discharge the duties to the best of his ability.

Votes of thanks were passed in conclusion to the Visiting Committee of the City of London Asylum, Dr. White, and the Chairman of the meeting, and in the evening the members and visitors dined together at the Café Monico, Piccadilly Circus, London, W.

IRISH DIVISION.

A meeting of the Irish Division of the Association was held on Tuesday, April 10th, 1900, at the College of Physicians, Kildare Street, Dublin.

The following members were present:—Dr. Conolly Norman, Dr. Mercier, Dr. Rambaut, Dr. Cullinan, Dr. Donelan, Dr. Nolan, Dr. O'Mara (Limerick), Dr. Dawson, Dr. Lawless, and Dr. Finegan (Secretary).

On the motion of Dr. NOLAN, seconded by Dr. FINEGAN, the chair was taken by Dr. Conolly Norman.

The SECRETARY read the minutes of the previous meeting, which were confirmed and signed. He then read a number of letters of apology for non-attendance from members of the Association, including Dr. J. Beveridge Spence (President), Dr. Hetherington, Dr. Harvey (who was to have read a paper), Dr. Woods (Cork), Dr. West, Dr. Oakshott, Dr. Petit, Dr. O'Neill, and Dr. O'Mara (Carlow).

On the suggestion of the Secretary, it was, after some discussion, unanimously resolved that the next meeting should be held at the new Portrane Asylum on Thursday, June 28th.

The following were elected ordinary members of the Association:—Patrick Coffey, L.R.C.P.I., Assistant Medical Officer, District Asylum, Limerick; and Thomas Francis White, L.R.C.P.I., Assistant Medical Officer, District Asylum, Waterford.

Dr. W. R. DAWSON, Farnham House, Finglas, read a paper on "The Best Method of Dealing with the Pathological Work of the Irish Asylums." (See page 487.)

LOCAL GOVERNMENT ACT (IRELAND).

Dr. FINEGAN, the Secretary, opened a discussion on the operation of the Local Government Act (Ireland), which has increased the work and responsibilities of medical superintendents of asylums, and proposed a resolution with a view to the best mode of securing proportionate compensation for these officers. He said: Before this Local Government Act was introduced, we were governed by, or at least we took as our standard the Privy Council Rules. These rules had no specific orders, as far as I know, beyond that of general superintendence, whereas under the Local Government Act there has been issued a General Order and also an Asylum Accounts Order. This Asylum Accounts Order involves thirty-five new books to be opened in every asylum. The General Order gives a new title to the superintendent, and calls him an accounting officer. The duties devolved on this accounting officer are that the superintendent must periodically examine the clerk's and storekeeper's books, and be responsible for them being properly written up. The General Order further directs superintendents to prepare the stock list twice in each year, and submit this stock list, with a report, to their committees of management. It further commands that all paying orders and orders for payment should be signed by the resident medical superintendent, and all orders passing out of the asylum under all circumstances whatever must be signed by the medical superintendent. In addition to these there is another account to be introduced, called the Subsidiary Account, which practically means that the superintendent has to keep a record of every penny piece in the matter of petty cash and open an account in the bank in his own name, for which he is responsible. That subsidiary account in itself means a considerable amount of work. Again the superintendent is ordered by Article 9 of the Orders to prepare an abstract of the entire accounts of the asylum twice in each year, to be submitted to the auditor, and to do a number of other of the clerk's duties, for which he is made responsible, such as publishing the audit on the asylum gates. Under the old arrangement these were not the duties of the superintendent. I think superintendents are entitled to a certain remuneration, and the question for us to decide is this—what is the best way to approach our committees? Under the circumstances I have drafted a resolution which, if adopted by the Association, I would propose be sent to each superintendent in Ireland, and let him bring it before his committee, and make what use he can of it to his own advantage. The resolution is as follows:—"The duties and responsibilities of Resident Medical Superintendents of Irish District Asylums having been greatly increased by the operation of the Local Government Act of 1898, and Section 115, Sub-section 18, having provided that adequate remuneration can be fixed for extra duties performed under the Act, or under orders arising thereon, we are of opinion that the resident medical superintendents should bring this matter under the

notice of their committees, with a view to a fair and reasonable readjustment of their salaries, in view of the increased duties and responsibilities referred to."

Dr. LAWLESS.—Do you suggest what remuneration would be adequate?

Dr. FINEGAN.—No; I think it would be a matter for each individual.

CHAIRMAN.—There is a provision in the Local Government Act that the salaries of employees under that Act may be considered and augmented in case of augmented duties, and it occurs to me very great care is required in drawing up any resolution to show precisely how our duties have been augmented.

Dr. NOLAN.—There is one thing which the Secretary has overlooked. This new Act abolishes the Board of Control, and that puts a good deal of extra work upon superintendents who have any building operations going on, or where land is being purchased, and owing to the letters and correspondence which have to be attended to, a considerable amount of real responsibility and work has been put upon superintendents. In my opinion in any resolution adopted an approximate percentage for the increased work should be stated; then it would be for every superintendent to make his own arrangements, because everything would depend upon the locality in a case like that.

After some further discussion, in which Dr. Lawless and Dr. O'Mara joined, Dr. O'MARA seconded the resolution, which was adopted unanimously.

NURSING IN IRISH WORKHOUSES.

The SECRETARY stated that at the last meeting a resolution on this subject was passed unanimously, and ordered to be sent to the Irish Local Government Board. He had done that, and the replies received from the Local Government Board went to show that something was done, and that considerable advance was made with this nursing question. He read the resolution and the subsequent correspondence. The resolution, which has already appeared, affirmed the opinion of the Association that as long as the insane are retained in Irish workhouses attendants should be properly qualified and certificated persons. To this the Irish Local Government Board replied that they are willing to establish a register for asylum-trained and certificated mental nurses. Subsequently, as a number of letters showed, the Local Government Board had insisted at various workhouses on the appointment of properly trained persons to look after the insane, and had in others suggested that such salary should be given as would induce asylum attendants to look for the post.

Dr. FINEGAN, continuing, said similar communications have gone practically to every union in Ireland. The certificate of the Psychological Association is recognised by the Local Government Board, and there will be a very large number of appointments open in the Irish Poor Law Service for those holding the certificate of the Psychological Association, so that the resolution has done a considerable amount of benefit to holders of the certificate, because the Local Government will not sanction any appointment over the insane for workhouses without it. The result from this would be that the Guardians, when they find they have to pay adequate salaries for attendants on the insane, will either send them back to the asylum or make proper provision for them.

The CHAIRMAN.—The correspondence shows the action, which at Dr. Finegan's suggestion we took, has produced some effect.

The Secretary was directed to prepare the abstract of the correspondence for publication.

Papers by Dr. CONOLLY NORMAN, "Notes to serve for the Study of Fractures of the Ribs in the Insane;" and by Dr. BAGNALL HARVEY, "Notes on an Interesting Case of Foreign Bodies in Stomach and Intestines" were by consent held over till next meeting.

Dr. RAMBAUT read a paper entitled, "Notes on Gangrene of the Lung in the Insane."

The CHAIRMAN.—I have to make the confession that I drew the attention of Dr. Rambaut and his colleagues to the method of feeding described by Dr. Newth, in the October, 1899, number of the *Journal of Mental Science*, and I now regret having done so. I see this description copied into some German journals, and it is quite possible it may do a great deal of mischief. We ought to be obliged to Dr. Rambaut for bringing the matter forward.

Dr. MERCIER.—He appears to have an unusual experience of gangrene of the

lungs too, more than I have had. I think the dangers of feeding with the tube are greatly exaggerated; I don't think there is the slightest suspicion of harm in feeding with the tube if carried out with care and intelligence. If carelessly or coarsely it may have caused harm, but if used with ordinary care I never saw any harm.

Dr. DONELAN.—Everything is in favour of the tube. It is the readiest and the easiest way.

Dr. LAWLESS said he used the tube in a great many cases, both nasally and through the mouth, and never had an experience of any symptoms of unpleasantness from it.

Dr. RAMBAUT also read a paper entitled "Post-mortem Appearance in a case of Alcoholic Neuritis," which was accompanied by a demonstration of the histology of the various viscera and nerves. Dr. Rambaut added that there were still some parts of the case to be examined,—

Dr. MERCIER remarked that the condition of the heart was most extraordinary, and it was very difficult to understand how it carried on its functions. He asked Dr. Rambaut if he had ever seen such an appearance before?

Dr. RAMBAUT.—No.

Dr. DAWSON asked if any examination was made of the nerves of the heart, either intrinsic or extrinsic, as he did not quite gather whether there was or not, or whether it proves the condition of the heart was due to the effect on the nerves of the heart or to the direct action of alcohol on the heart-muscle?

Dr. RAMBAUT having briefly replied, the proceedings then concluded.

SCOTTISH DIVISION.

A special meeting of the Scottish Division was held in the Royal College of Physicians, Edinburgh, on Saturday, June 2nd.

Present: Sir John Sibbald (in the chair), Drs. Clouston, Havelock, Campbell Clark, Watson, Carlyle Johnstone, Robertson, R. B. Mitchell, Keay, Urquhart, Ronaldson, and Turnbull (Secretary).

The minutes of the last meeting were read, approved, and signed by the Chairman.

The Secretary reported that he had ascertained the feeling of members resident in Scotland relative to the most suitable day of the week for holding the Divisional Meetings. There was a large majority in favour of a change from Thursday, as at present, to Friday. Having regard to the General Meetings he moved that the Scottish Division should, in future, hold meetings on the fourth Fridays of March and November. This was seconded by Dr. Havelock, and carried unanimously.

Dr. Carlyle Johnstone referred to the nomination of Examiners for the certificate of proficiency in Mental Nursing, and asked the Division for an expression of opinion as to representation on that Board. He held that Scotland should be represented by Dr. Campbell Clark, who had taken a leading part in instituting these examinations. After some discussion Dr. Clark intimated that he would be willing to accept office, Dr. Clouston expressing the mind of the meeting in saying that they were most deeply indebted to him.

Dr. CARLYLE JOHNSTONE moved that Dr. Campbell Clark should be nominated as one of the Examiners in Nursing, under the new regulations. This was unanimously approved.

REPORT OF THE COMMITTEE ON ASYLUM NURSING AND ADMINISTRATION.

This report was discussed at great length, and adjusted in detail. On the motion of Dr. Urquhart, it was then received and entered on the minutes. Various suggestions were made and discussed. These were referred to the Committee for adjustment, on the understanding that they would submit a series of recommendations or resolutions to the next meeting of the Division.

Dr. CLOUSTON moved a vote of thanks to the Committee, and especially to the Convener, Dr. Campbell Clark, who had done so much work in regard to this matter, and especially in presenting a full synopsis of the replies to the questions placed before the Scottish superintendents.

Sir John Sibbald was accorded a hearty vote of thanks, on the motion of Dr. Watson, for his conduct in the chair.

ASYLUM WORKERS' ASSOCIATION.

The Annual Meeting of this Association was held on May 14th. Sir James Crichton-Browne presided, and delivered an eloquent and sympathetic address, which dealt fully with the aims and activities of the Association.

A detailed report of the year's work was presented to the meeting; appended is an abstract of this Report:

"The roll of Members has increased from 2890 in December, 1898, to 3006 at the end of 1899, this number including 61 life members and 37 associate members; 1010 new members were elected during 1899; and had all old subscriptions been renewed, the Association would by this time approach 4000.

"Representatives of thirty-one Asylums (in England, Wales, Scotland, Ireland, and the Colonies) not previously represented, had joined the Association during 1899; and recently members had been elected from the Royal Edinburgh and Royal Glasgow Asylums. Reservists on active service had been retained on the roll without payment of subscription for the present year.

"The Financial Statement shows that the aggregate receipts for 1899 amounted to £256 10s., as compared with £254 7s. 9d. during 1898. The advance in receipts would have been larger but that the collecting cards for Home of Rest Fund brought in only £26 1s., as compared with £61 19s. 6d. in 1898. The credit balance at end of 1899 amounted to £143 2s. 4d., against £137 14s. 3d. at end of 1898.

"Nine cases had received grants from the Home of Rest Fund, which was assuming much of the character of a mutual benefit society, being mainly supported by Asylum Workers themselves, though contributions from others were welcome.

"Impending lunacy legislation had engaged the anxious attention of the Executive, and every effort had been made to obtain the introduction of a clause providing for assured pensions for Asylum Workers.

"The Association is to be congratulated on the willingness of Sir James Crichton-Browne, M.D., F.R.S., to undertake for a third year the office of President.

"The Executive Committee desire to place on record their keen appreciation of the continued services of the Honorary Secretary, Dr. Shuttleworth, to whom the growth of the Association is largely due, and of the valuable aid of Mr. J. B. W. Wilson as Assistant Secretary."

 PARLIAMENTARY NEWS.

LUNACY LABORATORIES.—29th March.

In reply to Sir J. A. Pease, Sir MATTHEW WHITE RIDLEY said that he had no information to lead him to believe that the research for which the laboratories might be established would involve necessity for licences or certificates. He promised to consult the Lunacy Commissioners on the subject.

RATING OF INSTITUTIONS FOR IMBECILES.—2nd May.

On a Bill being introduced to exempt from poor and other local rates all registered institutions for the care of idiots and imbeciles, Mr. T. W. RUSSELL said that it would be necessary to have an inquiry by a Select Committee before arriving at a conclusion. In the inquiry hospitals would be included. The Bill was withdrawn.

MEDICAL OFFICERS AND THE CERTIFICATION OF LUNATICS.—5th April.

Sir MANCHERJEE BHOWNAGGREE asked the President of the Local Government Board whether he received from the Bethnal Green Board of Guardians a communication to the effect that gratuities had been paid on a large scale to relieving officers by medical officers in respect of the certification of lunatics, as well as by certain metropolitan licensed houses; and whether he intended taking any steps to prevent a repetition of such practices.

Mr. CHAPLIN replied: The facts are as stated in the question. I have communicated with the Lunacy Commissioners, and I find that they have cautioned the

proprietors of metropolitan licensed houses that wherever the practice of giving relieving officers gratuities of the kind referred to has obtained it must be at once discontinued, and the Commissioners have no reason to doubt that their requirement will be respected. They have also communicated their views to the Wiltshire Justices, as one of the licensed houses affected was licensed by those Justices. As regards the officers of the Guardians, I have directed that an inquiry shall be held by an Inspector of the Local Government Board. The inquiry will take place as soon as possible, and on receipt of his report I shall have to decide what further steps, if any, it will be necessary for me to take in the matter.

Sir MANCHERJEE BHOWNAGGREE: In view of the facts now disclosed, will the Home Secretary insert adequate provisions in the Lunacy Bill so as effectually to check this practice?

Mr. CHAPLIN: I will consult the Home Secretary on the matter.

POST-MORTEM EXAMINATIONS.—11th May.

The Lunacy Commission came under discussion on the Estimates, and complaint was made of the low percentage of post-mortem examinations in the criminal lunatic asylum.

[If Broadmoor were specially referred to, the complaint would appear to have been ill-founded.—ED.]

The system of boarding-out criminal lunatics in ordinary borough and county asylums was also criticised as undesirable in the interests of these institutions, but it is a necessity until more State accommodation is provided.

ROYAL LUNATIC ASYLUMS.—17th March.

Mr. WEIR asked the Lord Advocate whether the Secretary for Scotland had received memorials from certain parish councils in Scotland urging that parish councils should be represented on the Board of Royal Lunatic Asylums, and that there should be a public audit of the accounts of those boards; and what action was proposed in the matter?

The LORD ADVOCATE: The memorials were received, and the Secretary for Scotland met a deputation, when the whole subject was discussed. To give effect to the proposals would require legislation, which it is not intended to propose at present.

LUNACY COMMISSIONERS.

Mr. WEIR asked the Lord Advocate if his attention had been called to the recommendation contained in the Forty-first Annual Report of the Commissioners in Lunacy for Scotland to the effect that measures should be taken to give district lunacy boards permissive powers to provide accommodation for the poorer class of private patients; and what action it was proposed to take?

The LORD ADVOCATE: The answer to the first part of the question is in the affirmative. The Secretary for Scotland does not propose to take any action at present.

LUNACY BOARD (SCOTLAND) BILL.—19th February.

The LORD ADVOCATE introduced a Bill to make further provision for the number and salaries of the staff of the Lunacy Board for Scotland, and for the remuneration of certain of the Commissioners.

9th March.

The LORD ADVOCATE said that this was a purely formal Treasury Bill. Unfortunately the salary of the Secretary of the Scottish General Board of Lunacy was fixed by statute, and there was a provision that only one clerk should be appointed. With the increase of lunacy in Scotland temporary clerks had been employed under the sanction of the Treasury. But an excellent official was being retained at a much less salary than that to which he was entitled. The present Bill was to put the staffing of the office on the ordinary footing, the Treasury fixing the salaries in the ordinary way, and to allow certain payments to the unofficial Commissioners and an increased payment to the Secretary. The matter had been arranged between the Treasury and the Scottish Office.

Objections were raised by several members and information was asked as to the duties of the Board, etc.

2nd April.

The LORD ADVOCATE, in moving the second reading of the Bill, said he should have thought that the Bill might well have been allowed to pass without much discussion, in the belief that the Treasury would not readily lend themselves to a contribution of Imperial money unless they felt that the demand could not be controverted. But owing to the remarks that had been made he felt it necessary to go into details as to the history of the Board and the increase of the work imposed upon them. Proceeding, he said that in 1858 there were in asylums 4020 patients, and in private dwellings 1804; and in 1898 there were 12,139 and 2767 respectively. Moreover, not only were the Medical Commissioners bound by statute to inspect every asylum twice a year, and there were 7 royal, 15 district, and 5 private asylums, but it was their practice in the course of every visit to make a personal domiciliary visit to every single patient. That meant over 29,000 visits a year. The Deputy Commissioners visited every patient who was boarded out in private houses, and had for this purpose to travel over the length and breadth of Scotland. Their visits in 1858 were 753, and in 1898, 3690. These visits occupied the whole time of the Deputy Commissioners. It was physically impossible for them to do more work. In the present circumstances it was absolutely necessary to have more medical time, and the question was how to get it. They could appoint another Medical Commissioner, but that would mean another salary of not less than £1000 a year, and it would also be open to the objection that the professional element would preponderate over the lay element—the Chairman and two legal members.

After consultation with the General Lunacy Board, LORD BALFOUR thought that by a re-arrangement of the duties of the office more medical time could be obtained from the Commissioners as at present constituted if they could be relieved of certain administrative work. The Chairman had not been idle; not only did he attend the regular board meetings, but he frequently was at the office at other times. He had to see prospective sites for asylums and investigate plans for buildings, etc. The legal members had given excellent attendance at the board meetings, and if the Medical Commissioners were to be more and more taken away, the Secretary would require someone to advise him. So far as the Secretary for Scotland was concerned, it would be the same to him whether they appointed an extra commissioner or utilised the Medical Commissioners in entirely medical work and took a proportion of the time of the unpaid Commissioners. This would entail a certain amount of remuneration. The provision in the Bill was that a sum might be paid by the Treasury to the three unpaid Commissioners, provided that in any year it did not amount to more than £500. He put this Bill as a necessary measure before the House—necessary if they were to have a proper working of a very useful and efficient department.

Mr. CALDWELL said there should be no difficulty in getting a Commissioner who would perform the duty unpaid, and it had not been proved that they should offer inducements to men to fill this office.

Sir J. STIRLING MAXWELL would not vote for the Bill. Officials holding important posts should either be paid or unpaid, but the Bill proposed to create officials who would be neither one kind nor the other. If there was strong ground for creating another paid post in the Department, he should have gladly voted the necessary amount for that purpose; but the present proposal seemed to him to be giving the sum of £500 where it was not wanted, and for which the country was not likely to get any adequate return.

Sir T. GIBSON CARMICHAEL, a former Chairman of the Lunacy Board, said he thought that the present Secretary of the Board discharged his duties most efficiently, but the clerical staff were very much over-burdened with work. If they agreed to the first clause of the Bill he thought they would be doing a good thing for Scotland. But why should the benefits of that clause be confined to the Secretary and clerks? There were other officials of the Board; there were the paid Commissioners and the Deputy Commissioners, and he believed their work had increased quite as much as the others. The legal members of the Board were extremely useful, and gave the Board advice upon technical matters which he could not have given to the medical members. If the Lord Advocate assured him legal members were not willing to discharge these duties on the Board without being paid, then he must agree to the proposal. He was going to vote for the second

reading, but he did not feel convinced that the Chairman ought to be paid. He hoped the Government would not press for a salary for the Chairman of the Board.

Mr. RENSHAW regarded it as an unfortunate feature of the proposals of the Bill; for it for the first time proposed the partial payment of those who were connected with public offices in Scotland. It seemed to him that what was most needed was the appointment of another Assistant Commissioner, or they might get rid of one of the two legal advisers.

Other members having given utterance to similar objections, CAPTAIN SINCLAIR paid a tribute to the admirable administration of the Scottish Lunacy Board. He said that the salaries were limited by a statute, dating so far back as 1864. The English statute did not limit the salaries, and he maintained that the Government should pay the Scottish Commissioners well, and no one could contend that at present they were sufficiently paid.

The LORD ADVOCATE said he was sure he was not doing too much in saying that he would take upon himself to bring to the notice of Lord Balfour the views that had been expressed upon matters of principle. They were perfectly willing to consider them, and he could promise the House that in the light of the remarks which had been made his noble friend and himself would consider the circumstances, and whether it might or might not be more prudent to provide for the extra assistance in another way. On that understanding he hoped the House would allow the Bill to be now read a second time.

Mr. CALDWELL thereupon withdrew his amendment, and the motion for the second reading of the Bill was agreed to.

EDINBURGH DISTRICT LUNACY BOARD.—10th May.

On the motion for the second reading of this Bill, Mr. URE moved its rejection, urging that it was of an unprecedented character. The statutory powers of the Lunacy Board had nothing whatever to do with constructing and maintaining a railway, with selling water as a water company, and with the work of a sewage contractor. He opposed the Bill, not only on general grounds, but in the interests of the town of Bathgate, which, with its small rateable value and limited water supply, had a claim on a portion of the large catchment area the Lunacy Board proposed to acquire.

Mr. JONATHAN SAMUEL seconded the amendment.

Sir LEWIS M'IVER said he hoped that the Hon. Member for Linlithgowshire was now prepared to allow the House to go on with the business before it. Bathgate had arrived at the decision to drop opposition to this Bill. It would be a grave departure from Parliamentary traditions to oppose on the second reading a Bill which had passed a Committee of the House of Lords, and to refuse it the courtesy of a hearing by a Committee in that House.

Mr. URE, by leave, withdrew his amendment, and the Bill was read a second time.

RECENT MEDICO-LEGAL CASES.

REPORTED BY DR. MERCIER.

[The editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Eady v. Elsdon.

The plaintiff was a schoolmaster, who brought an action against a schoolboy to recover damages for having wilfully set fire to the plaintiff's school and destroyed his furniture. The defendant denied liability, and pleaded that if he did the act complained of he was temporarily insane; and further, that the plaintiff voluntarily took him as a pupil, knowing that he was mentally affected, and failed to exercise proper discipline and control. The plaintiff advertised for boys who were idle, disobedient, or difficult to manage, and it was as a pupil of this description that the defendant was placed with him. It was alleged that the defendant had previously set fire to another school, and his mother stated that he needed constant watching and flogging, and could not be restrained. He had repeatedly

run away from home and from school. The defendant was called as a witness and gave evidence with considerable intelligence, and admitted instances of his own mendacity and vice, and that he had caused the fire. The judge told the jury that the recognised relation between master and pupil was that for the ordinary acts of the boy the master undertook the risk—namely, the wear and tear of school furniture by knocking about, kicking the doors, and so forth. But it was clear that he did not take upon himself the risk that the pupils would set fire to the school. To fix him with that risk it must be shown that there was a bargain to that effect. In the present case the crucial test was whether or not it was part of the bargain between Mrs. Elsdon and the plaintiff, that he should undertake such a risk as this. If it was, then the action could not be maintained. If not, and he only undertook the ordinary risk, then the plaintiff was entitled to damages. There was another question: Was the boy mentally deranged? It was put before them as a sort of defence, and although he could not see why, he would put the jury that question. The main question was, Was it part of the bargain that plaintiff should undertake the risk? It was one thing to say, "I know that he is unruly, and I can manage him," and another to say, "I know that he is likely to set fire to the house, and I will take the risk." Unless they thought that the defendant had made out a special contract, the risk was outside the ordinary contract in such cases. The jury found that the defendant was not insane, and that there was no special bargain, and assessed the damages at £450.—2 B. D., February 20th and 21st (Mr. Justice Ridley).—*Times*, February 21st and 22nd.

The interest of this case to those who have charge of mischievous and unruly persons is manifest. Supposing that the incendiarism had been committed, not by a schoolboy in a school, but by a lunatic in an asylum, would the lunatic be answerable in damages for his act? By the ruling in this case it would appear that his liability would depend upon the nature of the bargain made by his friends at the time that he was placed under care, unless it were assumed that incendiarism was one of the "ordinary acts" of a lunatic. Is incendiarism as much an "ordinary act" of a lunatic as cutting his name on his desk, or kicking the doors is an "ordinary act" of a schoolboy? Probably the managers of lunatic asylums would say that it was not, and probably the relatives of lunatics would say that it was. And does the rule, whatever it may be, apply as well to other forms of wilful damage as to incendiarism? A plausible view would be that while the breakage of windows and of crockery, and the tearing of clothing were as "ordinary acts" of the lunatic as the cutting of his name on a desk or the kicking of doors were of the schoolboy, yet, that incendiarism in the former was on a par with the breaking of windows in the latter, for which an extra charge is usually made. Until the question has been judicially decided, it would be rash to act upon this view, and the managers of institutions for lunatics, who desire to be secure against the consequences of exceptionally destructive acts on the part of those under their care, would do well to specify in the bargains that they make precisely how much of the property destroyed or damaged by their patients they are willing themselves to make good.

Charleston v. Stewart.

This case was referred to in the last number of the JOURNAL. It was an action for breach of promise of marriage, in which the defender pleaded, *inter alia*, that several of the pursuer's relatives, both on her father's and mother's side, had suffered from insanity. At the trial counsel for the defender admitted that "the existence of a weakness of this sort in the family of the woman was not a sufficient defence to an action for breach of promise of marriage, for the reason that the man ought to have inquired beforehand." The judge ruled that evidence of the fact that the parent or grandparent of the lady had suffered from insanity was admissible, because it might tend to affect the question of damages. Counsel acquiesced, and said that he would not found upon the evidence as a substantial defence.—Court of Session, March 27th and 29th (Lord McLaren).—*Scotsman*, March 28th and 30th).

It is interesting to know that, in Scotland at any rate, a lover is supposed to make inquiries as to the sanity of the relatives of the innamorata before he puts to her the decisive question, and that their insanity is no defence for him if he subsequently repudiates his engagement.

Mackenzie v. Anderson and others.

An action for damages for slander. The pursuer sued the defenders for writing and publishing in newspapers an account of proceedings headed "Astounding proceedings at Stornoway—Farmer carried off to a Lunatic Asylum." The defenders pleaded justification and privilege. The judge said that the vital question was whether the publication warranted the innuendo that it charged the pursuer with knowledge that Mr. Fowler, to whom the letter related, was sane. That was a question of impression which did not admit of quotation of authority, and hardly of argument, and on that question his lordship was of opinion that it did not. The question of fact in the first issue was whether the defenders said of the pursuer that he got his father-in-law confined in an asylum as of unsound mind. It was admitted that he did so, and it was clear that it was not slanderous to say that a man did that which, as a matter of fact, he did do. It was a contradiction in terms to say that a true statement was false and calumnious. Further, it could not be libellous to add that the act was done illegally and wrongfully, for such words added nothing to the substantial averment of fact; and besides, they raised a question of law, not a question of fact, for a jury. It was not libellous to dissent from or to blame an action actually done, or words actually spoken, however undeserved the blame might be. Nor could it make the statement libellous to add that Mr. Fowler was not, in fact, of unsound mind, if it were not said that the pursuer knew that he was not. That would be merely charging the pursuer with error of judgment.—Court of Sessions, March 13th (Lord Kincairney).—*Scotsman*, March 14th.

If to say that a man has illegally and wrongfully placed his father-in-law in an asylum be not libellous in Scotland, we can only suggest that our comments would be much more freely made and be of greater interest to our readers if this JOURNAL were published in Scotland, and we commend the suggestion to the Association. There are several things that we should say if we were not deterred by the fear of actions for libel.

Hope v. Board of Guardians of Chertsey.

Plaintiff, a medical man, was called in by the relieving officer to examine, with a view to certification, certain patients in the workhouse. For this he demanded a fee of a guinea for each examination and certificate. The Guardians disputed the amount, under their statutory discretion to pay "such reasonable remuneration as they thought fit," and offered three guineas for the eight cases. His honour, in giving judgment, said that he had to decide what was a reasonable remuneration. The examination was one of very great responsibility. The public interest and the fate of the patients were in the balance, and the responsibility attaching to the medical man was very great. Dr. Hope seemed to have done his work very thoroughly, and as to his seeing the eight patients in 85 minutes, it did not matter whether it took him 5 minutes or 100 minutes. It was not a question of time, but of professional judgment and skill and experience. Defendants had not given a single instance of a case in which less than a guinea had been paid, but on the other hand they had ample evidence of the recognised and customary fee in the profession. His first impression had been that the Act referred to left an absolute discretion to the Guardians, but the defence had itself admitted that that provision was merely to protect the guardians from the surcharge of the auditor in case they paid too much. Dr. Hope was not aware of this section of the Act when he was called in, and he had asked for what his Honour thought a fair and reasonable sum. Judgment for the plaintiff with costs on the higher scale.—Chertsey County Court, April 5th (Judge Lushington).—*Surrey Times*, April 7th.

Dr. C. H. Broadhurst was summoned at the instance of the Commissioners in Lunacy for unlawfully for payment, and not under the provisions of the Lunacy Act, 1890, taking charge of a lunatic in an unlicensed house at Bournemouth. The patient in question, a Mr. M—, had been in St. Andrew's Hospital suffering from various delusions, and had been discharged therefrom (not improved) by order of his wife. He was taken from St. Andrew's by Dr. Broadhurst to the house of the latter, and at the time of his discharge from St. Andrew's was considered by the medical officers of that institution to be certifiably insane. Dr. Morton, to whose care the patient had been removed from that of Dr. Broadhurst,

deposed that the patient was certifiably insane when he received him. Dr. Broadhurst deposed that during the time that Mr. M— was in his house he was not certifiably insane. That he transacted business, and was under no control, except that sometimes he had to be made to put his clothes on. Dr. Savage deposed that he examined Mr. M— while in Dr. Broadhurst's house, and that while Mr. M— was a confirmed hypochondriac, he was not a person who should be treated as a lunatic. He was not of sound mind, but he was not certifiably insane. Dr. Snow, of Bournemouth, said that he had examined Mr. M— while at Dr. Broadhurst's, and would not have certified him. At this stage the Court adjourned, and on resuming, Dr. Broadhurst's solicitor announced that his client was prepared to plead guilty to a technical offence. The solicitor to the Commissioners then assured the Court that he did not ask for a heavy penalty. There was not the slightest suggestion of impropriety against Dr. Broadhurst, and the patient had been well treated. It was merely a technical offence. The Bench inflicted a fine of £15.—Bournemouth Police Court, March 24th and 25th.—*Bournemouth Visitors' Directory*, March 31st.

Reg. v. Greaves.

Henry Greaves, aged 26, hawker, was indicted for the murder of Henry Smith, at Enfield. Prisoner hired Smith's yard, but as he was in arrear with his rent the deceased would not allow him to enter it. Greaves thereupon knocked him down, went away and fetched two scythes, and with these he repeatedly struck deceased as he lay on the ground, and of these injuries Smith died. The prisoner gave evidence, and said that he and the deceased man were the best of friends, and denied striking him with the scythe. He admitted that he was himself in drink at the time. Guilty. Sentenced to death, and subsequently hanged.

The plea of insanity was not raised in this case, but it is noticed here as a crime whose violence and ferocity so far outstripped the provocation as to bring it into close resemblance with a class of crimes that frequently result from insanity. And the resemblance is still further increased by the fact that the murderer was at the time suffering from the transient insanity of drunkenness, and to this there is no doubt that the crime was due. The transient insanity of voluntarily induced drunkenness is, however, no excuse for crime, and the prisoner was hanged. The case may be instructively compared with *Reg. v. Stoner* and *Reg. v. O'Byrne* in the last number of this JOURNAL.

INEBRIATE LEGISLATION.

The London County Council's Committee reports:—"Having regard to the insufficiency of accommodation for Protestant women at the Duxhurst Reformatory, and the refusal of the managers to receive patients of the prostitute class, who form a large proportion of those who come before the courts, we have been in negotiation with the Salvation Army, with the managers of various penitentiaries, who, we understood, had under consideration the question of applying for certificates under the Act, and have done all we could to find accommodation for those who could not be received under the terms of our existing agreements. Our efforts have not, however, been successful, and failing the provision of accommodation in any other way, the Council, on our recommendation, decided to provide accommodation itself, and has, for this purpose, acquired the Farmfield Estate, and arrangements are now being pushed forward as rapidly as possible for the adaptation of the buildings on the estate for the purpose of a reformatory for females. In order that no avoidable delay may occur in bringing the buildings into use immediately they are ready, a superintendent has already been appointed, and we are in conference with her with a view to the completion of the arrangements with regard to the staff and other details. We hope to have the reformatory ready for the reception of patients not later than the middle of June.

"With regard to the accommodation for male inebriates we have been in negotiation with the Church Army, who have a reformatory in course of construction near Dorking, and with the Managers of the Lingfield Training Colony, which has been visited by our Chairman. The Managers of the Colony are prepared to make arrangements in the existing buildings at the Colony for the temporary accommodation of from ten to fourteen inmates within a few weeks, and to proceed with the

erection of a permanent reformatory at which they propose to provide accommodation for twenty-five inmates. This accommodation they are prepared to make available for the reception of London inmates on the terms stated in our recommendation, which is as follows :

"That an agreement be entered into with the Managers of the Lingfield Training Colony for the reception of male inebriates from the County of London at the Colony in one of the existing buildings to be adapted for the purpose pending the erection of a permanent reformatory at the Colony, and subsequently at such reformatory, the Council to pay a rate of 1s. per day per head towards the maintenance of each such patient received and maintained at the Colony. The agreement to be for a term of not less than four years, and to be subject to the condition that the Council will arrange that when there are vacancies for the reception of reformatory patients at the Lingfield Colony, no male inebriate committed from within the County of London, towards whose maintenance the Council is liable to contribute, shall be sent to any other than the Lingfield Reformatory during the four years for which the agreement is to last, and while the arrangements for the care and maintenance are carried out to the Council's satisfaction ; the four years for which the agreement is to last to commence from the date at which the temporary accommodation is available, and that it be referred to the solicitor to complete the agreement."

This report, subject to a slight amendment securing to the Council the power of sending male inebriates to its own reformatory at Horley, was carried *nemine contradicente*.

From the *Manchester Guardian* of April 24th we learn that "at a conference of representatives of county and non-county boroughs, held in the County Hall, Preston, yesterday afternoon, under the chairmanship of Sir J. T. Hibbert, the Lancashire Inebriate Acts Board Bill was discussed. The Chairman said the Bill had been passed by the House of Commons and the House of Lords, and he moved that the Bill as amended by them be approved. This was agreed to, and it was decided that representatives on the Board should be appointed at the first quarterly meeting of the County Council after the Act comes into force. Under the Act the contributory boroughs with the number of representatives are:—Barrow, 1 ; Blackburn, 2 ; Bolton, 2 ; Bootle, 1 ; Burnley, 1 ; Bury, 1 ; Liverpool, 5 ; Manchester, 4 ; Preston, 2 ; Rochdale, 1 ; Salford, 2 ; St. Helens, 1 ; Stockport, 1 ; and Wigan, 1."

The *Dublin Express* of March 20th contains the following:—Several benches of magistrates having expressed doubts as to their power of committing habitual drunkards to certified homes under the second Section of the Inebriates Act of 1898, the Secretary of the Irish Temperance League addressed a letter to the Attorney-General for Ireland, who has replied as follows:—"In reply to your letter of March 23rd concerning the Inebriates Act, 1898, I am desired by the Attorney-General for Ireland to inform you that in his opinion the only rational interpretation to be given to the second Section is this:—While many of the offences in the Irish schedule of the Act are not, *per se*, indictable, yet they become so when committed by a habitual drunkard who has, within the twelve months immediately preceding the commission of the offence charged, been three times convicted summarily of an offence mentioned in the schedule."

In New York, the *Medical Record* states that a Bill will be introduced into the New York Legislature during the present session to establish an institution for the treatment of victims of alcohol and drug addiction. The Bill provides for the appointment by the Governor of a Board of Managers, who will receive compensation during the time they are engaged in making plans for the institution. After it is ready for the reception of inmates the managers are to serve, without pay, each for a term of three years. The institution is to have accommodation for 300 inmates. Incurables will not be admitted. Inebriates may be committed for terms of five years, but it is proposed to have a parole system similar to the one now in use in the Elmira Reformatory. Commitments will be made by magistrates, although persons seeking to enter for treatment will be accepted when there is room for them. The cost of maintenance of inmates committed by magistrates will be charged against the counties from which they have come.

PARISH COUNCILS AND SCOTTISH ASYLUMS.

Lord Balfour of Burleigh, Secretary of State for Scotland, received a deputation from parish councils on the 23rd January. The deputation appeared in support of a memorial urging the promotion of legislation to secure direct representation of parish councils on district boards of lunacy, and on the boards of royal and chartered asylums. It was stated that 356 parish councils supported the contentions of the deputation, and that these councils had under care 8377 insane persons, whereas 450 parishes with 4260 patients had taken no action in the matter.

Lord BALFOUR, in reply, insisted on the difference between poor-houses and asylums. He said that asylums have large curative effects, and should be as good as modern science can devise. He could not promise immediate legislation, but he pronounced himself entirely in favour of the independent audit of the accounts of district lunacy boards. Lord Balfour pointed out that the parish councils are not responsible for the treatment of lunatics, but are only bound to remove them to an asylum and pay for them there. The treatment rests with the district boards of lunacy, subject to the control of the General Board in Edinburgh. He further showed that the county council constituency is the same as the parish council constituency, which is really representative of all classes of the ratepayers, and depreciated any great increase in the numbers of the district lunacy boards. Referring to Inverness, eighty-three parishes would require representation. As to the plea that payments and representation should go together, Lord Balfour pointed out that where parish councils manage their own asylums (*e.g.* Edinburgh) the town councils suffer the same injustice, being requisitioned for the money to build, yet without representation. The town councils would naturally make the same request as the parish councils if the question is touched, and he doubted if the parish council of Dundee would care for that. He recognised that if parish councils were represented on district boards having no asylums of their own they would be parties to the making of contracts for the maintenance of their insane patients, but did not think that would carry them far, as the General Board has power to fix the cost. Lord Balfour suggested that the county councils should elect those of their number who are also parish councillors, in so far as possible, to the district lunacy boards, and thus gain much without legislation. With regard to the royal asylums he saw grave difficulties. Although they have privileges which should not be continued, they were built by charitable donations, and not by public rating. The intimate connection in these institutions between private and state-paid patients would have to be considered, and in view of the difficulties it would be necessary to consult the General Lunacy Board and the Local Government Board. Lord Balfour guarded himself against any promise of immediate legislation.

TYPHOID FEVER CAUSED BY CELERY.

In a report published by the Springfield *Republican* of December 14th, 1899, on an outbreak of typhoid fever which occurred recently in the Insane Asylum, Northampton, Massachusetts, U.S.A., the disease appears to have been originated and spread by means of celery. It seems that up to September 9th, 1899, the institution had been singularly free from typhoid fever, there having been only four cases in ten years. But on and after that date cases occurred with alarming frequency, so much so that in about two weeks forty inmates were stricken with the malady, which, moreover, exhibited no signs of abating. Accordingly the services of Dr. Morse, of the Massachusetts State Board of Health, were requisitioned, and he was requested to make an investigation. The fact was then disclosed that patients, nurses, farm help, and kitchen help were affected, and further, that the only patients attacked were those who paid for their care at the institution. Therefore it seemed probable that the cause of the epidemic was due to some article of food of which the patients, nurses, and servants partook, and in which the non-paying patients had no share. The discovery was made that the paying patients were sometimes supplied with extra articles of food, such as fruit and vegetables. At the time of the epidemic they received celery raised on the farm.

This vegetable was ultimately decided to be the cause of the disease, and investigations were set on foot thoroughly to probe this theory. It happened that the sewage after being filtered was on the celery beds, and owing to the methods used in cultivating celery, by banking the stalks of the plant with earth, the vegetable provided a very favourable medium for the transmission of the disease. Celery was first used at the Massachusetts Asylum in August, and became quite a common article of diet for the paying patients, the nurses, the house help, and the farm help. The most significant fact of all, however, is that one of the farm servants, not realising the danger of eating celery, and disregarding the injunctions forbidding its use, ate some, and quickly contracted typhoid fever. After orders had been given to stop the further consumption of celery the epidemic immediately subsided.

RETIREMENT OF THE REV. HENRY HAWKINS.

Mr. Hawkins, who is, we believe, the senior chaplain of the English asylums, retires after thirty-two years' service at Colney Hatch, with a previous service of eight years at Haywards Heath.

This long period of service has been distinguished not only by the faithful diligence with which Mr. Hawkins has performed the daily round of duty, but by unbounded sympathy with the suffering poor to whom he has ministered.

His unremitting industry and kindly charity have also led him to take an active part in general movements for the welfare of the insane. The After Care Association was entirely due to his initiative, and to his steady persistence it owed its survival in the earlier stages of its existence. He has been active, too, in promoting other societies for the weal of the insane and asylum workers.

Literary contributions, of value both to physicians, attendants, and chaplains, have also formed another outlet of his never-resting desire to do good.

That he may long enjoy the leisure for other forms of activity, which his retirement will give him, is the sincere wish of the large number of friends with whom he has worked for so many years.

OBITUARY.

DR. WILLIAM MARCET.

Dr. William Marcet, who recently died at Luxur, was the grandson of Dr. Alexander Marcet, of Guy's Hospital. His principal scientific inquiries were in regard to respired air, and he also wrote on climatology. To alienists his most interesting work is that on Chronic Alcoholic Intoxication, published in 1860. In this he followed on Huss' work, from whom he differed in laying stress on causes and treatment.

MISS MATILDA ROBINS GIDDINGS.

Miss Giddings died on 20th March, 1900, and the event claims mention in this Journal, as possibly marking the severance of the last tie of this generation of asylum workers with the great Conolly. Miss Giddings went to Hanwell in 1850 as an Assistant Matron, having been attracted by the fame of Dr. Conolly. There she had charge of *The Bazaar*, the female work-room, and played the organ in chapel and the piano at dances. Only female patients took part in the dances at that time, and it is a note of interest that the late Dr. Parsey, of Warwick County Asylum, claimed to have been the first to associate the sexes at these entertainments, an innovation which then involved a very great deal of consideration.

Miss Giddings spent three years at Hanwell, and was thereafter appointed Matron at the Perth Royal Asylum in 1853, when Dr. Sherlock undertook the duties of Resident Physician. On his appointment to the Worcester County Asylum in the following year, her sister, Miss Eliza Giddings, who had also served in Hanwell, was asked to become Matron at Powick. Both sisters retired on pensions about eleven years

ago, but Miss Eliza did not long survive her severance from public life. The changes which have occurred during the half-century which has elapsed since these honoured ladies went to Hanwell have been enormous, yet Miss Matilda Giddings maintained her interest in the asylum world up to the very last. She served the insane with a whole-hearted desire for their good, she was keenly alive to their wants, and she loyally co-operated in what sometimes seemed to her to have been revolutionary experiments.

Miss Giddings long and valued services are kindly remembered not only by her fellow officials, but by many grateful patients. She was a typical matron of the old school, an English lady, and one of the best.

NOTICES BY THE REGISTRAR.

Examination for the Nursing Certificate.

Five hundred and twenty-one candidates applied for admission to the May examination for this certificate. Of this number 59 failed to satisfy the examiners, 24 withdrew, and the following were successful:

ENGLAND.

Berks County Asylum, Wallingford.—Males: James Forbes.

Bucks County Asylum, Aylesbury.—Males: Richard Watson, George Turnham, Richard J. Washington, George Jones, Henry Woodbridge. Females: Alice Scott, Ada Harrison, Fanny Arnett.

Counties Asylum, Garlands, Carlsle.—Males: John Scott, William H. Metcalfe, Tom Glaister, John Howe. Females: Sarah Elizabeth Carrick, Mary Kenny, Elizabeth Christie, Elizabeth Dowding.

County Asylum, Fulbourn, Cambridge.—Female: Rose Cumming.

Devon County Asylum, Exminster.—Males: Frederick John Bunker, Jeremiah Endicott, William Field Lowe, James Adams, Charles Alford, William Elworthy, Charles Trenchard. Females: Mary Baker, Florence Penrose Lacy, Beatrice Mary Fry.

Glamorgan County Asylum, Bridgend.—Males: Frederick William Watts, William Williams, Lewis Jenkin Thomas, John Thomas, William Richard Morgans, Henry March, Roger Jones, William Ewart John, Henry John, William Isaac, Joseph Harrison, William David Harries, Thomas Harry, Seth Francis, William Henry Evans, David David. Females: Amelia Morgan, Jane Lewis, Annie Matthews, Mary Ann Hughes, Annie Highton, Rosina Griffiths, Miriam Andrews.

Hants County Asylum, Knowle, Fareham.—Males: Frank Moss, Thomas Wells, Francis Percy Hunter, Edward Cook, Edward John Gray. Females: Gertrude Holburn, Maria Edmunds, Alice Maud Dawkins, Susan Ann Neal, Mabel Ellis.

Kent County Asylum, Chartham.—Females: Eliza Jane Neary, Margaret Macmaster, Edith Grace Croucher, Mary Ellen Walch, Emily Louise Keating.

Lancashire County Asylum, Rainhill.—Males: Abraham Pitchford, William Sutton, William Lock, Alexander Gunn, Thomas Bryant, Richard Wilson, Frank Lyttelton Harris, John Hodgson, John Stanton Sherlock. Females: Mary Boyd Sharpe, Jeanette Shimmin, Annie Kate Weller, Grace M. M. Mackenzie, Minnie Lokier, Daisy M. W. Volume, Ethel Bence.

London County Asylum, Banstead.—Females: Sophia Webb, Joanna Smart, Eva Gazer, Edith Hughes, Agnes Kelleher, Margarite Matilda Holden, Gertrude Winterton, Nellie Mary Sharpe, Marie Elizabeth Ham, Emily Lynds, Elizabeth Harriet Marshall, Emilie E. Menage, Minnie Bruce, Clara Rea.

London County Asylum, Claybury.—Males: William Cail, John Gordon, Arthur Robert Church, Walter John Smallbone, Ernest Edward Bailey, Denis Hayes, William Owen. Females: Psyche E. Cronchley, Mary Jane Taylor, Mary Louisa Price, Catherine Gray, Florence Puffett, Margaret Jane Price, Ada Whymark, Annie Mary S. Welchman, Mary Walsh, Emma Best, Mary Llewellyn, Jessie Eliza Seabrook, Sarah Edgar, Maria Elizabeth Thomas, Cassie Evans, Alice Bessie Hopwood, Ethel Marie Skinner, Elizabeth C. Turner, Hetty Lloyd, Frances Hawkins, Edith Allwork, Ellen Griffiths, Lucy Sugden, Caroline Beck.

London County Asylum, Hanwell.—*Males*: James Richard Walker, Edward Bridgman, George Weeds, Frederick William Cox, Arthur Bowdery, George Barnes, William John Stanton, William Evans, David Callam, Thomas Walter Farrance, James Smith, Alfred Green, Alfred Gill, George Branton, George Baker, William Hedge, Frederick Martin, Thomas Whiteley, John W. Gray. *Females*: Minnie Wiggins, Ellen Ketcher, Emily Edith Scott, Agnes Wilkinson, Emily Williams, Elizabeth Scales, Jane Frances Meen, Flora Baker, Alice Leman, Edith Payne, Kate Creed, Elizabeth Robert, Emma Bird, Annie Goldsmith, Julia Raynham, Helene Whitehouse, Mary Willett, Rose Carr, Sarah A. Meadows, Georgina Hedge, Emily Earle, Emily Drewett, Bertha Mitchener, Charlotte Earle, Harriett Perrin, Alice Bird, Ellen Swait, Martha Spratley, Jessie Betts, Mary Rose, Lily Mahoney, Rosine J. Stanford, Jessie Pitt, Ada Grove, Annie B. Edington, Julia Ann Harding.

Monmouthshire Asylum, Abergavenny.—*Males*: John Davies, William John Lewis, Robert Wilson Wall, William Allen Thomas, John Worthing. *Females*: Marie Preece, Annie Morgan, Jenny M. Rogers, Maud L. George, Grace Sloyley, Elizabeth Williams, Martha Jane Edwards.

Middlesex County Asylum, Tooting.—*Females*: Edith Kate Lewis, Margaret Jane Wilcox, Margarida Portugal, Jessie Johnson, Alice Dawson, Lilian Agnes Hodge, Caroline Barber.

Nottingham County Asylum, Nottingham.—*Female*: Nellie Lever.

Northumberland County Asylum, Morpeth.—*Females*: Kate McAllister, Janet Mather, Kate Kelly, Mary McGonnigal, Susan Forster, Martha Johnson, Annie Liddell.

Stafford County Asylum, Burntwood, Lichfield.—*Males*: Joseph Clarke, Thomas Elkin, Thomas Jones, Silas Perks, James Stewart.

South Yorkshire Asylum, Wadsley, Sheffield.—*Females*: Agnes Harrison, Elizabeth Woodfield, Beatrice Mary West.

Somerset and Bath Asylum, Wells.—*Males*: Herbert Charles Francis, Walter Bedford, Isaac Gould, Jacob Cook. *Females*: Florence Louisa Redstone, Lucy Bishop, Harriett Gill, Eva Louisa Caswell, Eva Nicholls, Edith Maud Tovey.

Suffolk County Asylum, Melton.—*Male*: Tom Newbould Scaife. *Females*: Johanna Prout, Annie Honor Roberts, Mary Ellen Banner, Ada Frost.

Surrey County Asylum, Brookwood.—*Males*: Thomas Anthony Bullock, Christopher William Crondance, James George Fagan, Frederick Sinclair. *Females*: Winifred Mary Brooker, Lillie Agnes Northwood, Mary Jane Waller.

Warwick County Asylum, Hatton.—*Males*: Samuel James Clarke, William George Sewell, Edwin E. Smith, George Lock. *Females*: Patience Mary Donagh, Minnie Dore Altree, Elizabeth Mary Jones.

West Sussex Asylum, Chichester.—*Males*: William George Spooner, Archibald John Robertson. *Females*: Annie Perrett, Harriett Hyett, Emily Louisa Cane, Emily Sarah Ridley.

West Riding Asylum, near Leeds.—*Males*: John Hardisty, William Moody, Fred Ryder. *Females*: Hannah Baldwin, Annie Simpson, Carrie Watnough, Adelaide Stephenson, Emily Bradley, Hannah Brookes, Delia Mary Holmes.

West Riding Asylum, Wakefield.—*Male*: John Henry Just. *Females*: Bertha Pidcock, Mabel Berry, Isabella Patterson, Harriett Stead, Amy Welby, Edith Eccles.

Wilts County Asylum, Devises.—*Males*: Fred Spiller, Edward Thomas Davis, George Walter Fennell, William Staples. *Females*: Annie Louisa Ludlow, Agnes Lucy Jane Andrews, Ellen Davis, Sarah Maud Spiller, Jane Annie Smith Williams, Aline Lagnaz, Miriam Catherine Gover.

Birmingham City Asylum, Winson Green.—*Males*: John Palmer, John Ellsmore, Harry Cluley. *Females*: Ellen Taylor, Minnie Ada Bullock, Annie Beatrice Collins, Mary Hodgetts, Maud Williams.

Bristol City Asylum, Fishponds.—*Male*: Robert Henry White. *Female*: Jane Williams.

Exeter City Asylum, near Exeter.—*Females*: Rose Woolf, Lucy Spry, Florence Ada Spry, Emily Pyle, Ada Crosswell.

London City Asylum, near Dartford.—*Males*: George Yeates, David Lewis Evans. *Females*: Beatrice Read, Kate Oswald, Mabel Glawdys Williams.

Nottingham City Asylum, Nottingham.—*Males*: Henry Dickinson, William

George Knight, Samuel Bentley, William Arthur Drake, Arthur Spivey, William Hallam. *Female*: Mary A. M. Higton.

Newcastle-on-Tyne, City Asylum, Gosforth.—*Males*: Robert Elliott, Robert Riddle, James Sims. *Females*: Isabella Priest, Phyllis Melvin, Margaret Kirkpatrick, Jessie Millicent Jackson.

Portsmouth Borough Asylum.—*Females*: Florence Blyth, Julia Langridge, Helen Mortimer, Louise Crooks.

Bethlem Royal Hospital, London.—*Males*: George Francis Oulds, Thomas Warr, Philip Thomas Herbert Crow, James Waters, Francis Frederick Howe. *Females*: Ethel Eyre Haynes, Susan Mills.

Darenth Asylum, near Dartford.—*Females*: Christina MacPherson, Alice Haynes, Rose Francis, Annie Macarthur, Edith Day.

Heigham Hall, Norwich.—*Females*: Margaret Harmer, Ellen Hurren, Emma Pitcher, Martha Mary Hubbard.

Holloway Sanatorium, Virginia Water.—*Females*: Alice Jane Gubbins, Laura Woodman, Mabel Cordelia Woolmer, Florinda Waterhouse, Marie Barrett, Ethel Beatrice Marie Koek.

The Retreat, York.—*Males*: Ernest John Coulter, Henry Clack, Samuel Yeates. *Females*: Minnie Miller, Frances Pick.

Redlands, Tonbridge, Kent.—*Male*: Edwin D. Baker.

SCOTLAND.

District Asylum, Inverness.—*Females*: Agnes Malcolm Reid, Margaret Shirley, Martha Knox, Cecilia Smith Drummond, Lizzie Cranston L. Carruthers.

Royal Asylum, Dundee.—*Male*: Peter Innes. *Females*: Johan Shepherd, Nellie Wardhaugh, Isabella Peter Suttie.

Royal Asylum, Gartnavel, Glasgow.—*Females*: Emily Miller, Jessie Cameron Reid, Jane Ewen, Agnes Lindsay, Clementina Stewart, Isabella Graham Learmonth, Elsie Macdonald, Annie Bremner.

"James Murray's" *Royal Asylum, Edinburgh.*—*Female*: Helen Jane Pattillo.

Lanark District Asylum, Hartwood, Shotts.—*Males*: John Lind, Samuel Gamble Dunnachie, Thomas Monat. *Females*: Lottie MacLaren, Annie Dyer, Kate Rogers, Margaret Rae, Elizabeth T. Fullarton, Bessie Davidson.

Perth District Asylum, Murthley.—*Males*: Peter Mitchell, Duncan Ferrier, Alexander Scott, James Thomson, John Rattray. *Female*: Minnie Ogilvie.

Royal Asylum, Edinburgh.—*Males*: Gordon Stewart, John Allan. *Females*: Margaret Cowie, Agnes Henderson, Mary Feeney, Julia Jamieson, Elizabeth H. Ferry, Mary E. Macdonald, Margaret B. Simpson, Margaret D. Rutherford.

Roxburgh District Asylum, Melrose.—*Females*: Jane Heberton, Rubina Clubb, Mary Anderson.

Stirling District Asylum, Larbert.—*Males*: George Macdonald, Robert Mitchell, John Mackie. *Females*: Annie Gambley, Rachel Hendrie, Margaret Rankin, Elizabeth Hobson.

IRELAND.

District Asylum, Clonmel.—*Males*: William Brett, James Cummins, Patrick Brett, Patrick Griffin, Mark O'Brien, Matthew Foley. *Females*: Annie O'Connell, Mary Anne Mooney.

District Asylum, Londonderry.—*Male*: Robert John Davis. *Female*: Elizabeth Jane Buchanan.

District Asylum, Kilkenny.—*Male*: Patrick Hennessy. *Female*: Bridget O'Meara.

St. Patrick's Hospital, Dublin.—*Female*: Johanna Brophy.

Stewart Institution, Chapelisod, Dublin.—*Females*: Ellen Carter, Kate Duffey, Julia Branigan.

Richmond Asylum, Dublin.—*Males*: James O'Neill, Robert Kavanagh, James J. Cunningham, Michael Ryan, Patrick Curley, John Sheehan, Thomas Keating, Archibald McCollum, Patrick Behan. *Females*: Eva Barry, Annie Behan, Kate Drew, Anne Clindenning, Mary McEntyre, Mary Anne Duffy, Ellen A. Scully, Annie Burrows, Rebecca Camp, Annie Farrelly, Mary Anne Wisely, Jane Murphy.

Sligo District Asylum, Sligo.—*Male*: James Devins.

The following is a list of the questions which appeared on the paper :

1. Describe the mechanism of respiration. 2. Name the glands of the skin, and give their uses. 3. Describe the stages of an epileptic fit. State how you would manage a patient during, and immediately after, a fit. 4. Name the principal arteries of the arm, and describe generally the situation of each. 5. What symptoms are specially noticeable in diseases of the respiratory system? 6. Give examples of reflex action. 7. What are the causes of suffocation? What is the correct treatment? 8. Give directions for the preparation of good beef tea. 9. What is a sprain? Give an example, and describe the appearances. 10. What rules are to be observed in bathing insane patients?

Next Examination for Nursing Certificate.

The next examination will be held on Monday, November 5th, 1900, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association not later than Monday, October 8th, 1900, as that will be the last day upon which under the rules applications for examination can be received.

Note.

As the names of some of the persons to whom the nursing certificate has been granted by the Association have been removed from the register, employers are requested to refer to the Registrar in order to ascertain if a particular name is still on the roll of the Association. In all inquiries the number of the certificate should be given.

Examination.

The examination for the Certificate in Psychological Medicine will be held on Thursday, July 19th, 1900, at 10 o'clock a.m. in London, at Bethlem Hospital; in Edinburgh at the Royal Asylum, Morningside; in Glasgow at the Royal Asylum, Gartnavel; in Aberdeen at the Royal Asylum; in Dublin at the Richmond Asylum and in Cork at the District Asylum.

Gaskell Prize.

The examination for the Gaskell Prize will be held at Bethlem Hospital, London, on Friday, July 20th, 1900, at 10 o'clock a.m. Candidates for this examination must give fourteen days' notice of their intention to sit at the examination to the Registrar.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

Annual Meeting.—The Fifty-ninth Annual Meeting of the Association will be held in London on Thursday and Friday, July 26th and 27th, 1900, at the Rooms of the Association, 11, Chandos Street, Cavendish Square, W., under the Presidency of Dr. Fletcher Beach. There will be a meeting of Committees as follows, on Thursday, July 26th, before the Annual Meeting:—Educational Committee, 9 a.m.; Parliamentary Committee, 9.30 a.m.; Tuberculosis Committee, probably 10 a.m., but further notices of this will be announced; Council Meeting, 10.30 a.m.

The Annual Meeting commences at 11 a.m. on Thursday. In addition to the usual business, the following resolution will be placed before the meeting with a recommendation that a copy thereof be sent to the Local Government Board in the three Kingdoms:—"It is the unanimous recommendation of the Medico-Psychological Association of Great Britain and Ireland, that in Union Workhouses in which insane persons are detained, a properly qualified and trained mental nurse should be employed in the insane wards."

2 p.m.—The President's address, after which William Wynn Westcott, M.B.

London, H.M. Coroner for North-East London, and President of the Society for the Study of Inebriety, will read a paper entitled "Inebriety: its Causes, Results, and Treatment;" and Dr. Elliot Daunt will afterwards speak upon "The desirability of all medical men (other than the medical officers of public and private asylums or licensed houses) who undertake the care and treatment of persons who are mentally affected, or so-called 'borderland' cases, being brought into direct touch with the Council of the Medico-Psychological Association under an organised system."

Friday, 27th July.—10 a.m. The plans of the new East Sussex Asylum will be exhibited and described by Dr. H. Hayes Newington (member of the Sussex County Council and of the Asylum Committee). W. Ford Robertson, M.B., Pathologist, Scottish Asylums Laboratory, Edinburgh, "A Microscopic Demonstration of the Normal and Pathological Histology of Mesoglia Cells." David Orr, M.B., Pathologist, Prestwich Asylum, "A Contribution to the Morbid Anatomy of General Paralysis of the Insane;" and Thomas Phillips Cowen, M.B.Lond., microscopic and lantern demonstration. J. O. Wakelin Barratt, M.D.Lond., Pathologist, West Riding Asylum, "Two Cases of Lepto-meningitis—a microscopic and lantern demonstration." John Turner, M.B., "Some Alterations produced by Disease in the Giant Nerve-cells of the Cortex—microscopical and lantern demonstrations." Lewis C. Bruce, M.D., Physician Superintendent, and H. de Maine Alexander, M.B., Assistant Physician, Perth District Asylum, Murthly, "Observations upon the various Physical Changes in the Acute and Sub-acute Stages of Melancholia."

2 p.m.—Cecil F. Beadles, "The Insane Jew." W. C. Sullivan, M.D., "Alcoholic Homicide." David Blair, M.A., M.B., "Non-diabetic Glycosuria." A. F. Shoyer, M.B.Cantab., "An Angioma of Broca's Convolution in a Lunatic." F. W. Edridge-Green, M.D.Lond., "Psycho-physical Perception."

Saturday, July 28th.—The President, Dr. Fletcher Beach, and Mrs. Fletcher Beach, will be "At Home" to members and their friends on Saturday, July 28th, four to seven o'clock, at Winchester House, Kingston Hill, Surrey.

The Annual Dinner will take place at the Whitehall Rooms, Hôtel Métropole, on Thursday, July 26th, at 8 p.m. Tickets £1 1s. each.

Northern Division.—The Autumn Meeting will be held at the Newcastle City Asylum on Wednesday, 3rd October, 1900.

APPOINTMENTS.

Gow, W. B., M.D., appointed Medical Superintendent of the Lunatic Asylum at Wellington, New Zealand.

Macdonald, J. A., M.B., B.Ch.Glasg., appointed Assistant Medical Officer (Pathologist) to the Glasgow District Asylum, Woodilee, Lenzie.

Morton, Gavin, M.B.Syd., appointed Senior Medical Officer to the Hospital for the Insane, Gladsville, New South Wales.

Roseby, Edmund Rupert, M.B., Ch.M., appointed Assistant Resident Medical Officer at the Parkside Lunatic Asylum, and Medical Officer to the Adelaide Gaol.

Smith, Henry B., M.B., appointed Junior Assistant Medical Officer to the County Asylum, Bicton Heath, near Shrewsbury.

Wood, J. M. S., M.B., Ch.B., appointed Assistant Medical Officer to James Murray's Royal Asylum, Perth.

THE JOURNAL OF MENTAL SCIENCE

[*Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.*]

No. 195 [NEW SERIES
No. 159.] OCTOBER, 1900. VOL. XLVI.

Part I.—Original Articles.

*The Presidential Address delivered at the Fifty-ninth
Annual Meeting of the Medico-Psychological Associa-
tion, held in London on the 26th July, 1900.* By
FLETCHER BEACH, M.B., F.R.C.P.

FIRST let me thank you very heartily for the high honour you have done me by electing me to the Presidential chair. When one looks over the names that have preceded me, from the time of Conolly downwards, one finds that it has been occupied by men of high talent, well known as workers in psychiatry, not only in this country, but abroad. To emulate them will be my endeavour, and I shall certainly do everything in my power to uphold the dignity and welfare of this Association.

It is usual in addresses of this kind to refer to the losses which the Association has suffered during the past year. We have a very good precedent for it, for it is the custom of the President of the College of Physicians of London, when delivering his annual address, to give an account of the lives of Fellows who have died during the year. The time at my disposal will only allow me to do so briefly, but I think it is only right and proper that their names should be placed on record.

The first name to which I wish to refer is that of Dr. Godding, who had been an honorary member of the Association for fourteen years. Early in life he determined to devote

himself to the study of mental diseases, and after being assistant physician for four years at the New Hampshire Asylum, he was appointed to a similar position at the Government Hospital for the Insane at Washington. Seven years afterwards he became superintendent of the asylum at Taunton, Massachusetts, where he remained for the same period of time, and then returned as superintendent to his old asylum at Washington. When he died he had been superintendent for twenty-two years, and had managed the affairs of the hospital with wisdom and conscientiousness. He was a man of high intellectual culture, and was much beloved by his colleagues.

Professor Ludwig Meyer was also an honorary member for thirteen years. He was the founder of the non-restraint system in Germany, and though his proposal to do away with restraint was considered impracticable, time has shown the method to be a complete success. He studied architecture, and turned his attention to land surveying for a time, but fortunately these pursuits did not content him, and he became a student of medicine at Bonn University. From there he moved to Wurzburg, and afterwards to Berlin, and after passing his examinations and becoming qualified, he was appointed assistant in the Psychiatric Department of the Charité Hospital. For a short time he became second physician to Schwetz, but was recalled to the Charité as head physician. He only remained there a year, when he was elected re-organiser of the Hamburg Lunatic Asylum, and chief physician of the Psychiatric Division of the General Hospital. Here he made a sale of the strait jackets which had formerly been in use, and allowed visitors to see the patients on Sundays. He built a new hospital for the patients at Friedrichsburg, and moved there with them at the end of eight years, but two years later he was appointed Professor of Mental Diseases in the University, and Director of the Lunatic Asylum at Gottingen, and here he remained for the rest of his life. He was a voluminous writer, and not only published articles in *Virchow's Archives* and the *Charité Annals*, but established, in conjunction with Griesinger, the *Archives of Psychiatry*.

Serafino Biffi, although not a member of our Association, is worthy of notice, as he may be considered as one of the founders of Italian psychiatry. Whilst still a student, he engaged in experimental work, and published his researches on the function

of the lingual nerve, and the innervation of the iris. After taking his degree, he became an assistant at the University of Pavia, but in 1848 was appointed to the post of assistant at the Casa Privata dei Pazzi at San Celso, in Milan, and henceforth devoted himself entirely to the study of mental diseases. Five years later he became Director of San Celso, and a leading man in everything connected with the progress of psychiatry. In association with Verza, he formed the Societa Freniatica, and lent his aid to the establishment of Italian journals devoted to psychiatry. He was an authority on criminological and penal matters, and a well-known medico-legal expert. He was much loved by his colleagues and patients.

Reginald Southey was not a member of the Association, but he was so closely connected with our specialty that his name must not be omitted. In 1860 he was elected Radcliffe Travelling Fellow, and became a member of the Royal College of Physicians, London. He took his degree of M.B. at Oxford during the following year, and went abroad to continue his studies. On his return, after being connected for twelve months as physician to the City of London Hospital for Diseases of the Chest, and the Royal General Dispensary in the City, he was elected assistant physician to St. Bartholomew's Hospital. Next year he took his degree of M.D., became a Fellow of the Royal College of Physicians of London, and delivered the Gulstonian Lectures on the "Nature and Affinities of Tubercle." At the end of five years he became full physician to, and teacher of clinical medicine at, St. Bartholomew's Hospital, and delivered annually a course of lectures on public health and medical jurisprudence in the medical school. He held this appointment for fourteen years, and up to the end of his life his interest in the progress of hygiene never diminished. In 1881 he gave the Lumleian lectures on Bright's disease, but in 1883 he resigned his appointments at St. Bartholomew's Hospital on being appointed Commissioner in Lunacy. He held this post for fifteen years, and then resigned on account of the failure of his health. He did not live long to enjoy his well-deserved leisure, as he died somewhat suddenly last November. He was a vigorous writer, and in addition to contributing articles to the various London medical societies, he wrote the article on "Personal Health" in Quain's *Dictionary of Medicine*. He was a hard worker, and not only acknowledged,

but did his best to support the conscientious work of others, and in this way gained the good opinion of those with whom his work brought him in contact.

Louis Gustave Bouchereau was also not a member of our Association, but his work in Paris renders his name worthy of notice. He graduated M.D. in 1866, and was elected, together with Dr. Magnan, during the same year Médecin de Service de Répartition at St. Anne Asylum. After holding this post for thirteen years, he was appointed superintendent of the female wards. In 1866 he was elected Secretary to the Association Mutuelle des Médecins Aliénistes de France, an association whose object is to help the members or their widows or orphans who might be in want of assistance. We have no such society in this country, but this, perhaps, may be due to the better pay and pension of alienists here. In 1881 he became President of the Paris Medico-Psychological Association. He was a modest man, but was much beloved by all who came in contact with him, his patients being much attached to him.⁽¹⁾

With regard to the subject of my address, I have thought I might profitably employ the time at my disposal, by tracing the progress which has been made in the treatment of certain defective classes of society, such as idiots, imbeciles, the feeble-minded, the epileptic, and juvenile delinquents, during the last sixty years. At the commencement of that period two schools for idiots had been established in Paris, one by M. Ferrus at the Bicêtre, the other by M. Falret at the Salpêtrière. Both of these, no doubt, were the result of the teaching by Itard of the savage boy of Aveyron. Dr. Séguin, to whom belongs the honour of having created the true method of teaching idiots and imbeciles, had three years previously, on the advice of Itard and Esquirol, undertaken the treatment of an idiot boy, and his first publication on the subject, published in 1838, gives the results that he had obtained.⁽²⁾ About 1840 he was given the care of ten idiots, who were inmates of the Hospital for Incurables, Paris, and in 1841 he published under the title, *Théorie et Pratique de l'Education des Idiots*, an account of the intellectual, moral, and physical characteristics of each idiot, and the means he adopted in training and teaching them. The contents of this book led Orfila to make a report to the General Council of the Hospitals of Paris. The Council considered the report, and decided that "M. Séguin should be in-

structed to apply his method to the numerous idiots of the Bicêtre Hospital, with whom should be united those whose education had been commenced at the Hospital for Incurables, and that this new trial should be carried on for a year, in order that the merit of the measures employed by M. Séguin might be recognised with certainty." (3) The Prefect of the Seine approved the decision of the Council of Hospitals, and authorised Séguin to continue his work at the Bicêtre up to the end of the year 1843, and charged the physicians there to follow the progress and results of this new method. Séguin commenced his work at the end of November, 1842, but difficulties were put in his way, false accusations were made against him, and at the end of December, 1843, he was obliged to retire. He then started a small school of his own and continued to carry on his work. "After seven years of this patient labour, and the publication of two or three pamphlets on the subject, a Commission from the Academy of Sciences of Paris, consisting of Messrs. Serres, Flourens, and Pariset, in 1844 examined, critically and thoroughly, his method of training and educating idiot children, and reported to the Academy, giving it the highest commendation, and declaring that up to the time when he commenced his labours (1837) idiots could not be educated or cured by any means previously known or practised, but that he had solved the problem. His work thus approved by the highest scientific authority, Dr. Séguin continued his philanthropic labours in Paris for some years, his school being almost constantly visited by teachers and philanthropists of his own and other nations, and his methods bearing the test of experience, schools for idiots were established very soon, based upon these methods, in England and several countries of the Continent." (4) In 1846, nine years after the commencement of his work, Séguin published his admirable book *Traitement Moral, Hygiène et Éducation des Idiots, et des Autres Enfants Arrières*, which still continues to be the manual for all those who are interested in the education of idiots. I have related the history of this remarkable man at some length, because his indomitable spirit overcame all the difficulties placed in his way, and to him we owe what we know of the training and education of idiot children. Of course as time has gone on improvements or additions have been made to our knowledge, but the fact remains that he was

the first to put the methods he advocated into practice. I had the honour of his acquaintance, and found him full of enthusiasm, as, indeed, a man must be to accomplish the work he had done.

In 1842 a part of the Deaf and Dumb Institution at Berlin, of which M. Saegart was the head, was permanently put aside as a hospital for idiots, and M. Saegert, assisted by one male and two female teachers, instructed twelve pupils with encouraging results. About the same period Dr. Guggenbuhl established on the Abendberg, Switzerland, 3600 feet above the level of the sea, a hospital for the cure of Cretin children. He commenced with eleven children, whom he taught himself, but in 1845 there were twenty-five under instruction by Guggenbuhl and an assistant, and two Sisters of Charity came from the Protestant establishment at Lausanne to attend them. In a pamphlet by Dr. Guggenbuhl,⁽⁶⁾ a full account is given of six cases who had much improved under treatment. Two years previously Dr. Twining had published an account of Cretinism and the Institution on the Abendberg, and solicited money to allow Dr. Guggenbuhl to carry on his work. Probably as the result of this a small school for imbeciles was opened in 1846, at Bath, under the management of the Misses White.

Up to this time there had been little interest in the subject in Great Britain, but in 1847 Dr. Scott, Principal of the West of England Institution for the Education of the Deaf and Dumb, published some remarks on the education of idiots and children of weak intellect, in which he gave an account of the work that had been done by Séguin and Saegert, and appealed to Lord Ashley, afterwards Lord Shaftesbury, to erect an institution for idiots in England. In the same year an article on the subject by Dr. Conolly appeared in the *British and Foreign Medico-Chirurgical Review*, and two articles in *Chambers' Edinburgh Journal* by Mr. Gaskell, afterwards a Commissioner in Lunacy, in both of which a reference was made to the good work which Séguin was doing at the Bicêtre. These articles attracted the attention of Dr. Andrew Reed, a noted philanthropist, who, with the assistance of Conolly and others, opened an asylum in 1848 at Park House, Highgate. This building soon became too small for the numerous applicants, and it was necessary to have a branch, until one large asylum could be

erected. Essex Hall, Colchester, was obtained, and some of the pupils at Highgate were transferred there. In 1853 the Prince Consort laid the foundation stone of the asylum at Earlswood, near Redhill, and it was opened in 1855. The inmates at Essex Hall were removed to Earlswood, and the former place became a separate institution, and is now known as the Eastern Counties Asylum for Idiots and Imbeciles, Colchester. The Asylum for the Western Counties was founded in 1864, and that for the Midland Counties in 1868. In 1870 the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties was opened, and in 1875 the first pauper school for imbecile children, the patients being for a time located at a building at Clapton, and four years afterwards at the institution specially built for them at Darenth, near Dartford, Kent. At this institution an important change is now being made. As time has gone on a large number of ineducable patients have accumulated, and some of the educable ones are being removed to an institution at Ealing, so that their education and training may be carried on in a more efficient manner, and it is to be hoped that eventually all the educable cases will be kept together in one establishment.

In 1886 the Idiots Act was passed, in order to free the charitable institutions above mentioned, and certain licensed houses, such as Normansfield, Hampton Wick, and Downside Lodge, Chilcompton, Bath, from provisions of the Lunacy Acts, which formerly applied to them, and which sometimes interfered with the reception of cases. In fact, whereas formerly patients were required to be certified as lunatics before they could be admitted, the machinery required under this Act was much simplified.

A medical certificate to the effect that the patient, who may be an infant or of full age, is an idiot, or has been imbecile from birth, or for years past, or from an early age, is capable of receiving benefit from an institution, the name of which is given, registered under the Idiots Act, has since the passing of this Act been all that has been necessary. These charitable institutions became registered under the Act, the admission of cases was much simplified, and the annual inspection of the establishments by the Commissioners in Lunacy being continued was a proof that the patients and arrangements were managed in a satisfactory manner.

Coming now to more recent times, we find that no more separate institutions have been erected, but a block for fifty imbecile children has been set apart at the Northampton County Asylum, and an annexe for 200 imbeciles has been built at the Middlesex County Asylum. In addition, there are also special wards for idiots at the Hants, Kent, Durham, and Rubery Hill Asylums, and Winwick Hall has been fitted up by the Lancashire Asylums Committee for the treatment of fifty idiots of the male sex.

In Scotland there are two public institutions. One is at Baldovan, Dundee, and has been erected by Sir John and Lady Jane Ogilvy; it was opened in 1854, and accommodates forty patients. The other at Larbert, near Falkirk, owes its origin to the liberality of Dr. David Brodie; it was opened in 1855 in Gayfield Square, Edinburgh, where it remained for four years, and was then removed to better premises at Colinton Bank, in the suburbs of that city. Soon after the committee acquired nine acres of land at Larbert, and they commenced in 1861 the erection of an institution in which they proposed to accommodate 200 idiots and imbecile children.

In Ireland there is only one public establishment, which was founded by Dr. Stewart in 1869, and contains sixty-two children. It is called the Stewart Institution for Imbecile Children, and is situated at Palmerston, near Dublin.

Meanwhile our American cousins had not been idle. In 1847, a Commission, of which Dr. Howe was appointed president, was appointed by the State of Massachusetts to inquire into the condition of idiots in the Commonwealth, to ascertain their number, and whether anything could be done for their relief. Shortly afterwards they made a report, in which was enclosed a letter from Mr. Sumner, who had seen Séguin's work, which he highly eulogised and approved. In 1848 the Commission made a complete report, in which statistical tables and minute details were given, and recommended the opening of an experimental school. As a result the Legislature made an annual appropriation of twenty-five hundred dollars for three years, to be devoted to such a school, for the purpose of testing the capacity of idiots for improvement. The school was opened on the 1st of October, 1848, and Dr. Howe was appointed superintendent. Three years later the Joint Committee on Charitable Institutions visited the

school, and were highly gratified with what they saw. They therefore recommended that the school should be made permanent under the name of the Massachusetts School for Teaching and Training Idiotic and Feeble-Minded Youth, and that five thousand dollars should be annually devoted to its support. This recommendation was adopted, and the school has ever since been doing good work. Two months afterwards a private school was opened at Barre, in the same State, by Dr. Wilbur. In 1846, Dr. Backus, Senator of the New York State, endeavoured to bring in a law for providing training and education for the idiot children of that state; this was adopted by the Senate, but thrown out by the other Assembly. Another attempt was made in 1847, which also proved unsuccessful, and it was not until 1851 that a law was passed voting an amount necessary for carrying on an experimental school for two years. It was situated at Albany, and was opened in October, 1851, under the direction of Dr. Wilbur, who left his private school at Barre, being succeeded by Dr. G. Brown. The work at Albany attracted considerable attention; educationalists, members of the Legislature, and other bodies visited the school, and in September, 1854, the corner stone was laid for a building expressly erected for the care and education of idiot children. Dr. Wilbur remained as superintendent until his death in 1883. The example set by the States of Massachusetts and New York was soon followed by other States, Pennsylvania, Ohio, Connecticut, Kentucky, and Illinois being amongst the first to establish State Institutions for their idiot and imbecile children. In 1873 the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons was founded, and no doubt owing to the influence it exerts, more state institutions have been opened, so that, according to a report published by Dr. Powell in the *Proceedings of the National Conference of Charities and Correction*, 1898, there are now nineteen States which maintain twenty-four public institutions, and care is provided for 8492 idiot and imbecile persons. New York has a custodial asylum for adult idiots and imbeciles at Rome, and many of the other institutions have custodial as well as educational departments, the most complete being that provided at Elwyn for Eastern Pennsylvania. This is a most important arrangement, and is much wanted in this country, where patients from the charitable

institutions have to be sent back to their homes after a period of residence to make room for the admission of other patients.

If we compare the provision made in Great Britain and Ireland for this defective class with that in the United States, we shall find that both provide for about six per cent., but it must be remembered that the institutions here are chiefly supported by voluntary contributions, while the majority of those in the United States are maintained by funds supplied by the different States. It will be thus seen that much remains to be done in this country for this class of children, especially by Poor Law Authorities, if we are to provide asylums supported by the rates only up to the standard of State-aided institutions now at work in America.

Returning now to France, we find that there are now five institutions in the department of the Seine which receive idiot and imbecile and epileptic children, viz. the Bicêtre, the Vaucluse Colony, the Salpêtrière, the Vallée and the Villejuif, the whole of these accommodating 980, or including the institution of Dr. Bourneville at Vitry, 1000 patients.⁽⁶⁾ There are some scattered cases in some of the provincial asylums, and in the John Bost Institution, which consists of nine houses, four have been put aside for idiots and imbeciles, as well as for blind and infirm cases, and 217 patients here find a home.

In Germany there are twenty-nine establishments, which accommodate 3070 idiot and epileptic children, and 1831 adult cases of the same class, so that the work first begun by Saegert has been followed up successfully in that country. In Austria there are five institutions, in Belgium four, in Holland four, in Italy two, in Switzerland five (since increased to fourteen), in Denmark three, in Norway three, in Sweden sixteen, in Russia five, and in Finland one. All these are public institutions, but there are some private ones as well. It is worth noting that in the school for idiots at the Hague there are thirty-eight scholars who live at their homes and attend school daily, and that one of their employments is cigar-making. It should also be pointed out that although only three institutions have been assigned to Denmark, one of them, the Keller Institution, has five buildings set apart for the teaching and training of idiot children.

As regards our Colonies, Canada has an establishment at Orillia, Ontario, which contains 610 patients; and there are

branch establishments in connection with two asylums in Australia and one in South Africa.

In the Argentine Republic the idiots occupy a separate quarter of Los Mercedes Hospital for the Insane, and provision is there made for eighteen children and ten adults. The authorities are about to erect a separate building for them, which will contain baths, workshops, and a gymnasium. In the hospital for demented women the accommodation is not so good, but there are separate wards for seven children and twenty-three adults. Altogether the provision here made puts to shame many European countries which are supposed to be more enlightened.

As regards moral imbeciles, they were kept in prison sixty years ago, and on the Continent are there still ; but in England and America they find their way into the institutions for idiots and imbeciles. They are a difficult class to deal with, for they are often intellectually sharp and clever, but morally they are thieves, liars, full of cunning, and sometimes criminal in their tendencies. If remonstrated with they will promise amendment, but their promises are soon forgotten, and a slight cause produces a fresh outbreak. In some cases they possess good manual skill, and use it for bad purposes. The late Dr. Kerlin, who was Superintendent of the Pennsylvanian Institution for Feeble-Minded Children, was of opinion that they should not be educated, as it increased their power for evil, but that they should live in buildings apart from other children, in order not to infect them with their bad tendencies. Dr. Jules Morel is of opinion that they should be received into institutions set apart for their treatment, as they are not fit subjects for lunatic asylums, reformatories, or prisons ; and in this opinion I concur. If they are not kept under control they will be sure to commit some act which will result in their being sent to prison, and this, as Dr. Morel says, is not the place for them.

At a meeting of the British Medical Association, held at Glasgow, in 1888, Dr. Warner read a paper in the Psychology Section on "Methods of Examining Children in School as to their Development and Condition of Brain," and a resolution was passed "That a committee be appointed to conduct an investigation as to the average development and condition of brain function in primary schools, and that their report be sent

to the Editor of the Journal; and further, that the Committee should have power to add to its number, and to apply to the Council for a grant" (⁷). A Committee was appointed, and a grant of money was made to assist the investigation. In 1889 a report on the investigation of children in fourteen schools was made to the Council of the Association by Drs. Hack Tuke, Warner, Shuttleworth, and myself; 5334 children had been seen, and 809 cases were examined and the results tabulated. In the same year (1889) a Royal Commission on the blind, deaf, and other classes requiring exceptional modes of education was held, and the evidence already obtained was laid before the Commission by Dr. Warner. After collecting a considerable amount of evidence on the subject, they issued a report in which, among other recommendations, was one in favour of county or town councils providing for educable imbeciles, and another "that with regard to feeble-minded children, they should be separated from ordinary scholars in public elementary schools, in order that they may receive special instruction, and that the attention of school authorities be particularly directed towards this object" (⁸). At the meeting of the British Medical Association at Leeds, in 1889, the report above alluded to was read; the Committee was re-appointed, and a further grant of money was made. In 1890 the Charity Organisation Society appointed a Special Committee to "consider and report upon the public and charitable provision made for the care and training of feeble-minded, epileptic, deformed, and crippled persons" (⁹), and the Committee was instructed to promote a scientific inquiry into the number and condition of feeble-minded children and adults, to raise a fund for carrying on the inquiry, and "to prepare for publication a statement endorsed by leading men and others who may be specially qualified to form an opinion on the subject." (¹⁰) In 1891 the investigation with regard to the number and condition of feeble-minded children was proceeded with, and in July of that year an interim report, containing elaborate tables and particulars respecting this investigation, was published. In the same year (1891) the Congress of Hygiene and Demography met in London, and it was decided that the results of the investigations made by the British Medical Association, which was still going on with the work, and the Charity Organisation Society, should be put before

the Congress. It was also resolved that the Congress should be asked to appoint a Commission, whose duty should be to inquire into the condition of children in schools and elsewhere, and that they should have power to add to their number, and to appeal to authorities for assistance if necessary. The Congress acceded to this recommendation, and a Committee was soon appointed to carry on the work. Up to this time 50,000 school children had been seen, and 9186 had been examined; and in 1893 the Charity Organisation Society published a report, containing statistical tables, in which the results of the investigation of the physical conditions of these 50,000 children were given, and suggestions were made for the better education and care of feeble-minded children and adults. It was considered advisable that the results obtained by the investigation of 50,000 children should be checked by an investigation of another 50,000, and this was carried out by the Committee appointed by the Congress of Hygiene and Demography. Funds were collected from private sources, and grants were made by the Congress and by the British Association for the Advancement of Science. Finally, in 1895, a "Report on the Scientific Study of the Mental and Physical Conditions of Childhood, with particular reference to children of defective constitution, and with recommendations as to Education and Training," was issued by the Committee. Of the 100,000 children who were seen by the examiner (the greater part of the work was done by Dr. Warner) 18,127 were particularly noted, and observations were made as to defects in development, abnormal nerve signs, low nutrition, and mental dulness. The report contained tables showing the coincidence and co-relation of various classes of defects, and it was decided that 1·6 of the first 50,000 and 0·88 of the second 50,000 required special care and training. The Committee, having concluded its labours, was dissolved, and a new Society, called the "Childhood Society," was formed in 1896 to still further carry on the investigation. This Society has been in operation for three years, and annual reports are issued giving an account of the work done during the year. It has higher aims than those of the preceding societies, for besides promoting "the study of educational methods, and of the environment of children during school life best suited to ensure their physical and mental development," it desires "to supply

information and diffuse knowledge on points connected with the mental and physical status of children, by means of publications, lectures, etc., and to promote the special training of teachers to qualify them to deal with abnormal children; and to assist by legislation, philanthropic efforts, or otherwise, in the provision necessary for them" (¹¹). In pursuance of this work six courses of lectures have been given at the offices of the Society, Parkes Museum, Margaret Street, London. At the meeting of the British Association at Dover last year, a report was read by a Committee appointed by that body, some of whom are members of the Childhood Society, on the mental and physical deviations from the normal among 1120 children in public, elementary, and other schools, and a very complete table was given, which showed the conditions of those children who required special care and training.

No doubt as the result of the investigations I have already mentioned, and the fact that there were a number of children who could not be instructed in the ordinary way, the Lord President of Council appointed in December, 1896, a Departmental Committee, in order that they might inquire into the systems then in force for the education of feeble-minded and defective children. The Committee, on which Drs. W. Smith and Shuttleworth served, held several meetings, and examined both medical and lay witnesses who were interested in the subject, and afterwards drew up a report, in which they estimated that 1 per cent. of the school population belonged to the feeble-minded class. They recommended that there should be legislation for the education of feeble-minded children under conditions similar to those provided in the Blind and Deaf Act; that "school authorities should be required to appoint medical officers to advise them as to the discrimination of defective and epileptic children," and that the Education Department should "consider whether a medical adviser should be appointed, whose duty it should be to advise the Department on all matters arising out of the education of defective and epileptic children, and to inspect homes and classes for such children when required." (¹²) In 1899 the Elementary Education (Defective and Epileptic Children) Act was passed, and although it is permissive only, yet it contains many provisions which will be found useful for those who have to deal with the instruction of defective and epileptic children. Thus a school authority may

make arrangements for ascertaining “(a) what children in their district not being imbeciles, and not being merely dull or backward, are defective, that is to say, what children by reason of mental or physical defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in such special classes or schools as are in this Act mentioned ; and (b) what children in their district are epileptic children, that is to say, what children, not being idiots and imbeciles, are unfit by reason of severe epilepsy to attend the ordinary public elementary schools.” In order to ascertain whether a child is defective or epileptic within the meaning of this section of the Act, “a certificate to that effect by a duly qualified practitioner approved by the Education Department shall be required in each case.” This is a very proper provision, for medical men alone are able to ascertain whether children are defective, or epileptic, or not. When a school authority has ascertained that there are defective children in their district, they may make provision for them by means of “classes in public elementary schools certified by the Education Department as special classes ; or by boarding out, subject to the regulations of the Education Department, any such child in a house conveniently near to a certified special class or school ; or by establishing schools, certified by the Education Department, for defective children.” The provision that the Education Department shall not certify any establishment after the commencement of the Act for boarding and lodging more than fifteen defective or epileptic children in one building is, in my opinion, a mistake which requires to be rectified. Twenty-four children would be a much better number, as there would be more chance of classification, and twenty-four could be as easily managed as fifteen. There are two good provisions ; one giving a school authority to provide guides or conveyances for children, who, on account of any physical or mental defect, are unable to attend school without them ; and the other, the extending of the period of education, so that a defective boy or girl is deemed to be a child until the age of sixteen years. We all know that deficient children require a longer period of education than normal children, and for my part I should like to have seen the age limit extended to eighteen years. The Act gives power to the Education

Department to give grants from public money towards the education of defective and epileptic children, makes the parent liable to contribute towards the expenses of the child, and allows Boards of Guardians to contribute towards the expenses of providing, enlarging, or maintaining a certified special class or school, in respect of scholars taught at the class or school who are either resident in a workhouse, or in an institution to which they have been sent by the Guardians from a workhouse, or boarded out by the Guardians.

We in Great Britain and Ireland have been late in taking up the practical instruction of feeble-minded children. As long ago as 1863 there was established at Halle, in Germany, an auxiliary class for children "who could not be taught the ordinary school curriculum," and in 1867 a similar class was established at Dresden. Leipsig and Brunswick followed, and gradually auxiliary schools grew out of the classes. Herr Kulhorn . . . gave an account in 1894 of thirty-two auxiliary schools, consisting of 110 classes, with a teaching staff of 115, established in various parts of Germany, and Herr Wintermann, of Bremen, was able to supplement this statement in 1898 by the information that at that date auxiliary schools existed in fifty-two German towns, consisting of 202 classes, and containing 4281 children under instruction by 225 teachers. A later estimate states that there are probably not less than 6000 children receiving instruction within the limits of the German Empire.⁽¹⁸⁾ This is a splendid record, and we may be quite sure that a practical nation, such as the Germans, would not have established all these schools unless they had already seen good results. Conferences of teachers of auxiliary schools are held annually, and matters of interest are then discussed. In Norway classes for the instruction of abnormal children have been established for at least twenty years, and are under the management of Herr Karl Lippestad and Herr Soethre, the former being director of an imbecile institution at Christiania, the latter at Bergen. Separate classes have also been organised for backward children in connection with two of the largest elementary schools at Bergen. In Copenhagen there are a number of institutions, some of which contain feeble-minded children, which have been organised by Dr. Keller, and Dr. Shuttleworth and myself had the opportunity of seeing the good work which he is doing on visiting these establishments

in 1897. The classes we found usually consisted of from eight to ten pupils, so that the ratio of teachers to children was high. Great stress is laid upon physical and manual work ; one of the teachers gave us an exhibition of gymnastic exercises in a well-fitted up gymnasium by some of these feeble-minded boys which would have done credit to normal children ; and in one of the classes was a miniature garden, in which the boys were educated in cultivating with tools specially made for the purpose.

It was not until 1892 that special classes for these children were established in England, the first of the kind being opened at Leicester in connection with the School Board. Later on in the same year the London School Board established "Schools of Special Instruction," for children who could not be taught by the ordinary method, and Mrs. Burgwin, who had been for some years a teacher under the Board, was appointed Superintendent. Under her direction fifty-three schools have been opened, and there are now between 2000 and 3000 children who are being specially instructed. The Metropolitan Asylums Board has opened a home for twenty children, and others are in contemplation. The children attend the special classes, and there is, therefore, more individual care and better training than they could have in Poor Law Schools. In the provinces, too, special classes have been opened, for, besides the one at Leicester just alluded to, classes are in operation at Birmingham, Bolton, Bradford, Brighton, Bristol, Burnley, Bury, Nottingham, and Plymouth.* Some private educational homes have also been instituted during the last few years, for patients belonging to a higher social class, who also require special methods of education.

On the Continent, Belgium and Switzerland have set apart schools for the instruction of feeble-minded children, and Austria is in favour of the movement. Dr. Bourneville has advocated, in his last volume of the *Clinical and Therapeutical Researches*, the creation of special classes attached to primary schools in Paris and France, and details the results of the classes which have been in operation in Switzerland, England and Belgium, in support of his appeal. In Italy "colonies have been formed for backward children, where sea-bathing and summer outings are enjoyed . . . and there is an excellent institution for mentally backward children of good circum-

stances at Nervi, near Genoa . . . it should be mentioned that there is also another institution at Vercurago, in the province of Bergamo" (14). Quite recently a "National League for the Protection of Feeble-minded Children" has been organised in Italy, under the presidency of Professor Bacilli, Minister of Public Instruction. "His chief aim is the creation of an institution in each province for the training of these unfortunates" (14). One of the results of this National League has been the opening in Rome of a day school for these children. A private institution has been established for their training at Melbourne, and Dr. Stawell, in January of this year, read a paper on "The State Education of Mentally-feeble Children" before the Australian Association for the Advancement of Science, in which he advocated the establishment of a school at Victoria (16). Finally, Mr. R. Osuga has opened a small institution for ten feeble-minded orphan children at Tokyo, Japan, and a good notice of his work has been published in the *Church in Japan*, for November and December, 1898 (17).

For some years past small homes have been established by philanthropic ladies for the reception of feeble-minded girls, in different parts of the country, and the Metropolitan Association for Befriending Young Servants has opened one at Hitchin. From statistics which had been prepared it was found that many girls, on leaving public elementary schools at the age of fourteen, or poor law schools at sixteen, were apt to go wrong, not because they were vicious, but, being simple-hearted and mentally feeble, they were taken advantage of by evil-doers, and at last came into the workhouse to be delivered of a child. In some cases the same girl would come into the workhouse again and again for the same purpose, there being no power to detain her. Many ladies, becoming acquainted with this state of affairs, opened homes into which these girls have been received, and trained in laundry, domestic, and other industrial work. There is no power of detention; but there is no necessity for it, for their lives are rendered so happy that they do not attempt to escape. In 1896 the National Association for Promoting the Welfare of the Feeble-minded was formed, under the presidency of the Duchess of Sutherland, and the chairmanship of Mr. Dickinson, Chairman of the London County Council, in order to co-

ordinate these scattered institutions, and to endeavour to arouse public interest in these cases. Since its formation this Association has opened four homes near London, two of these being for adult girls, one for grown-up boys, and one for children who are trained in the same method as those who attend the special classes. Including these homes, there are now no less than fifteen which carry on this useful work, and as they are certified by the Local Government Board, and visited by their inspectors, and in the case of the four houses just mentioned by consulting physicians, specially appointed for the purpose, we may be quite sure that the arrangements made for the comfort and welfare of the inmates are as perfect as possible.

Epilepsy was recognised as far back as the time of Hippocrates, who wrote about it under the name of the "sacred disease," though he was enlightened enough to consider it not more divine nor more sacred than other diseases, but that it had a natural cause, from which it originated in the same way as other affections. In fact, he stated that the disease was connected with the brain, and he gave a description of the blood-vessels which connect it with the trunk, a remarkable discovery on his part considering the time at which he lived. Later Latin writers, such as Gabucinus, wrote concerning it under the name of "comitialis morbus," so called, according to Festus, because its occurrence was considered ominous, and put a stop to business for the day. In the book of Gabucinus, which was published in 1561, reference is made to the ancient Greek, Arab, and Latin authors who have written on the subject, and Homer, it appears, had mentioned it in his works. Various authors succeeded Gabucinus, and in 1827 Portel wrote his *Observations sur le Nature et le Traitement de l'Épilepsie*, in which he fixed the seat of epilepsy in the brain, and principally in its medullary substance, and described the observations he had made in an examination of the body after death. In 1851 Marshall Hall delivered the Croonian lectures before the Royal College of Physicians of London, "On the Threatenings of Apoplexy and Paralysis; Inorganic Epilepsy; Spinal Syncope; Hidden Seizures; the Resultant Mania; etc.," in which he described the principles on which prevention of the seizures depend. In all the affections treated of in these lectures, certain causes, emotions, and irritations, act directly on the muscles of the neck, inducing what he calls Trachelismus,

and treatment should be directed to remove this Trache-lismus, because on it epilepsy depends. Other writers, such as Delasiauve, Brown-Séguard, Sieveking, Russell Reynolds, Bourneville, Hughlings Jackson, and Gowers, have since written on the subject, and the well-known views of Hughlings Jackson are now accepted by nearly all medical men who have studied the subject.

With regard to the provision for insane epileptics, sixty years ago they were mixed together with the other patients in the asylums. The first movement for improving their condition was to provide special wards for them, so that they might be separated from the other cases. As long ago as 1874, Mr. Ley, in his annual report, advocated that the epileptic patients at that time in the various Lancashire Asylums should be placed in a separate institution; but apparently nothing was done. In 1892 Dr. Ewart read a paper before this Association, in which he advocated the establishment of colonies, not only for the epileptic insane, but for adults and children who were epileptic only and not insane. Public opinion had evidently been ripening on the subject, for in 1897 Dr. Rhodes and Alderman McDougall were appointed by the Chorlton and Manchester Joint Asylum Committee to visit institutions for the treatment of imbeciles and epileptics in Germany, France, and Belgium, and on their return they issued a report in which they recommended: "(1) that of the epileptics and imbeciles, the mental and bodily sick—say 20 per cent.—should be provided for in pavilions similar to the Wilhelmina Augusta Pavilions at Alt-Scherbitz; (2) that the epileptics and imbeciles who are not physically incapable—say 80 per cent.—should be provided for in homes on the colony plan, and that not more than thirty persons should be placed in the same home; and (3) that provision should be made for those able to pay a proportionate sum towards their maintenance" (18). These recommendations, viz. the colony system, they say have been approved by the International Congress on Public Assistance, held at Paris in 1889, and the Congrès International de Médecine Mentale. As a result of this report the Manchester and Chorlton Unions decided to establish a colony for imbeciles and epileptics. A site was decided upon, and was about to be purchased, when, at the last moment, Dr. Rhodes informs me the Liverpool authorities intervened and bought the land themselves, so the

Manchester and Chorlton Unions now have to search for another site. It is proposed to accommodate the imbecile and insane epileptics on one part of the estate, and the sane epileptics on another part. This good example has been followed by the Leicester Board of Guardians, who are about to acquire a large area of land for the treatment, on the colony system, of the imbeciles and epileptics in the Leicester workhouse. The London County Council is about to build on the Horton Manor Estate, and I am informed by Mr. Charles Clifford Smith, Asylums Engineer, that the colony will accommodate 300 male patients, 127 acres of the estate being allocated to it, the buildings forming it occupying an area of twenty-seven acres. The buildings comprise an administrative block, with which is included staff quarters and an infirmary for patients, a separate block containing the stores and kitchen departments, with the recreation hall adjoining, and eight villas for patients. These villas are single-floor buildings, and each will accommodate thirty-six patients and staff in proportion. A house for the medical superintendent is placed within convenient distance of the administrative centre. This scheme has not yet been adopted, but it is the latest information I have on the subject. Finally the Lancashire Asylums Board are about to provide a colony for the insane epileptics in Lancashire.

Turning now to the provision for sane epileptics, John Bost, to whom I before referred, opened his first home for epileptics at La Force in 1862, and since then he has opened others, the last being founded in 1881. The houses clustered round a centre, and were built on the family system, as a family of homes. The Bielefeld Colony in Germany, also, consists of a number of homes, and accommodates 1400 epileptic inmates, and, according to the reports, is:—(1) a sanatorium, a medical investigation being made in every case; (2) an institution for the education and instruction of epileptic children; (3) an institution for the employment of epileptics; and (4) an asylum for imbecile epileptics. The last seem to have become imbecile as the result of long-continued epilepsy, but of late years 30 per cent. of those admitted have been epileptic imbeciles. There are besides some weak-minded epileptic children, so that it is not purely a colony for sane epileptics. The homes which have been built more recently are smaller in size, and contain

from fourteen or sixteen to forty or sixty inmates. In this, as in all well-conducted colonies, all the colonists are employed as much as possible. There are tailors, smiths, joiners, shoemakers, basket-makers, brickmakers, toy-makers, and others who work on the farm and garden, while the women are employed in the laundry, kitchen, housework, and sewing room. They are divided into three classes, according to the amount of money they pay. A good many of the epileptics, Dr. Rhodes informs me, are in asylums, and although Bielefeld seems to be the only one known as the colony, its methods are followed in most of the other institutions. Apparently in Germany more than in any other country attention has been given to the special treatment of epileptics, and from the report of the Charity Organisation Society, which inquired into the subject in 1891, and from Dr. Rhodes's report, there appear to be in that country no less than forty institutions which deal with epileptics. A number of epileptics are in the State Asylum for Chronic Lunatics at Dalldorf, near Berlin, which I visited when the Congress was held in Berlin, but the largest number are included in the Asylum for Epileptics and Imbeciles, Wahlgarten, near Berlin. As regards other countries, there are in Austria-Hungary three, in Russia three, in Denmark two, in Holland one, in Switzerland three, in Italy five, and in France five. Besides the five in France, epileptics are accommodated in the Bicêtre and the Salpêtrière. In America there are six. The first institution was built at Ohio, and since then colonies have been established at Massachusetts, New Jersey, California, Pennsylvania, and New York. One of the most important of these is the last, which is known as the Craig Colony, at Somyea. This institution was opened in 1896, and is intended to accommodate about 1000 inmates.

The first home that was established in England was the one at Maghull, near Liverpool, in 1889 by Dr. Alexander and others, and the colonists are there well classified; but as the number of cases increases new houses will have to be built—one has already been built for male epileptics—for the patients, who will have to be still further subdivided and classified. From a letter which I have received from Dr. Alexander, I learn that the number of colonists at present in residence are 123. In 1893 a Home of Comfort for epileptic women and girls from the ages of two to thirty-five, from all parts of the

kingdom, was founded by Lady Meath, at Godalming, Surrey. The inmates must be able to engage in some occupation, such as needlework, bead-work, basket-making, or laundry work. Here about fifty female epileptics are accommodated, members of the "Girls' Friendly Society" being admitted on payment of 10s. 6d. per week, non-members at 12s. 6d., and children at 8s. The charge for ladies is from one guinea to two guineas per week. In 1894 the first colony in England for sane epileptics was opened at Chalfont, in Buckinghamshire, by the National Society for the Employment of Epileptics. The object of the Society is "to establish homes where persons suffering from epilepsy, yet capable of some occupation, may enjoy the advantages of regular life, with healthy surroundings, and where, under the necessary supervision, they may, according to their age, sex, and condition, be educated, industrially trained, or suitably employed." (¹⁹) Alcohol is not allowed, and the bromides are sparingly used, being only given when absolutely necessary. The houses have been gradually increased, and there are now seven, three for men, one for women, one for boys, one for girls, and one for colonists requiring special care and treatment, and accommodating altogether 134 inmates. Mr. Passmore Edwards, who not only purchased the 135 acres of land on which the houses are erected, but has himself built some of them, is about to commence the building of an administrative block, which has been found urgently necessary. An anonymous donor has provided funds for the erection of another home for women; and a gentleman who will not allow his name to be disclosed has undertaken to build a home for convalescent cases. It is well known that convalescent institutions will not admit cases liable to epileptic fits, so that this will be a very welcome addition to the colony. An important change which was made in the law last year, by the passing of the Elementary Education (Defective and Epileptic Children) Bill, before referred to, has interfered with the opening of the boys' and girls' homes, since by that bill the number in a home is limited to fifteen, whereas the homes for boys and girls at Chalfont were erected for twenty-four. The National Society has sent a memorial to the Education Department praying them to alter the number to twenty-four, but in the meanwhile the boys' home will be used for epileptic youths of fourteen and upwards, and the home for girls for grown-up

girls and women. It is to be hoped that this grievous obstacle to the erection of homes for children will soon be removed, for at present there is no place where the children of the poor can be educated and trained. The London School Board is, I believe, making an inquiry into the number of children under their jurisdiction, and there are no doubt many epileptics in the Poor Law Schools for whom provision should be made ; but at present apparently nothing can be done until this limitation of fifteen children for a home is altered. The colony, however, is doing good work, for, besides employment in the farm and garden, there are also a few carpenters, plumbers, painters, bricklayers, and smiths, while the women are employed in the laundry, or in house work, and needlework. The result has been that marked improvement has taken place in most cases ; the general health has improved, and the number of fits has diminished. Another colony for sane epileptics is to be opened at Chelford, in Lancashire, where the Lewis trustees have bought an estate of 460 acres. Dr. Rhodes, who induced the trustees to take up the subject, informs me that it is proposed to accommodate 200 cases, and they will be divided into first, second, and third classes, according to payment, as in the German institutions.

Notwithstanding what has been done, many more colonies will require to be erected to meet the demand for them. It is calculated that there are 40,000 epileptics in the United Kingdom, and of these a large number are no doubt accommodated in workhouses, which is not at all the place for them. Many of the best cases at the Chalfont Colony have been colonists, who had been in the workhouse for only a short time, and who have drifted into pauperism from no fault of their own, but simply from their inability to obtain work. It is to be hoped that the unions not only in England and Wales, but in Scotland and Ireland, where no special provision has yet been made for them, will copy the example of the Chorlton and Manchester, and Leicester unions, and provide colonies for these afflicted persons. In places where the numbers are small the counties should combine and build a colony for their epileptics. For the class above paupers voluntary effort is much required.

Finally, I should like to say a few words about juvenile delinquents. There is no doubt that sixty years ago they were badly treated, for with the exception of the Reformatory Farm

School at Redhill, Surrey ; the Houses of Refuge and the Dalston Refuge ; the County of Warwick Juvenile Criminal Asylum ; the Children's Friend Society ; and some others, nothing was done for them in England but to send them to gaol. On the Continent they were in a worse condition, though efforts for their rescue by means of schools of industry and reformation had for a long time been put forth, the most notable case being that of John Falk, of Weimar, in Prussia, who was a pioneer in this work. His compassion was excited by seeing the orphan children after the battles of Jena, Lützen, and Leipsic, who wandered like wild beasts of the forest in the neighbourhood of these places. "Falk gathered 300 of them into his house, to give them food, education, and an honest calling, and he gave himself wholly to this rescue work, and succeeded in it."⁽²⁰⁾ This simple experiment induced practical men in England to try and give it effect on a larger scale. It was seen that a gaol could not be converted into a school, and that a true reformatory school should always be an industrial training asylum. Various parliamentary inquiries into the matter had been instituted, and judges and magistrates were endeavouring to deal kindly with the children, who were often quite small, so that their heads could hardly be seen in the dock in which they had to stand. At length, in 1852, schools were established for them, of which three may be mentioned : one, at Hardwicke, in Gloucestershire ; another at Kingswood, near Bristol ; and the third in Birmingham. All yielded good results, but the one at Birmingham was such a remarkable success that, encouraged by the liberality and work of Lord Norton and some others, the Birmingham Reformatory Institution was founded. This society established the Saltley Reformatory in order to endeavour to rescue, educate and reclaim youthful criminals, provide for them a home, and train them to habits of regular industry. Those who had founded these schools, and others which soon came into existence, were much encouraged by the efforts which had long been in operation at the Warwickshire County Asylum and the Redhill Reformatory Farm School, before mentioned, in the former of which 65 per cent., and in the latter 75 per cent. were permanently reformed. At Mettray, in France, 85 per cent. turned out irreproachable ; at the Rauhe house, at Hamburg, only 9 per cent. gave cause of complaint ; and at institutions at Wurtemberg and other places more than

half the children turned out well ; while at the old established schools in the United States, including the House of Refuge at New York, and the State Reform School at Massachusetts, the success was so complete that the practicability of criminal children being reclaimed by this method was considered as a settled question. From this period the idea of the modern reformatory may be considered as naturalised, not only in Europe and America, but also in England, Scotland, and Ireland ; but still there was a general feeling that the question of dealing with this class was not completely solved, for in 1849 there were 12,508 young persons under seventeen years of age under detention in gaols. In order to enlighten the public mind and to obtain legislative powers, an organisation was brought into existence as the results of two conferences held at Birmingham in 1851 and 1853, when "such an impetus was given to the whole question that this period has ever since been looked upon as forming an epoch in the progress of reformatory science."⁽²¹⁾ The result of the first conference was that a committee of the House of Commons was appointed in 1852 to take the whole matter into consideration, and after having sat during two sessions of Parliament, they presented in 1853 a report in which the reformatory system was strongly advocated. The conclusions arrived at received great support from the second conference, held at Birmingham, in December, 1853, at which there were many influential speakers, who supported the doctrine that reformatory treatment of criminals ought to be substituted for retributive punishment. The public mind and the Government were so much impressed by these meetings that in 1854 this principle, so far as it applies to the young, was embodied in the Youthful Offenders Act. This Act was amended in 1854, 1855, 1856, and 1857, and all were consolidated in the Act of 1866.

This act established some new and important principles, and the main lines on which the original Act and its subsequent amendments proceeded are similar to those which have been followed in America, France, and other countries. These are "the detention of the offender for a long period of correction and industrial training, the introduction of the family system and domestic feelings and habits into the schools, and the keeping the offender under supervision after leaving the school by placing him out in employment, on probation, under

license, previous to his final discharge." (²²) By the introduction of the first of these principles remedial was substituted for punitive punishment of children, it being recognised that their moral responsibility differed from that of adults, and thus judges and magistrates were enabled to send youthful offenders to reformatory schools established by voluntary contributions, where they were detained for instruction and training for a term not exceeding five years. Though these schools are assisted and superintended by the State, they are conducted by voluntary management, and have thus retained an independent, partially charitable character. Another important principle was the entrusting of these outcasts of society, with a view to their being able again to take their place as members of the public community, to the benevolence of earnest people who were willing to assume the charge. The aim of this principle was to make an entire change in the character of the offender, and to develop habits and conduct which could not flourish under the rigour of life in prison. Four distinct advantages have been obtained by the adoption of these principles; first, the inmates of these schools have obtained opportunities of employment, and openings for gaining a livelihood on their discharge from detention, which no establishment under official management could have given them; and secondly, private individuals have become interested in these children, who have been allowed to enter life without any drawback from the character of the place from which they have come. Thirdly, the offender was committed to prison for a short period previous to his corrective training and detention in the reformatory school. This was thought to be necessary, in order that the public community should not feel that vicious and mischievous children were rewarded and placed in a better position than children of respectable and honest parents. Fourthly, the criminal or neglectful parent was compelled to pay something towards the reformation of his child. The effect of this law has been to stimulate parents to perform their duties, and to diminish the number of young criminals. There is no doubt that the diminution of juvenile delinquents has been accomplished; for in 1856 no less than 13,981 children under seventeen years of age were committed to prison, while in 1866 the number was reduced to 9356, in 1876 to 7138, and in 1893 to 2924. This Act of 1866 is still law,

but a few changes were made by Lord Leigh's Act of 1893, as a result of which preliminary imprisonment was no longer obligatory; the minimum age for admission to reformatories was raised to twelve, unless the child had been previously convicted; the limit of age up to which an inmate may be detained was reduced from twenty-one to nineteen; and three years, instead of five years, was prescribed as the minimum period of detention to be fixed by the sentence. In 1896 there were fifty reformatory schools, all under voluntary management, containing 4800 inmates, generally between thirteen and nineteen years of age, and no child was admitted except on conviction and sentence.

The Reformatory Schools were not the only result of the Birmingham conference, and the parliamentary inquiry. The Ragged School Movement had begun some years before, and in Scotland schools for disorderly and vagrant children who were outside the criminal class were established in most of the large towns; but in 1854, the same year as the Reformatory Schools Acts was enacted, the first Industrial Schools Act was passed and applied to Scotland exclusively. Amendments were made in 1855 and 1856, and in 1861 these acts were repealed and a consolidating statute was passed, by which not only mendicant and destitute children were admissible, but children under twelve charged with an offence, and refractory children under fourteen. The parent was bound to pay for his child, and if he was unable to do so, the expense was to be recovered from the parochial board of the parish to which the child was chargeable. Meanwhile, in 1857, the Industrial Schools (England) Act was passed. Under this Act the children admitted were to be above seven, and under fourteen, at the date of their detention, and they could not be detained above the age of fifteen. In all cases conviction of vagrancy was the first step, and power was given to the justices to discharge the child to the parents or managers, if they were satisfied that employment was to be provided for him, or that due security was given for his good behaviour. The parent was made liable for the support of his child, but no liability was imposed on the guardians; they were, however, empowered to contract with the managers for the education of any pauper child. In 1860 this Act was amended, and in 1861 (the same year in which the consolidating Act as to Scotch Indus-

trial Schools was passed) these Acts were repealed by a consolidating enactment. The two chief changes were that power was given to the Treasury to contribute towards the maintenance of the children, and that the contribution of parents might be as much as five shillings per week, and if the child was refractory they were required to pay the full expense. Conviction was not rendered necessary, and besides destitute and mendicant children, those who were charged with an offence, and refractory children, were admissible. In 1866 the English and Scotch Acts were consolidated by an Act which is still in force, and by it the industrial schools of both countries are placed on the same footing. According to this Act children cannot be sent to an Industrial School, if they have been previously convicted in England of felony, or in Scotland of theft; and power was given to send refractory children from workhouses and pauper schools. In 1880 the scope of industrial schools was much enlarged, and authority was given to send to the school any child under fourteen years of age, who was found to be lodging or residing with common prostitutes, or who was frequently in the company of prostitutes. There are now 141 industrial schools, all but sixteen of which are under voluntary management, and they accommodate between 17,000 and 18,000 children between the ages of six and sixteen. The children are not admitted on conviction.

In some cases, and especially in the case of first offenders, a child who is guilty of larceny, of obtaining money under false pretences, and of setting fire maliciously to a wood, heath, etc., may, with his consent, be dealt with under the Summary Jurisdiction Act, 1899. This Act is an amendment of the Summary Jurisdiction Act of 1879, and includes certain offences not mentioned in that Act. The punishment is the same however; the court may, either in addition to, or instead of, any other punishment, cause the child to be privately birched by a constable. This is a good arrangement, for the child is punished as a consequence of his act, but at the same time is kept out of prison.

Want of time prevents me from giving you an account of the Certified Day Industrial Schools and Truant Schools in England, and of the treatment of Juvenile delinquents in foreign countries, including the Continent of Europe, the United States of America, Japan, and the Colonies of Australasia,

Canada, and the Cape ; but in each country arrangements have been made to remove children from prison, and to place them in colonies, reformatory or industrial schools. Public opinion has decided, and rightly so, that children should not be treated in the same way as adult criminals who prefer a life of crime to that of honest labour.

Dr. CONOLLY NORMAN : I rise to propose a vote of thanks to our President for his admirable address. The subject is one of very great interest to all of us. The kindly treatment and care, the improvement and education of the feeble-minded class, is one of the most benevolent works to which humanity can devote itself. These unfortunate persons, to whom mother Nature is only as it were a step-mother, are deserving of our very particular sympathy and care, and it is a great honour and credit to our profession that so much has been done by physicians for a class who used to be considered, so lately as sixty years ago, hopeless outcasts.

Dr. MICKLE : It gives me much pleasure to second the vote of thanks proposed by Dr. Conolly Norman. Our President has been so intimately associated with the treatment and care of persons of feeble mind, that there are few, if any, better able to lay down with accuracy and authority the history of the subject, in which he has taken a large part, for much of it has occurred in his own time. I was particularly interested in the latter part of the address, where the young criminal was spoken of, and from a public point of view that is extremely important. Criminals to a large extent are, as a rule, a feeble-minded race. At all events, although many of them may be clever in some particular direction, still they are in my opinion specimens of deterioration. The importance of dealing with the criminal young is a matter which will be urged upon the public authorities. In fact, to deal successfully with your criminal, you must catch him young and keep control over him, otherwise he will give rise to much trouble. The whole subject of criminality is so intimately interwoven with that of feeble-mindedness that I was extremely glad to hear our President dwell upon it.

The vote was passed with hearty applause, and Dr. Beach in acknowledgment said—

I am exceedingly indebted to you for the kind manner in

which you have received my address, and especially for the kind words which have fallen from my two friends. I thank you very heartily.

Since the delivery of this address, I have been informed that a third institution for idiots has been erected in Scotland, and besides the colonies for sane epileptics which I have mentioned there are two small institutions for them in England which have been recently opened.

(¹) For the information I have been able to give regarding the lives of these distinguished men I am indebted to the *Journal of Mental Science*.—(²) *Resumé de ce que nous avons fait pendant quatorse mois*, Esquirol et Seguin, 1838.—(³) *Rapport sur l'Assistance des enfants, idiots, et dégénérés*, par Bourneville, Lyons, 1894.—(⁴) In memory of Edouard Séguin, M.D., being remarks made by some of his friends at the lay funeral service held October 31st, 1880.—(⁵) *Extracts from the First Report of the Institution on the Abendberg, near Interlachen, Switzerland, for the Cure of Cretins*, by Dr. Guggenbuhl, translated by W. Twining, M.D., 1845.—(⁶) For the information here given, and for that which follows as regards the provision made in Europe for this defective class, I am indebted to the report published by Bourneville in the *Assistance, Traitement, et Éducation des Enfants, Idiots, et Dégénérés*, 1895.—(⁷) *Brit. Med. Journ.*, August 18th, 1888.—(⁸) *Report of the Royal Commission on the Blind, the Deaf and Dumb, etc., of the United Kingdom*, 1889.—(⁹) *The Feeble-minded Child and Adult*, London: Swan, Sonnenschein & Co., 1893.—(¹⁰) *Ibid.*—(¹¹) *Prospectus of the Childhood Society*.—(¹²) *Report of the Departmental Committee of Defective and Epileptic Children*, London: Eyre and Spottiswoode, 1898.—(¹³) *Mentally-Deficient Children; their treatment and training*, by G. E. Shuttleworth, B.A., M.D., 2nd edit., London: H. K. Lewis, 1901.—(¹⁴) Article by Lombroso, published in the second number of the *Kinderfehlen* for 1896; quoted in the *Journal of Psycho-Asthenics* for December, 1897.—(¹⁵) *Journal of Psycho-Asthenics* for June, 1899.—(¹⁶) *Inter-Colonial Medical Journal*, February 20th, 1900.—(¹⁷) *Journal of Psycho-Asthenics* for March, 1899.—(¹⁸) *Treatment of Imbeciles and Epileptics*, by Dr. J. M. Rhodes, C.C., and Alderman McDougall, J.P., Manchester, 1897.—(¹⁹) Leaflet issued by the National Society for the Employment of Epileptics.—(²⁰) "Reformatory Enterprise: its Pioneers and Principles," a paper read by William Morgan at the Fourth Conference of the National Association of Certified and Industrial Schools, held in London, in 1888, and published in a Report of the Congress.—(²¹) *Ibid.*—(²²) *Report to the Secretary of State for the Home Department of the Departmental Committee on Reformatory and Industrial Schools*, vol. i, 1896.

Inebriety, its Causes and Cure. By WILLIAM WYNN WESTCOTT, Her Majesty's Coroner for North-East London, M.B.Lond., D.P.H.; President of the Society for the Study of Inebriety.

WE are all prepared to grant that alcohol is a poison in a general sense, and that any use of it for the pleasurable sensations it produces may lead to discomfort, to folly and to

disease, and yet the majority of our adults persist in its habitual use, and readily take the risks of future suffering for the sake of present daily enjoyment.

The total abstainer, with whom alone is absolute safety, is still a member of a minority in this country; he rejoices in his safety from the evils of alcoholic poisoning, and is generally somewhat self-assertive and jubilant on the subject. It is to me still a moot point whether his self-contentment is an enticement to the ordinary drinker to follow in his path. His self-sufficiency is apt to ruffle the feelings of the common man, rather than to convert him.

On the other hand, I am not prepared to say that the truly moderate drinker succeeds in transforming many inebriates into sober members of society.

Habits of drinking on social grounds are so interwoven with our national life that a man needs much determination to separate himself from his fellows, and so to forfeit many social amenities, only to avoid what may seem a small risk of being seduced into intemperate habits. A man can look around him and see crowds of his fellows who have not fallen under the seduction of intemperance, although they have joined in the common festivities of life. Yet he knows in his inmost heart that some of his ancestors, and some of his friends as high-minded as himself have fallen, and have wrecked themselves and their families to satisfy their craving for alcoholic indulgence.

What are the true reasons why inebriety exists, and is common among us? Are the causes capable of being removed? and is an inebriate a patient who can be cured? Such are the considerations which are referred to in this essay, which is offered to members who cannot but be familiar with the results of alcoholic intemperance in the origin of insanity.

In 1838 Father Mathew's crusade against excessive whisky drinking among the Irish caused a universal awakening of the public conscience, and from that date onward Teetotalism became a bye-word, and Total Abstinence a public virtue. National and local societies designed to make our people abstainers have obtained much success. Even yet, however, there is a terrible amount of drunkenness constantly before our notice.

Temperance reformers, largely successful in their efforts, turned their attention to medical treatment, and declared that all disease could be equally well cured without alcoholic preparations, and a few eminent physicians have subscribed to this opinion.

These reformers then called public attention to the assertion that, beyond the needlessness of alcohol as a medicine, there was a further mischief done by doctors, in advising the use of alcoholic drinks as means of hastening recovery from illness, and thus creating many inebriates. The medical profession as a whole repelled the assertion, and Dr. Norman Kerr denied the prevalence of the evil, and stated that the charge was exaggerated, and in his large experience only accountable for one half per cent. among 4000 recorded cases.

The existence of inebriety is a factor of such immense importance to life assurance companies that it is possibly of even more notable value than a discovery of hereditary tendencies to gout or tuberculosis. Sir Dyce Duckworth has lately drawn special notice to this question. Sir Andrew Clark also, by thorough investigation into candidates *usual* drinking habits, showed that many "moderate drinkers" had to confess to morning, afternoon, dinner, and evening tipping, which, represented in total quantities, fairly astonished them.

Causation.—Inebriety shows itself in many forms, and is perhaps as varied in its manifestations as insanity itself: these forms are partly related to the causation and partly to the age, sex, and nature of the sufferer. Inebriety is, no doubt, often *an hereditary failing*, yet it seems in some cases to be entirely a personal acquirement. We all know some drunkards in whose family history there is no record of intemperance, and their ancestors may have all been sober men and women. We must, however, remember that drinking habits are often concealed, and that two or three generations back total abstainers were few in number, and that general social opinion did not concern itself with the drinking of individuals, except in the way of joke, or in the way of pride at a man's drinking powers. These considerations will, I think, tend to make us favour an hereditary causation, rather than postulate an evil *acquirement* in the individual. That an hereditary predisposition to the drink crave is common few doctors will deny, and that it passes on through many generations is accepted.

Medical opinion is, however, now hopelessly divided over the question whether an "acquired inebriety" can be transmitted from father to son, any more than other somatic acquirements which we never see transmitted. We all have seen drunken parents have drunken children, but the question arises whether the inebriety of the child was due to the father's giving way to drink, or to his inherited tendency to do so.

If a sober man has three children, and they are healthy, and then he becomes a chronic drunkard,—are the children subsequently born more likely to become drunkards than the first three children?—no hereditary tendency to drink being present in the father.

Teetotalers almost invariably say "yes," and warn every one that his drinking habit will be reproduced in his children. We may note here one peculiar source of inebriety, some wives during a pregnancy by a very drunken husband are affected by the drink crave throughout their pregnancy.

Biologists say that no acquirement has been shown to have been inherited, and that there is no *proof* whatever that an acquired inebriety is reproduced in the children, although this is often surmised. The biologists are prepared to grant that intemperate habits enfeeble the parent, and may in some way produce a germ which, when fecundated, may grow up into an individual who is feeble and imperfect; but they deny that there is any proof that the special peculiarity of the "*drink crave*," when parentally *acquired*, can be so transmitted by a sperm or germ cell. Again, if a man has an hereditary tendency to drink and does drink to excess, and does have children, have they the father's hereditary tendency *plus* an added increment from the father's excesses? Dr. Archibald Reid urges that if this were so, each generation getting more and more drunken, the race should be poisoned and die out by alcohol early and surely; but it is the men of races who have had no previous experience of alcohol who die most certainly and rapidly of alcoholic poisoning, while races like the Italian and the Spanish, who have had access to alcoholic drink for a thousand years, are much more sober, and have a low alcoholic death rate. Dr. Reid's contention is that it is in vain to argue that because alcohol is almost constantly circulating through a certain person's body—the totality of somatic cells—therefore, the single sperm or germ cell which

chances to produce a new being must develop into a man or woman with a special drink craving; and that no proof of this has ever been adduced. •

Race is a factor in the proportion of inebriety, because it involves the question of how long alcohol has been in free use among the people; for history leads us to recognise that the excessive indulgence in alcohol is in inverse proportion to the ancestral experience; prolonged use and abuse of alcohol tends to eliminate the alcoholic diathesis of drink craving, and tends to render a race more and more sober.

“Nearly all races which have had no experience of strong alcoholic drinks are excessively drunken when introduced to them—so drunken that, given the opportunity, they drink to extinction” (A. Reid).

So there is an evolution of sobriety.

The question of *climate* is nearly related to that of race, and need not be separately considered here, except as regards the effect of a change of climate upon a traveller or colonist.

The man accustomed to a temperate climate, on being removed to the tropics, suffers much from heat and thirst, and if he drinks largely of alcohol he rapidly suffers from liver disease, and early death follows; yet each debauch of drink produces less obvious appearance of drunkenness, because the alcohol is more quickly evaporated and excreted.

In the arctic regions, on the contrary, alcoholic excess causes a rapid onset of drunkenness, and an exposure to the open air when drunk is very fatal; yet internal organic alcoholic disease is not very notable. This effect of cold can be seen, in a modified form, in our English winters when frosty, for a man may drink heavily in a hot room, and leave it with the appearance only of jollity; but let him essay to walk home in the frosty night air, and before many minutes are over he will be staggering and helpless.

Dr. Norman Kerr said that southern warm climates do not show so much chronic inebriety or so many dipsomaniacs as cold northern lands, yet temperate Italians emigrating to London often become drunkards.

Another consideration occurs here, that each climate produces its own form of drink, and that the special drink of the country does much less harm to the native, and even to the

visitor, than does imported wine or spirit—for example, many a Londoner has found he can drink freely of Scotch whisky when visiting Scottish highlands, but that the same quantity makes him ill at home.

Then comes the question of adulteration. It is certain that very much disease and inebriety are caused by impurities in cheap and common drinks, the adulterations being more poisonous than the alcohol itself. This is especially true of fusel oil and derivatives of amylic alcohol, and of acetone from the methylic series.

When the source of the alcoholic drink is from grapes, the alcohol is purer than from other sources—from corn is next best; very offensive impurities may arise from unskilled manufacture of alcohol from beetroot; and potatoes produce the most dangerous forms of distilled liquor, which require excessive purification.

There are in this country many inebriates who consume methylated spirit from choice or for its cheapness, and there are, as is well known, many ether drinkers, especially in Ireland.

The *environments* of work and social life have much influence in the causation of inebriety, both from a physical and a moral point of view. Many occupations have a great tendency to make men drink, and so foster inebriety, such as those involving exposure to great heat and great changes of temperature, as is seen among gas stokers and iron founders; those exposing the workers to much dust, as grinding works; those carried on late at night in low, gas-lit badly-ventilated rooms, as compositors; occupations also which call for heavy work with intervals of idleness, as occurs among dock labourers. Exposure to inclement weather, with occasional periods of no occupation, makes cabmen tend to become drunkards.

On the other hand, there is much protection against the risk of becoming an inebriate if a man be a cleric or a lawyer, and many men with an inherited tendency to inebriety have been saved by such professions.

The fear of disgrace is a very powerful deterrent from drunkenness.

This last consideration is a great safeguard for all women, who know that men have generally considered them more

moral than themselves, and they shrink from the disgrace of equalling man in his vices.

When, however, a woman has at last become a drunkard, she tends to become utterly lost to all sense of propriety, and falls lower than the average man does.

Motherhood, implying an urgent need for constant watchfulness over children, is a great protector of womankind from inebriety; and in my experience the majority of female drunkards who kill themselves by excesses, or by suicide after inebriety, are childless wives.

As to the general influence of *Sex*, the Retreats of America show a proportion of patients of five males to one female. In England there are certainly many more homes for female inebriates than for males, but the male inebriates are vastly more numerous than the female. Female inebriety, unfortunately, is certainly on the increase in this country.

It is alleged, and with much truth, that the introduction of the grocer's licence to sell wines and spirits by the single bottle has been a chief factor in encouraging women, and especially well-to-do ladies, in habits of secret drinking. Among the rich it used to be a difficulty for ladies to buy wines and spirits by the cask or the dozen for private consumption.

In regard to *Age*, the largest number of serious cases of inebriety occurs between the ages of 30 and 40 years.

In the matter of *Religion*, Dr. Norman Kerr arrived at the conclusion that drunkenness was increasing at a greater rate among Roman Catholics than among Protestants, and especially among the women, and he adds that the sobriety of Jews puts to open shame the habits of Christians.

Inebriety as a disease is indebted to the cultivated classes for a large proportion of its subjects. As to *Smoking*, the glass precedes the cigar quite as often as the cigar leads to drinking; neither, he thinks, has any appreciable effect upon the other, as regards immoderate use.

Companionship and the standard of family life are most potent factors in deciding the future of an individual who has an inborn tendency to drunkenness.

Incidents and accidents of life are commonly called *exciting causes* of inebriety. One man will take to drinking on his

marriage, from a fancied strain on his nervous system, another will drink because he is disappointed in love. One man will drink more and more as his financial position becomes easier, another will take to drink when he fails in business.

A shock, mental or physical, to the nervous system is a cause which frequently starts a man or woman on a course of excessive drinking.

People cannot be made temperate by argument alone, but by education and by legal pressure. Our principal object must be the consideration of the best modes of regulations limiting opportunities of free drinking. We must teach the cultivation of habits of personal cleanly life. Judging by analogy, the moderate drinker cannot be exterminated. Let us devote our energies to the restraint of the moderate drinker within limits to be defined by the medical profession, and to the absolute cure of those who have passed the borderland, and are ruining their lives and the lives of those dependent upon them. These must be deprived of their personal liberty until they have survived the craving which ruins them body and soul.

Treatment.—The medical treatment of inebriety can hardly be carried out with success unless the patient be under control. Two considerations present themselves: *Firstly*, the relief of the acute effects of alcoholic excess; how to relieve the dyspepsia and the debility due to chronic excess; and how to check the progress of organic alcoholic disease. *Secondly*, is there any medical treatment, if any, which can control the drink craving, the disordered mind, the sleeplessness, the state of humiliation, and the tendency to repetition of debauches. The physician has a large pharmacopœia of drugs suitable to relieve disorders of the first class.

The serious problem is, what remedies are there that have power over the second class? Is there, indeed, any remedy, other than seclusion and absolute prohibition from alcohol?

The advertising quack generally professes to cure the disorders of class two, by the remedies for class one, as will be referred to later on. The first practical point for decision is that of the stoppage of the supply of alcohol; shall it be done at once, and entirely? or shall the amount be gradually decreased? It has been widely contended that as the heart is

weakened by alcoholic excess, and is often rendered fatty by it, there must be a risk of a fatal syncope if it be suddenly withdrawn ; and no doubt many patients have died after the stoppage of alcohol in delirium tremens.

On the other hand, it has been argued that the person is ill and dying of a poison gradually administered, so that no further dose of the poison can possibly be allowed. From my own observation I am inclined to say, stop the whole of the alcohol at once, as a rule ; but a few cases of cardiac weakness may be saved from immediately fatal syncope by one or more small doses of wine or brandy, before the entire cessation of alcohol.

Hot baths should be used as soon as possible. Calomel with saline purgatives seems to hasten the excretion of waste products which have accumulated in the system.

Bromide of sodium in drachm doses is probably the safest remedy for the insomnia, but it is not a powerful remedy. Chloral often succeeds, but it may cause fatal syncope, although I have never met with that unfortunate experience. Formerly opium, and then morphine were prescribed ; but of late years it has been objected that they tend to constipate and check excretion. Chloralamide, paraldehyde, hyoscyamine, and hyoscine are more powerful sedatives, and have what has been called a power of chemical restraint. Sulphonal may certainly be used in many cases with advantage. Da Costa has obtained valuable results from cocaine, in doses of $\frac{1}{12}$ of a grain, given by the stomach ; calming its irritability, and soothing the nervous system towards sleep.

It is to be observed that there is a possibility of a drunkard falling a victim to the sedative which has thus been prescribed.

The stage following on the acute symptoms is that most commonly treated by quack remedies chosen from the prescriptions of the physician.

The effects of drugs in this stage are largely dependent upon the integrity of the vital organs, for if there be serious degeneration of vital organs, very little improvement can be anticipated. In this stage the use of strychnine is universally recommended. It improves the state of the nervous system, gives tone to the muscles, improves the appetite, and relieves the tendency to feel the stomachal craving for drink, which is distinct from the mental craving.

In many cases the preparations of iron do good. There is a

tendency to prefer the Galenical preparations of cinchona to quinine. During a course of tonic treatment it is advisable to change the drugs frequently; phosphorus and arsenic and the mineral acids may thus be alternately given with those above named. Other drugs have gained a reputation in curing inebriety, such as atropine, the salts of manganese, and the chloride of gold and sodium. As to the last remedy, it should be noted that an irritating red rash often occurs more or less all over the body, and a diminished dose must then be administered.

The tincture of hydrastis is considered as almost a specific by many physicians in Canada. Dr. Mac Nutt of California recommends the mixed tinctures of hyoscyamus and cinchona. Preparations of capsicum certainly relieve the stomachal craving which is so irritating and tedious in many patients. Digitalis is in frequent use, seeming to slow and strengthen the action of the poisoned and weakened heart.

Tartrate of antimony, recommended by many American physicians, on the ground that it produced a distaste for whisky, is a doubtful remedy, for it creates, *pari passu*, a dislike for food and wholesome drinks. Dr. Crothers, of Hartford, has had similar results with apomorphia.

A series of hot baths, or, better still, the use of Turkish or Russian baths, are extremely valuable remedies. Massage encourages a free blood-circulation through the muscles, and does much to assist excretion, and is therefore appropriately used with baths.

The use of electricity, constant and induced, hastens the processes of repair in nerve and muscle, and so to a greater and general bodily energy.

Whatever may be the medicinal treatment, it is not by medicines alone that we shall cure inebriates. Restraint combined with exercise, fresh air, and hopeful, useful employment must be added, and must be continued not for days or weeks, but for months. The disuse of alcohol, however, often reveals disorders previously masked by drunken habits, and diseases are certainly often rapidly fatal under these conditions. Thus an unsuspected rapid phthisis may occur; general neuritis is common; and forms of chronic rheumatism and gout come into painful notice. Melancholia may gradually develop, and paralysis, especially of spinal origin, frequently appears. Renal diseases come pro-

minently into notice, and soon lead to death. Dementia is often found.

As has been indicated, the cure of inebriety has been constantly attempted by the advertising quack, notably in the United States of America.

Speculators have introduced vaunted nostrums, and commercial companies have been formed for the cure of the drunkard. Needless to say no real mode of cure has evolved from the strife of these contending professors.

The so-called cures have been mostly culled from medical remedies. Thus while strychnine, iron and the salts of gold have been specified by physicians as promising drugs for certain stages and forms of alcoholic poisoning, some quacks have chosen these as unfailing remedies of the disorder as an entity. Necessarily their methods have been failures. The salts of gold have a small curative power in certain cases of alcoholism, and this limited value has been exploited as universal.

The "Dwight Cure" was alleged to be gold in medicinal form; the "Golden Specific," according to Dr. Usher a preparation of cinchona with a small percentage of tartar emetic; the "Boston Drug" and the "Fisk Gold Cure" are all more or less familiar.

Lastly, there has been in France a resort to "Anti-ethyline," as was noticed in the *Journal of Mental Science* in April, and in Australia similar experiments of doubtful value.

The recent claims made for hypnotism are well known. Dr. Milne Bramwell recommends hypnotic suggestion for dipsomaniacs—those who are not habitually drunken, but are subject to crises. The bout of drinking passes off and leaves the patient more or less ill. Recovery follows, characterised by a period of sane conduct.

An hereditary neurotic predisposition may often be traced in those persons who are the least susceptible of complete cure.

There are certain difficulties which restrict the frequency with which this mode of relief can be applied. Hypnotism and suggestion are very dangerous experiments unless their performance is restricted to the medical practitioner, and I do not feel at all sure that he may not do more harm than good in an unwitting manner.

Then, only comparatively few doctors can produce hypnosis simply by reading a tract on the subject; and, again, only a

certain percentage of patients can be hypnotised by anyone. Dr. Milne Bramwell confesses that the art is useless unless the patient himself wills to be cured.

The production of hypnosis is often a long and tedious process, and even if its use checked the drink crave, its value would depend upon how long the control lasted, as such a process could seldom be conveniently repeated at short intervals.

The hypnotic method has not yet had a full trial, and perhaps need not be condemned offhand, yet the assumed cures by the process should be carefully watched for years to come. Doubtless, like other means of cure, it may succeed in a few cases, and will fail in many more ; but even if any dipsomaniacs are cured by it that will be a distinct gain. It is still a moot point whether the inebriate is more or less susceptible to hypnotism ; on *that* account opinions differ, for some think that the alcohol having enfeebled the will renders a patient more prone to succumb to suggestion ; on the other hand, as the will must consent to a successful, useful hypnosis, and as hypnosis in its onset is much assisted by a determined calm concentration of mind, so the weakened will and mind should be less easily hypnotised.

I have known many non-medical observers in this field, and have been informed of their successes, and of their many failures, but I am entirely of opinion that the employment of hypnotism upon any sick, or inebriate, or insane person should be restricted to the duly qualified medical man.

I have known inebriates who shrank from cure for fear that it would mean for them a continual desire for drink, combined with the loss of power to take it.

Neither *Tit-Bits* nor the Society for the Study of Inebriety in England has obtained any information of value in regard to the drink cures vaunted by their owners.

It cannot be doubted that the present view of the medical profession is incontrovertible. It may be stated thus :—That the relief of the sufferer from alcoholic excess is a purely medical question of medicinal treatment on ordinary therapeutic lines, and that the tendency to inebriety can only be overcome by a period of hygienic restraint in an institution regulated by law and managed by medical men who have had experience in the treatment of mental degeneracy and physical incapacity.

Total abstinence from alcoholic liquors is the only safe pro-

cedure for the dipsomaniac and the inebriate, and for all those who have shown any morbid, if even temporary, craving for alcoholic excess. Yet for the ordinary man in good health, in regular work, or with sufficient exercise, who has shown no warning signs of inherited or acquired craving, there is much reason for allowing him a moderate amount of alcoholic drink, taken with the principal meals of the day. He should not look upon this as a necessity, nor should the practice become so habitual as to produce discomfort if the amount be omitted. With moderation thus understood, an occasional glass on days of public or private rejoicing will do no harm, nor would there be any craving to make the glass into a debauch. It is the man who is regularly drinking up to, if not above, the tolerable quantity, who on festive occasions gets splendidly drunk, and has to pay the necessary penalty of sickness and headache, even if he be fortunate enough to avoid an apoplexy, an inflammation, and an accident.

Let us now consider the question of the relief of the inebriate by *enforced abstinence*, combined with seclusion in a home or institute under medical care.

There have been for long asylums and homes of various kinds to which an inebriate could voluntarily retire for treatment, but until recent years there has been no legal means of compulsory cure, unless a person of inebriate habits were also definitely insane.

By the Habitual Drunkards Acts of 1879 an habitual drunkard could be admitted to a retreat licensed by a local authority, and placed under medical care, upon the statutory declaration of two persons that he was an habitual drunkard; and on his own application, attested before two local justices, he might be then detained for a period not exceeding twelve months.

This Act was only to remain in force for ten years, and so in 1888 an Act to amend the Habitual Drunkards Act of 1879 was passed, and it was ordered to remain in force until varied by Parliament. This Act enabled the licensee of a retreat to appoint a deputy, and ordered that any two justices might act, instead of two justices having only local jurisdiction.

Lastly, in 1898, there was passed the Inebriates Act, a second Amending Act, which came into force on January 1st,

1899. Section 1 provides that where any person is convicted of an offence punishable by imprisonment or penal servitude, and if the court is satisfied that drunkenness contributed to the offence, and the offender admits that he is, or the jury find that he is, an habitual drunkard, the court may order his detention in a State, or a local licensed reformatory for any period not exceeding three years.

Any offender who has been three times convicted within a year may, on a fourth conviction, if he be an habitual drunkard, be also detained three years in a reformatory, the managers of which are willing to receive him. Section 3 authorises the Secretary of State to establish reformatories ; and by Section 4 the Secretary of State may issue a certificate or licence to any approved reformatory, established by any county council, borough, or other persons.

By Section 16, the signature of one justice is required, instead of the signatures of two justices, in the voluntary seclusion of an habitual drunkard, and the period of time is extended from twelve months to two years for his detention.

By many persons it is considered that still further legislation is necessary, on the one hand for the confinement of the wealthy drunkard, and on the other hand for the gratuitous care of the poor inebriate. Possibly, also, an extension of the meaning of the word "inebriate" to include other forms of drug intoxication, such as morphinism, would be advantageous.

This Act has been in force for a year and a half, but it cannot be said that very great results have yet been achieved. The Home Secretary declined to build a State reformatory for the nation, or any part of it ; he also declined to set aside any special prison for the purpose.

The boroughs and county councils, fearing the original outlay and subsequent expenses, have in many cases declined to undertake the work, alleging that the foundation of such reformatories is a national duty.

In many other cases councils are still conferring with neighbouring councils as to a joint establishment.

In still other cases boroughs and councils have made arrangements with privately owned licensed houses to admit inebriates from their districts. The home at Bentry, near Bristol, has made arrangements with twenty-two local authorities, borough, and county councils, to receive and treat

both male and female cases. Lady Somerset's Home at Duxhurst, near Reigate, has also taken many cases of female inebriates. St. Joseph's Reformatory for Roman Catholics at Ashford is well supplied with patients. Lancashire has obtained a special Act of Parliament to create an Inebriates Board representing twenty-five boroughs, in addition to the County Council.

In all, four institutions for female inebriates, and one for males, have been licensed under these Acts; while two other reformatories for men, and one for women, are expected to receive certificates at an early date.

During the first year's working of the new Act, only eighty-two patients were received, five under Section 1, upon conviction for an offence punishable by imprisonment or penal servitude; and seventy-two under Section 2, on a new conviction, after three previous convictions within a year, of an habitual drunkard. Of these London has supplied sixty-one cases.

The London County Council has appointed a Special Committee to deal with all matters relating to the Inebriates Act. It has also made temporary arrangements with existing institutions for the care of its inebriates. The Council has also purchased a large estate of 364 acres at Charlwood, near Horley, Surrey, and is in process of modifying some existing buildings there to serve as a reformatory for the restraint and treatment of additional cases, which are sure to be committed from the judicial courts within the area of its control, for, of course, the present sixty-one certified drunkards do not form even a small proportion of the offenders who are also habitual drunkards in London. This institution will be opened in August of this year.

There may be delay, and there will be doubtless many difficulties to be surmounted before the County of London will be fully supplied with all the desirable accommodation for inebriates, but that the arrangements made will be well considered and skilfully executed, under the guidance of the present chairman of the Inebriates Committee, Dr. Job Collins, no one who has long known that councillor can have any doubt.

Inebriate reformatories may in the future well be of various characters, some for the criminal, some for the mis-

demeanant, and others for the treatment of the sick inebriate, and the semi-insane dipsomaniac.

It will be difficult also to combine under one roof suitable treatment for rich and for poor sufferers.

In all cases we think the superintendent of the institution should be a physician and not a civilian, and he should be a doctor who has an enthusiasm for the work of curing inebriety. He should be an abstainer, and so should all his officers. The home should be in the country as far as possible from towns, to avoid the risks of drinking by the straying away of patients, and so as to provide ample agricultural and gardening work. Regular and suitable labour, and regular but varied amusements should be provided. The system of preserving good order by the bestowal of rewards is to be preferred to that of punishment for errors. The culture of the patients by a well-considered moral code will be a necessary feature of the successful mode of cure.

The separation of the sexes will be necessary, but there might well be two adjacent homes, one for each sex, by which means the agricultural work of one might supplement the laundry and clothing work of the other. Small dormitories should be preferred to large wards. The mental and moral standing of the nurses and attendants should be a matter of careful selection. Lastly, these homes should be self-supporting colonies devoted to self-improvement by means of pure air, exercise, regular work, sufficient play, good food, and healthy dwellings.

Placed under these conditions, the chronic drunkard may soon regain health, and lay a basis for future good conduct. The difficult cases will be those of patients who remain reasonable for long periods, but who occasionally break out into maniacal drink craving and violence ; such cases are to be controlled by drugs.

The members of the Medico-Psychological Association will, I am sure, take a keen interest in the foundation, equipment, and management of these coming reformatories, because they are so fully aware of the importance of the treatment and cure of the inebriate, and also because so many of them are experienced in the practical working of asylums for the insane, to which the new inebriate reformatories must have a close relation in regulation and work.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

Dr. BEACH.—I am sure that you will agree with me in according a very hearty vote of thanks to Dr. Wynn Westcott for the excellent and exhaustive way in which he has treated this subject, in which we are all interested. At the British Medical Association Meeting at Portsmouth last year, a resolution was passed and referred to the Inebriates Legislation Committee. The result is that a Bill has been drafted to provide not only for the well-to-do inebriate, but for inebriates generally.

Dr. FORMAN (L.C.C.).—I am sorry that I arrived rather late, and therefore did not profit, as I otherwise should have done, by the very instructive paper that has just been read. I came here to learn, and not to teach; to pick up a few hints as to how we were to manage our new Inebriate Reformatory. The subject has interested me for a good many years while I was in private practice, and since I have been a member of the London County Council I have been a member of the Asylums' Committee for more than ten years, and of sub-committees of various asylums, and have been struck with the immense number of drunkards brought under our notice. But the question has often occurred to me whether these persons have been driven into the asylums by means of drink, whether drink has made them mad or insanity led them to drink. It has seemed to me that, in a large number of cases, the latter is the true explanation. As a Justice of the Peace, I have been struck, during the last few days, with the very large number of those who have drunk themselves into an insane condition through thirst caused by the great heat. There is a large number of persons who, drink however much they may, do not drink themselves into a condition of *delirium tremens*, in the production of which a certain peculiarity of nervous system is necessary. Drunkards, therefore, divide themselves into two big classes. There are diseases caused by alcohol irrespective of mental influences. For instance we find cases of cirrhosis, etc., in general hospitals, while in asylums we find drunkards who are rarely affected with these maladies. I do not mean to say that there are no exceptions, but that is, speaking generally, the fact. Therefore, although there may be but few who are in a condition of irresponsibility solely through drink, there is some antecedent factor which has caused them to be more susceptible to the influence of alcohol than their more fortunate neighbours. Of course these cases are more frequently met with in the female sex than in the male sex. These women fall into the hands of the relieving officer, then go to the workhouse, and most frequently pass on to the asylum, while their husbands, brothers, and sons are able to carry their liquor without becoming responsible before the law. If they do go to the workhouse, the majority never pass on to the asylum. We remand them for fourteen days, and, generally speaking, before that time is completed the men are well enough to be discharged. It is not so with the sister or wife. The fourteen days that the law allows are not sufficient for them, and they have to be sent on to the asylum. It is then discovered that there is some nervous instability, either epilepsy or hereditary insanity. I think that we may get rid of the phrase "hereditary tendency to drink," by substituting for it a "hereditary tendency to nervous instability," and regard these neuropaths, as Dr. Mott calls them, as subject to an insanity that is unquestionably often brought on by alcohol. There are cases, no doubt, that are often erroneously, thought to be purely alcoholic. The majority of these are cases of commencing general paralysis.

I pass on to cases of inebriety such as we now have to treat. I think that the Council and London generally are very fortunate in having secured for the committee so able a chairman as Dr. Collins. I happen to be the Vice-Chairman, and we work together as amicably as two medical men should do in this great work, which we hope to carry through with success. We have purchased a large farm, a beautiful estate of 364 acres on which are two houses. These we are fitting up in the best way we can. No doubt it would have been better if we had pulled them down and rebuilt them, but there has been such a persistent outcry that we were doing nothing, when we have really been industrious, that we thought it was on the whole better to secure what premises we could and to adapt them as best we could. The London County Council has really done more in this matter than any other county council. No county except Lancaster

has done so much to carry out the Inebriates Act. We have placed some of these persons in Lady Henry Somerset's Reformatory, and others at Ashford, and if we found any male drunkards we should have accommodation for them. It is extraordinary that there has been little call on the part of the male sex for accommodation. It has been entirely females that have required to be dealt with.

We hope to be able to receive inebriates by the first week in August, and thus to show London that we have not been so dilatory as has been stated. I am sorry that a coroner in the *Times* of to-day has thought fit to censure the London County Council on account of the accidental death of a lady who was an habitual drunkard. Her husband said that his wife would not go into an inebriates home, and before she could be placed there by the law she must have been convicted three times in one year, but she was not in that position, indeed she had never been convicted at all. The husband did the best he could for her, and this misfortune has come to him without his having been able to prevent it. Certainly, no blame could be attached to the London County Council.

We have tried to get information as to the best way of dealing with these people on all sides. We have conferred with Mr. Paton, who is at the head of one of the male inebriate reformatories. He seems to think very much, and so do I, of the careful selection of attendants—of those he calls Christian brothers. We have taken a leaf out of his book, and have secured an admirable matron, who has been matron at St. Bartholomew's and at Bath. We have temporarily appointed one of the medical men residing in the neighbourhood, and are carefully watching the working of the system, while deputing a good deal to the matron. Seeing that the farm is some fifty miles distant from London, it goes without saying that we shall have the advantage of abundant fresh air. There are some people who deplore that there is no reformatory in the County of London, but we thought that the farther it was out of London the better, and the site fixed is also a long way from a public-house. We have been acting in concert with the Home Office, and have had to put up bolts and bars, and walls, and so on, but we have done as little of that as possible. We have sought to regard inebriety not so much as a crime as a disease, and have thought that anything that made the place resemble a gaol would be ineffective. On the other hand, these persons are sent to us by the stipendiary magistrates, and there are certain things enforced by law that we cannot escape. With Dr. Collins I have visited Duxhurst, Ashford Reformatory, and Holloway Jail, and have gained information from all three places. From Dr. Scott, of Holloway, we gained the information that there were very few, if any, male inebriates. The number committed by the magistrates, according to him, was almost *nil*. He also told us that the crimes of inebriates are of the most trivial character, and such as would arise from the drink. He impressed me greatly in stating that the great criminal never drinks. We hope to do these people good by interesting them. We shall have the ordinary business of the farm, and shall have to employ men accustomed to agricultural operations; but in addition we propose to keep bees, to grow fruit, to make jam, to grow tomatoes, to do anything possible to provide work such as these women are able to do, and such as will be suggested by their ordinary occupations. In the case of the London woman it is not likely that she will know much about floriculture, and therefore we do not expect that she will be able to do much in the tending of flowers, but it does seem an important point that we should find her something to do. What is wanted is to raise her self-respect, to make her less ashamed of herself, and that means that she must be kept there for a long time. My own view is that Lady Henry Somerset's successes may possibly turn out to be failures, as time will show. We shall have to keep these inebriates longer than she does, and may not meet with her remarkable results. So far as at present advised, we shall not attempt any of those cures which have been alluded to by Dr. Westcott. It has seemed to me, as a medical man of a good many years' experience, whether they are inside or outside a reformatory, a necessity to look upon them as poor, weak creatures, and not to impose such tasks upon them as they are unable to complete, however easy those tasks may seem to those in good health. If a man says he must go to a particular customer and get an order, but that he cannot face that customer before he has had a "go of whisky," I think it obvious that he should be placed where facing a customer is not his occupation, and where the "go of whisky" will not be required. At any rate, we

shall be able to prevent their bringing into the world children with like proclivities, and in that way, at least, good will be done. Dr. Collins and I, when we visited gaols and inebriate institutions, have been struck by the fact that certain of our asylum patients have been constantly brought under our notice. Jane Cakebread, who had been more than 100 times in gaol, died in Claybury Asylum. There is undoubtedly a close connection between what the law considers as a criminal condition, and what we, as medical men, regard as the best means of treating inebriety, namely, placing it under restraint.

Dr. MORTON.—I can only express my agreement with what has fallen from Dr. Forman. There has certainly been an impression in the temperance world that the London County Council were not moving as fast as they might have done in providing the machinery to deal with these cases, and it is very gratifying to hear that there are two such men as he and Dr. Collins charged with the work. I have no doubt that in their hands it will prosper. There is a great deal in what Dr. Forman says as to the connection between a predisposition to insanity, and a predisposition to suffer from the effects of drink in the nervous system rather than in the other organs of the body. We should all keep that very steadily before us in our studies of inebriety.

Dr. HEYWOOD SMITH.—I am in agreement with what Dr. Forman and Dr. Morton have said. We ought to insist upon the Government passing a law for the detention of all inebriates. It seems a thousand pities that, after all these years, a person should have committed some criminal act before he can be treated.

Dr. JAMES STEWART.—The general opinion among those experienced in this subject is that it is utterly out of the question to expect any Government would last for any length of time who banished from their mind the bugbear of the freedom of the subject. That is the barrier in the way of any such legislation. I think it is very important that we, as medical men, should be prepared to give some answer as to the possibilities of a permanent cure, where treatment is adopted of such a kind as may be at present undertaken. My answer is that no permanent cure may be hoped for unless the patient is kept absolutely and entirely free from the risks of alcohol for at least eighteen months. The circumstances by which the patients are surrounded in homes where they cannot get alcohol, are very different to the circumstances which surround such patients when they go out, and six or seven months is not long enough. It requires a period of at least five years to elapse from the time the patient leaves such a home before one can say with any confidence that a cure has been effected. I have found a number of cases restored, and able to fight the battle of life after being under treatment, but they are invariably those who have remained in homes for eighteen months. The larger number of permanent cures are amongst ladies. They are generally regarded as absolutely incurable, but it so happens that I have had a proportion of five ladies to eight gentlemen throughout my twenty-four years' experience, and I can state that the proportion of cures is something like twenty per cent. greater amongst ladies than amongst gentlemen. I account for that because the former can be more easily spared from home duties, and therefore she remains longer under treatment. The Home Secretary was quite within bounds when, in his circular letter, published in the *Times* in January, 1899, he said that the consensus of medical opinion with regard to this question was decidedly that a period of from eighteen months to two years was absolutely necessary; because if for years and years a person has been diminishing his will power by taking alcohol, that period is a comparatively trifling length of time to be under treatment. I have had under my care persons of considerable position in the literary world, with marked powers of writing, etc., and yet at the end of eighteen months have considered them perfectly unfit to go about the world. It is not the case that the intellectual faculties are disturbed by the effect of long-continued drinking to the extent that the public generally suppose. At least 70 per cent. of those who came under treatment, at all events amongst the educated classes, are those whose condition of inebriety, whose physical deterioration, whose weakened condition of the will power, has been caused by their feeling unequal to doing their work. They are born with a neurosis, are unable to do a normal amount of work without a stimulant. We should be in the van of those medical associations who are educating the public and the medical profession, to understand that inebriates are, as a rule, more to be pitied than blamed. It has

been stated to-day that successes are due to the attendants. I have had successes because I have had no attendants.

Dr. ARCHDALL REID.—I have given a good deal of time to ascertain the effect of drink, not upon the individual but upon the race. I think that a number of medical men share the opinion that drunkenness in the child is due in great degree to the drinking of the parent; that because the parent was a drunkard, the child is more prone to drink than he or she would otherwise be. I think that there is also another impression which most people hold, namely, that it is found that the parents' drinking so affects the subsequent offspring that they are more feeble. Such an affection would come through the germ, and when a germ has been affected, then the organism which springs from the germ shows certain peculiarities, and the germs which spring from that second organism continue the peculiarity; so that generation after generation would have the drink tendency increased in the race, until at last the race became extinct. It has been found necessary to forbid the use of opium in Burmah, and alcohol has been prohibited in Australia. The temperance problem is by no means so simple as temperance reformers ordinarily suppose. It is next to impossible that, with an increasing craving for drink, we can combat intemperance; and therefore I think that temperance reform should include not only a scheme for saving the individual drunkard, but also one which, by legislative or individual action, shall discourage the procreation of children by him.

Dr. BRISCOE said that the scandal of permitting inebriates to go about unrestrained at home was greater than the alleged hospital scandals in South Africa. He instanced the case of a clergyman whom he had lately seen in a state of intoxication at a railway station. On his appealing to the police, the officer said it was not a case for him if there were no misbehaviour other than drunkenness. Dr. Briscoe would have a detention room for the care of drunkards attached to every public-house, for his opinion was that a man when drunk was really mad.

Dr. CLOUSTON.—If there is a difficult position in which a medical man can be placed, it is when the wife or the husband of a drunkard comes and states his or her pitiable case, and asks what is to be done, and when your reply is that nothing can be done. The law, as it at presents stands, allows every Englishman to drink himself to death if he likes. There is no doubt that nine tenths of the medical opinion of this country is absolutely solid for effective legislation in regard to habitual drunkards. I consider that the Act of 1899 is one of the most futile legislative efforts ever passed by the British Parliament. All that trouble had been taken for the relief of a few absolutely incurable drunkards! It really pained me to hear of the splendid efforts of the London County Council to benefit persons who are not worth doing anything of the kind for. If they are not going to cure them, they are wasting money in purchasing that estate and fitting it as they are doing. The Act applied to Scotland, and no medical man was appointed on the Departmental Committee. The College of Physicians brought this business under the notice of the Secretary of State for Scotland, and I was elected to serve. We sat for a week, went down to Lady Henry Somerset's Home, made many rules, brought out a blue-book. The whole affair was an absolute waste of human energy. The only exception I make is this, that if the county councils of London and Lancashire set up their institutions for criminal inebriates, and if they make them successful, then I think we shall get our lawyers and politicians to rid themselves of the monomania of fear and suspicion that at present possesses them, and they will then perhaps consent to give us a Bill of real service to curable persons. What do we care about women who have been convicted 100 times? Why buy an estate for those who are not worth it? What we want is an island where whisky is unknown, where drunkards may be detained, where they will have plenty of work, and adequate supervision. There is one other point to which I would direct the attention of this Association, namely, to the purely scientific aspect of the study of inebriety, and in supplement to Dr. Westcott's paper I would mention the German studies at present going on in regard to the action of alcohol on the brain cortex. The results are exceedingly striking. They appear to prove that in regard to intellectual effort alcohol absolutely does harm; inhibition is destroyed, while the feeling of well-being is remarkably increased. Certain molecular changes take place as a result of taking alcohol, and they are to a large extent permanent.

It is well worth while to study the effects of alcohol on different kinds of brain. I am quite sure that Dr. Reid is right in what he says as regards the prevention of drunkenness.

The Plans of a New Asylum for East Sussex. By H. HAYES NEWINGTON, F.R.C.P. Edin.

WHEN East Sussex determined a year or two back to build an asylum for its sole use, a Visiting Committee, appointed for the purpose, was fortunate enough to find in the centre of the county a suitable estate which the County Council purchased. It is situated at Hellingly, a village about nine miles north of Eastbourne. The area is four hundred acres, compact, as you will see on the plan, having within 400 yards of its western boundary a railway station which we propose to connect with the main asylum by a full gauge tramway. It slopes gently upwards from the south towards the north, where it attains its highest level of about 130 feet above the sea. The subsoil is most favourable, being, with the exception of two patches of clay, of a sandy or gravelly nature. The water supply is adequate, and the general contour lends itself readily to an efficient system of drainage, which will be bacterial. The views are excellent, extending to the sea and the south downs. It would be difficult to find a more suitable site for an asylum. A sub-committee was authorised to travel about the country to inspect other asylums, I being appointed its chairman. We visited the Hartwood, Lenzie, Gartloch, Hawkhead, Cheddleton, Burntwood, Glamorgan, Dorchester, Isle of Wight, and Chichester Asylums. I extract from the full report which we drew up on our return the following passage :

"We cannot refrain from expressing, also, the intense interest and admiration that we felt in seeing the progressive steps which have been taken, and are being taken, in the recognition of the just claims of the insane poor to be treated in a reasonable and liberal manner. It has been especially interesting to us to note the success with which each medical superintendent has impressed his individual aims on the establishment under his control, and how, even in the older asylums, by skilful and kindly attention to the personal surroundings of patients,

comfort, often of a homely nature, has been attained to an extent not to be exceeded in the newer. On some points of structure and management we found wide divergence of opinion; however, where we have found it impossible to harmonise such differences, we have been content to follow positive experiences rather than fears of failure."

Our report being received, the services of Mr. Hine were retained, and we were further commissioned to obtain plans from him. The report being handed to him, the plans now before you are, after much consultation, the result, Mr. Hine having truly and very skilfully reproduced our leading ideas.

The County Council has seen fit to adopt without hesitation the plans as they left the committee, and the work is so far forward that the foundations are in, while the tenders for the superstructure will be before the Council next Tuesday.

Since the time when there were sufficient county asylums to offer ground for comparison it has been a custom, which continues to this day, to classify and label them according to the various features they present. It is a matter for satisfaction that our new asylum cannot be relegated to any particular class. We claim, with one or two exceptions perhaps, no particular novelty in ideas; but we can, I think, claim as novel the arrangement of some ideas already in existence.

The leading principle has been to divide patients into two groups, and to provide dissimilar accommodation for them. The first group includes the dangerous, suicidal, and troublesome chronic cases, who must be made safe at any cost; the sick and infirm who need special care and nursing; and lastly, the residuum, if I may so call it, of advanced mental mischief,—that considerable mass of patients who cannot appreciate anything more than warmth, good food, and adequate personal attention. For all these we have provided a large main asylum. The second group contains those whom more extended and more segregated accommodation may justifiably be supposed to benefit. To contain these two groups the asylum has been planned for 1275 patients, but the accommodation now to be built is for 1115.

I will begin then with remarks on the main asylum, which contains 840 beds. As you will see, it is of the strung-bow design now commonly adopted. The main entrance, committee rooms, office, and receiving-rooms are on the north side, thus

allowing all the south aspect to be apportioned to the patients' quarters. The latter are allotted to females on the east, and to males on the west side. The two sides are similarly arranged, the only difference being in point of accommodation, which is, as usual, greater for the females. The first floor and ground floor are also identical in arrangement. The only part in which a second floor has been planned is that set apart for the chronics. The dormitories for these patients are above their own day-rooms and those of the epileptics.

The component wards of this building, though administratively detached, are structurally continuous, an arrangement which in our opinion allows of greater ease and convenience in working, and greater safety in case of fire, than are found where the wards are separated buildings attached to the main corridor by a pedicle. It is possible for a medical officer to travel through the whole of the first floor without having recourse to the stairs between the wards. The arrangement permits also of the freest ventilation, and of all the many day-rooms only one on each floor is without a direct south or west aspect.

As it is my intention, having regard to time, to describe principles more than details, I will pass lightly over this building.

The chronics of each sex are at the outside tips, next come the epileptics, and after these are the troublesome, dangerous, and suicidal casés, forty in each ward. I point out what we consider to be a good arrangement here of the day-rooms, which are three in number in each ward. The three together form a right angle about a central lobby, and are separated by glazed partitions. Thus both outside rooms can be commanded from the central one, while the former do not overlook each other. This should permit of convenient separation of the cases where necessary.

Then we come to the wards for infirm patients, and inside them, again, those for the sick. The latter are separated as between the male and female sides by passages only. The object of this arrangement is that thereby it will be possible to work all the wards for sick and infirm of both sexes, containing 300 beds, as one large infirmary for the purposes of nursing and supervision. It is the avowed intention to have this done by female nurses under one responsible head, as far as circumstances will permit. Such a head obviously will be a person

with large experience of hospital nursing. We quite recognise the fact that there are male cases which cannot or should not be attended to by females, and our arrangements are such that one quarter, one half, three quarters, or the whole of the male beds can be left to male nursing. But on the supposition that not more than a half or quarter will be thus cut away, we have provided accommodation for married attendants.

Our views on this great question of the best form of nursing for sick and infirm patients were thus expressed in our report :

“ It may be said at once that in advising that the whole of the nursing in the infirmary should be done by females, no reflection on the capacity of male nurses is implied ; for we know that the latter do their work admirably. We trust, however, that in recommending the arrangements which are universal in general hospitals, and are, indeed, partially admitted into military hospitals, we are simply furthering the wishes which would arise in each one of us in case of illness. Further, we consider that the influence of the female nurse may in many cases have good results in the control of language and habits.”

But whether in course of time our views are carried out or not, we consider that this aggregation of feeble folk in the sunniest portion of the building, with medical assistance close at hand, and in close touch with the recreation hall, forms a distinct feature in the general disposition of the accommodation. In some instances the partitions between dormitories and day-rooms are glazed, the Committee having been struck with the appearance of light and cheerfulness which resulted from this arrangement, as seen in Dr. Spence's new infirmary wards at Lichfield.

Two suitable rooms have been provided for pathological work, in addition to the space to be found in the mortuary.

With regard to the administrative portions of the main asylum I have but little to say beyond that they appear to be convenient and economical. You will see that on each side we have provided independent blocks for the attendants, to which they can retire when their services are not required in the wards. The tramway head is worth noticing. Here coals can be delivered straight from the railway trucks. This is a matter of importance to us, for we are but twenty-five miles from the harbour of Newhaven, to which we are joined by the rails of one company only. Thus we can purchase sea-borne coal by

the shipload, and have it conveyed direct into our sheds without further handling. Then, also, heavy goods can be delivered into the yards on either side, while flour can be swung from the truck by a crane into the store. Other goods can be trolled into the main stores by an underground passage. Besides this, a small passenger platform is provided opening into a main corridor. Probably some sort of tramcar will be provided for use between the station and the asylum, and, as suggested by one of my colleagues to meet a point officially raised, it will be serviceable for the conveyance of patients to the recreation hall from the hospital, to be presently described.

Leaving now the main asylum, I point out the other detached houses provided for the various types of patients which compose the second group. Here is the separate house for idiots, which follows with certain variations the general idea of the excellent house at Fareham. I need hardly give the reasons for separating these patients from adults. The accommodation is provided for sixty, which is beyond our immediate wants, but we are persuaded that we can fill it from other sources, possibly receiving non-pauper patients of small means, for whom there is such scanty accommodation in the country. We have added accommodation for fifteen adult female chronics, whose services will be required for ward cleaning; and it is to be hoped that we shall find some motherly bodies in the asylum who will take an interest in the children, to their own benefit. A schoolroom at first sight seems to be supererogatory, but one could see at Fareham that even if the children sat at the desks with their books upside down they were learning important lessons in sitting still and general discipline. Then there are four villas, two for males, and two for females, each having thirty beds. One will be set aside for the laundry workers, and another for male patients working in the shops, and possibly for some of those patients who do odd jobs about the place as orderlies. These two villas will be supplied with meals from the main kitchen in specially prepared trolleys, such as we saw in effective use at Glamorgan. The other two villas are for well-conducted females who can use the needle well, and for farm patients respectively. Both of these will have their own kitchens, materials being supplied from the stores. The women's house is supplied with a large sewing room, and it is justifiable to believe that, if a sufficiently business-like air

is given to its conduct, much profitable work may be turned out, not only for the asylum itself, but for other county purposes.

The particular amount of accommodation in each villa was decided by the view that it can be worked by two attendants, or, as we expect, by one attendant and a tradesman, farm hand, laundry woman, or sewing mistress, as the case may be. We are encouraged in this hope by the experience of other asylums where patients are supervised by members of the outside staff without any regular attendant. Such an arrangement would obviously be economical, and to the probable comfort of the patients, although difficulty may be found in finding just the right person for the duty.

We regard the following as some of the advantages of these detached sections. More variety of food and more elasticity of *régime* can be allowed. These will make the houses more comfortable and less institutional, thus affording an inducement to patients to get to and remain in them. And such a system does afford an opportunity of rewarding to some extent, by small indulgencies of trifling cost, those who do work often of considerable value for the asylum. Such a contrast in treatment between workers and drones is demanded by justice, if not by business interests, and it can be carried out in the villas to an extent which would be unattainable, or at least difficult, in an asylum compressed into one building.

I may point out that the total accommodation, if and when required, can be extended almost indefinitely by the erection of further villas, without causing appreciable inconvenience to the management of the asylum.

The chapel and medical superintendent's house are detached altogether. Without entering into the thorny question of this treatment, we can say, at least with regard to the chapel, that it is a relief to get rid of it in planning the main asylum. It is difficult to work it in so as to do justice both to it and the building to which it is attached.

The last and most important of the detached buildings is the hospital for the treatment of cases which present any prospect of ultimate recovery. The idea of separating such cases from the mass of incurable patients is by no means a new one. When I had the honour of sitting where you now sit, Mr. President, some eleven years ago, the hospital treatment of the

insane was under warm discussion, and on it I founded my official address. I sketched out what I ventured to term a county hospital, much on the same lines as those which by the most fortuitous of circumstances it has devolved on my colleagues and myself to suggest and carry out. I then pointed out that as far back as 1845 an Act was passed, sister to the one which now forms the foundation of lunacy law. This Act provided for special independent buildings for chronic patients being erected, so as to leave the chief asylum more free to exercise its curative functions. It was repealed in 1853, having never been acted on. Within the last few months I have come across the following opinion, expressed before a Select Committee which inquired into lunacy abuses in 1815.

Being asked to give his opinion of the plan of the Stafford Asylum, then building, a witness roundly stated that he thought it an extremely bad one. Asked why, he said, "Because I think there should be a discrimination between new cases, or those who can be called curable, and those that are incurable; and it is my firm belief that a large public asylum in which all descriptions of lunatics are admitted is a great deal more calculated to prevent recovery than to promote it, under the best regulations possible." "I think that the mind should be entirely divested of the idea of incurable lunacy; close confinement is necessary and the company of incurable lunatics." "I would recommend that the curative system should be entirely separate from the system of keeping incurables; I think that nothing in the world can reconcile them together," etc.

This statement came from a layman; eighty-five years ago few but laymen had any experience in treating the insane. But in spite of its source, and after making all allowances for the great advance in treatment, can any one deny the existence in this opinion of at least a germ of solid sound sense, applicable to present circumstances?

Again, some five or six years ago, when the question of extending Hayward's Heath was under consideration, such an institution was one of the recommendations which were made by the Visiting Committee in a report drawn up for it by Dr. Saunders.

When, therefore, our Committee set out on its travels the idea was not unknown to it. I studiously forbore, however, to

bring forward my personal, I may say expert, opinions, feeling sure that an inspection of the admirable arrangements at Gartloch and Hawkhead would have a strong influence on my colleagues. Thus it happened, and the foundation stone of our project was a hospital for curable cases. But the idea is carried out on different lines to those of the above or any other asylum, and the building you now see before you is, I believe, the first in this kingdom which is to be devoted solely to recoverable patients. As you know, medical and administrative convenience have suggested the combination of bodily and mental sickness as at the above-named asylums, or, as found elsewhere, the treatment of such a detached building as a general reception-house, the hopeless cases being moved on after observation has shown that there is no prospect of cure. But we thought that the trouble and extra cost of such a detached house should be incurred only for the curable, and that most of the objects for which it has been proposed would be imperilled by any mixture of chronic and acute patients.

The plans which are now before you show accommodation for thirty-two male and forty-eight female patients, a total of eighty beds. Apart from difference in numbers the general disposition of the two wings is identical. The dormitories are above, and the day-rooms on the ground floor. Each wing is divided into three sections, the outer being for the more excited cases, the middle for patients of the quieter and depressed type, while inside will be found the convalescent. You will see that each of the two former sections have two day-rooms, while in addition to the day-room space on the female side are three, and on the male side two, single sitting-rooms, which I must claim as an idea, or perhaps a fad, of my own. Experience leads us to know that separation of highly excitable cases has a beneficial influence on excitement, and I venture to say that if judiciously continued it must tend to a shortening of that period when either recovery or non-recovery is practically determined. On the other hand, there are quiet, shrinking patients, who for their ultimate good, if not for their present comfort, should be protected, if possible, from the troubles and alarms of an average ward containing recent cases. The single sleeping, and specially prepared rooms, are provided according to accepted scale, and we have not arranged for any excess of these, or for any very special sick ward, on the

general ground that if a case should be so turbulent and noisy as to be a bar to the comfort of others, or become so sick as to require more than an ordinary sick room, it should go to the main asylum, where ample provision has been made. Indeed, a temporary removal there, or a threat thereof, may have a salutary disciplinary effect. I am aware that some may think that our principle is trenched on by such a removal. So it may be, but the comfort and progress of the great majority are the chief considerations, and we set out with the idea that no rigid rule in any direction should imperil them.

As to the working of this hospital, you will see that it has its own kitchen and administrative centre. This may appear to be a source of undue expense ; but I am not sure that when all is considered it will be found to be so. As we know, the diet of acute cases is necessarily expensive, as no class of sick people require a more liberal and varied supply. Every extra penny that is judiciously expended in this direction will probably be amply repaid by speedier and more thorough recovery. This being so, it will be more convenient to have the special food prepared apart from the bustle of the main kitchen, and the extra supply can be more readily followed, and if necessary checked.

Accommodation is provided for the residence of one of the medical officers in the hospital. In addition to an office he will have the advantage of a complete set of reception-rooms for each sex. The idea was borrowed from Hartwood, where we found a suite of examination, dressing, and bath rooms, which afford every convenience for carrying out the important duties of reception. There are also quarters for chief attendants and an ample staff of attendants and nurses. The idea is that each side, though it is in three sections, will be worked as one ward. This arrangement would seem best to provide for meeting emergencies arising from an undue proportion of one type of new case, from sickness, or absence on leave of the staff, and it will avoid the necessity of having charge attendants for each section, none of which are large.

The cross passages connecting the centre with the outside sections have been made roomy, so as to serve for visiting when required, and to allow of indoor exercise in wet weather.

One more provision I have to describe, and this we consider to be of the utmost value. In a central position, where it can

be readily reached from either wing, is a recreation room forty by twenty-four feet in size. It is proposed that this shall be comfortably and domestically furnished, and that it should be used constantly—even most evenings—by those of either sex who are well enough to be admitted there. We all know what benefits arise from the dances and other entertainments for which the large recreation-room is provided in every asylum; but, considerable as such benefits are, I do not think that for the class of cases now under consideration, they will equal those to be derived from the quieter and more social use of a meeting-place such as this, where songs and games and books, and even now and then a little dance, can be enjoyed night after night without troublesome preparations, and with but the supervision of a chief attendant. When a patient has got on his or her road far enough to be allowed admission, he or she will have reached a point where social influences will have the best effect in confirming self-control and a natural habit of thought. So, too, with those who have not got so far, there will be some inducement to try and join their more fortunate companions.

I must say a few words as to the number of beds here provided. When I was preparing the address to which I have alluded before, I endeavoured to work out the proportion of such accommodation of this nature which might reasonably be provided to the total accommodation of an asylum. The result was that one bed should be provided for every fifteen of the total patients. I have recently worked out the question again in greater detail from the statistics of Hayward's Heath and some other asylums over a space of seven consecutive years, and I find that the above proportion is justifiable. At Hayward's Heath in those seven years of the admissions, when considered in classes, no less than 35 per cent. were obviously hopeless, being congenitals, epileptics, chronics, and dements, etc.

Then Dr. Saunders gives year by year a valuable table showing his forecast of the admissions considered individually. On collating these tables I found that 50 per cent. presented to him a bad or hopeless prognosis.

Yet again I collated the returns in the Commissioners' Reports as to the number of patients deemed curable on December 31st of each year, and naturally found the propor-

tion of hopefulness much decreased, a fact further confirmed by the actual number of ascertained recoveries.

We may take it, then, that on the average 50 per cent. may claim admission to the hospital.

I found that those patients who did recover within twelve months were discharged after a mean residence of five months. A few recover later, and on the whole, we may consider the average of all cases to be six months. The control figures of other asylums, as far as they could be applied, presented a very similar conclusion. This would mean a turnover of beds twice a year. In practice it would occur oftener, for some die, and with us some will soon show the hopeless nature of the case and would then be removed to the main asylum.

On the average, the rate of admission into county asylums is one to every four of the average number resident in the year.

The sum works thus, then: In an asylum of 1000 patients about 250 will be admitted each year, of whom 125 will probably recover after an average residence of half a year. Assuming that there is no very great departure from average admissions, hopefulness, and residence, sixty-three beds will accommodate these hopeful cases—and 63 to 1000 is not quite 1 to 16.

Of course one knows that, however much averages prevail in the long run, they do not hold constantly, and under unfavourable circumstances this proportion may occasionally be found insufficient. We are not likely in East Sussex to suffer from such vagaries for some years to come, since we are building for many more than our present number of patients, proposing to fill up with out-county chronic cases, who will obviously have no claim on the hospital. When a time of strain should come it will be easy to extend our provision for curable cases.

Another point on which question has arisen is how on admission a distinction can be drawn between hopeless and hopeful cases. I confess that difficulties may and will arise, and that possibly cases may be missent either to the hospital or the asylum. Even if this should be the case, the main principle will not be killed, and steps can be taken to correct such mistakes as do occur at the earliest possible moment. A great deal of assistance may be rendered by union medical and relieving officers when once the importance of such assistance is recognised. In some localities there probably is a want

of helpfulness on the part of these officers. But after all, asylum and union officers are the servants of the ratepayers, even though they carry out their duties under different sets of the ratepayers' delegates. It is not too much to hope that as county councillors and guardians are often the same persons, and as a liberal interest in the insane is spreading to all authorities, pressure may be brought to bear, in the interest of the county as a whole, to ensure that at least some intimation of the nature of the case to be admitted will be forwarded, if necessary by the telegraph. Even if only the congenitals and dements were so announced some trouble would be saved, and for this no very extraordinary powers of diagnosis would be required.

As to the objects of the hospital, we have no exaggerated views of the results to be expected. We simply wish to provide a place where patients shall have a better chance of recovery, a shorter and happier sojourn under control, and a less distressful memory after recovery. We think all these can be promoted by the withdrawal of the ordinary experiences and *régime* of an asylum. What, for instance, can be more prejudicial to recovery than the one set hour of getting up for those who have good sleep, and those who perhaps are just closing their eyes after none? What more irritating to those who are improving than to have to get to bed at an hour fixed by the requirements of the sick and by the general convenience of the whole asylum? We have in our county asylums, besides peasants who lie down and get up almost with the sun, people of superior positions and other habits of life. A rigid rule in many such social matters must press hard on some, and one great purpose of this part of the institution is to allow of reasonable departure from the rigidity which is essential in the general asylum. As medical men, also, we have a well-founded belief in the value of treatment, whether medical or moral, in the earlier days of the disease, and nowhere is such treatment more certainly and conveniently applied than in a place which contains only active and moving cases, bespeaking continuous attention, and supplying the motive as well as the name of a hospital. Again, we are persuaded that the existence of such a half-way house, founded on the idea of active hospital treatment, will overcome to a considerable extent the reluctance on the part of friends to send patients in the earlier days of the disease.

Going back again to the general consideration of our scheme, three questions arise: first, what will be the capital cost? An exact answer to this cannot be given, as some portion of the work has not been submitted to tender. But, taking as a guide the tender which we accepted ten days ago for the super-structure, it is reckoned that for the initial accommodation for 1115 patients the cost per head for the buildings will be £275, and the total cost, inclusive of land and equipment and all other matters, will be about £325 per head. When the further accommodation for 160 is added, it is estimated that the total cost will be reduced to £300.

About three years ago we reported to the County Council that the total cost per head of a good modern asylum was about £250. Since then, in addition to the fact that we have had cast on us considerable expenditure not usually included in estimates, the cost of building has without question most materially advanced, so much so that it is fair to assume that if the prices of three years ago obtained now we should have not exceeded the original estimate. In any case we think that a comparison with the cost of other asylums recently erected goes to show that our variations in general disposition and design have not led to any material increase in expenditure.

Secondly, will the current cost of carrying on the asylum be greater than is usual? Apart from the hospital, I do not think that it will be. The chief item of extra expenditure, if any, will be in respect of salaries and wages. There is no reason why a staff of one attendant by day to every ten patients over the whole institution should not be amply sufficient. Any extra amount of staff, after making allowance for savings elsewhere, will be called for by the hospital, and the cost of this, with the cost of food, will probably be repaid by more frequent and more speedy discharge on recovery. A missed recovery is equivalent to burying, for the time being, some hundreds of pounds, the interest on which would be represented by the cost of boarding and lodging the patient. Therefore, if by reason of extra expenditure for a restricted time the county is relieved of the life-long charge of even a few patients, the balance may well be found to be in its favour.

The last question is, will an institution planned as this is entail more trouble and anxiety than the average present day asylum? It certainly may at first until practice and routine

have been settled, but there is this about lunacy—it tends to speedily follow up and justify any advance in liberality of treatment. We have but to look back to the sudden and determined abolition of restraint at Hanwell, to the disappearance of brick walls, and to the gradual disuse of the key, for a confirmation of this proposition. It is so true that no authority can conscientiously afford to build an asylum on the lines considered to be advanced thirty or even less years ago. In our proposals we have borne this fully in mind, and believe that while we have provided sufficient accommodation of a fixed nature for those classes of patients where no variation in the effects of disease is to be looked for, there is ample scope for introducing yet further improvements for the benefit of other classes.

But whether there be undue difficulties or not, there is no question about there being plenty of men fit to successfully cope with them. The management of asylums in former days was an art, dependent for its success almost entirely on the personality of the manager; now it has become a science, and he who is called to the position of medical superintendent can start with a large stock of organised knowledge, whereas his predecessor often had to create a system for himself. We may claim the credit of this for our Association, and the opportunities its meetings and journals create for criticism, comparison, and record of experience. Certainly I, for one, do not hesitate to own my debt to it for much of whatever I may know of this subject.

In conclusion, we will fain hope that even if there be a heavy load placed on the shoulders of our superintendent, whoever he may be, he will not be ill pleased with the opportunities of displaying his talents, which will be afforded by the machinery placed in his hands.

DISCUSSION,

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

The PRESIDENT.—I congratulate Dr. Hayes Newington on having been able to carry out his scheme for a hospital as well as an asylum, and have no doubt that we shall hear from him how the institution works. One point naturally pleased me, namely, that idiots and imbeciles are being specially provided for.

Dr. ROBERT JONES.—The scheme now brought before us is most comprehensive, and, to my mind, is as near the ideal as it is possible for an asylum to be. All of us know how important it is for us to separate our patients. They come, although practically paupers, from different classes. There are the dissolute, the crossing-sweepers, and, may be, the University graduates. It is cruelty to associate them

indiscriminately. Mr. Hine, at Claybury, has managed to give us wards for twenty-four patients in the acute blocks, and has subdivided these not by glazed partitions, but by actual bricks and mortar. These small wards are subdivided into three, or even four, sections; and, although it is a most extravagant arrangement from the point of view of administration, still it answers most excellently. Indeed, I am often asked by visitors, "Where are your noisy and acute patients?" As to the female nurse for male patients, that is a matter regarding which I have very little practical experience; but, after conversation with those who have tried it, I have some doubt on the matter. Before you have female nurses for male patients you should carefully select your patients, and see that there is in them a certain tendency towards recovery. I do not think that they are suitable for acute cases. I do not see why the benefits of moral control by women over men should not apply to the staff as well as to the patients. We have at Claybury an association room, where male and female nurses have social meetings, and it has answered extremely well. I think that for the introduction of the boarding-out system, if cottages for asylum employes were more freely dotted about the estate one might be able to use them as a sort of screen for the patients to go through, where they would live under the care of experienced members of the staff prior to being selected for outside care.

Dr. SPENCE.—I congratulate East Sussex on having had such admirable plans prepared for the new asylums. It occurs to me that it may prove rather expensive in working; but if the work be done well it does not matter if it costs a little more. I understand that Dr. Newington gives a large share of the credit to those who have been associated with him in perfecting the plans now explained, and specially to those gentlemen who have gone about the country visiting asylums and selecting the best points.

Dr. OSWALD.—In connection with the hospital there is apparently an arrangement by which all the bodily sick of both sexes can be shut off, so that the whole, or a certain proportion of them, can be nursed by women. From the nursing point of view alone I am sorry to note this separation, because it is very necessary to impress the nurse with the idea that there is a close connection between the mentally sick and the physically sick. If you dissociate them you emphasise the distinction between mind and body, and I have therefore always tried to treat these classes together.

Dr. TURNBULL.—My experience has been that there is a wonderfully small proportion of patients who are unfit to be under female care. We find that the female nurses gladly take charge of male patients, because they find it is very much easier to manage them than those of their own sex. Men have objected to be placed under the charge of women, but have ultimately expressed their appreciation, and have benefited very considerably.

Dr. CLOUSTON.—The acute melancholiac is perhaps the patient who most deserves our sympathy. He most needs nursing, and requires most at our hands. Brain-sickness is to be properly nursed, irrespective of mental symptoms. I think that the combination of bodily and mental nursing—the sinking of the notion of the mental symptoms being the main thing—undoubtedly was at the bottom of what I may venture to call this particular Scottish advance in the construction and management of asylums. It was this class of patient which appealed to me, and made me think of converting a wretched old refractory separate ward into a hospital for bodily and mental nursing under the very best nurse I had, and of sending through this hospital every female nurse for training. I congratulate Dr. Newington most heartily on his success in having practically shaped this general scheme, which I most earnestly hope he will see realised as one of the best hospitals for mental disease in the country. We all wish the Committee and him every success in their philanthropic efforts for the insane of East Sussex.

Dr. HAYES NEWINGTON.—I thank you very much for the sympathetic remarks which have been made by those who have spoken. No doubt when you have had an opportunity of studying the plans you will find more grounds for criticism. With regard to what Dr. Jones said of acute wards of twenty-four, we did go one better than that at East Sussex, because originally the acute wards were to hold twenty each; but, considering the expense, we arranged that there should be forty in each ward, with three day-rooms. I note what he says about the association of the sexes, attendants, and so on. With regard to what fell from Dr. Spence,

I have endeavoured all through this paper, by using "we" instead of "I," to show how much I feel the kind co-operation of my colleagues. I am only too glad to take this opportunity of expressing the wonderfully good feeling that has existed amongst us all in this matter. We have all worked together in elaborating the general ideas. With regard to Mr. Hine, I thank him heartily, not only on my own account, but also, I am sure, on behalf of my colleagues; because it is one thing to have an architect to carry out instructions, but it is quite another thing to have one who knows routine requirements. I may say this: that with all the brains which were engaged upon the work, it would not have come to much without Mr. Hine's wonderful power of taking the idea and working it out. In reply to Dr. Oswald, the accommodation for the nurses at the acute hospital is off the wards. We did not think it would be right at night to leave a large body of recent cases without a considerable staff. The night nurses will be accommodated in the nurses' block. We have a large nurses' home, capable of accommodating thirty-seven, which is situated at the other end of the big building. We want to be prepared for any kind of treatment, and we recognise the fact that there are patients who suffer from a bodily lesion, and we are prepared to treat them in the hospital. If, however, one gets a case which is unduly noisy or destructive, for the benefit of others I should send that patient off to the main asylum. With regard to the lake, we debated as to what was to be done. We eventually decided to leave it as it is, but to fence it in later on; but, curiously enough, two of the builders have been drowned there already. I am very pleased to hear what Dr. Turnbull said about the nursing of males by females. Our attention was first drawn to the benefits of it years ago by Dr. Turnbull, from experience in his own very nice hospital, and he should have the credit of pushing the idea. I may say that during our rounds visiting various asylums we found that such nursing was successful. I have learned a very great deal from Scotland. I was at Morningside before Dr. Clouston went there, and had experience of one of the very worst asylums, and learned a valuable lesson of what to avoid. I have seen that asylum turned into one of the very best.

A Contribution to the Morbid Anatomy and the Pathology of General Paralysis of the Insane. By DAVID ORR, M.B.Edin., Pathologist to the County Asylum, Prestwich, and THOMAS PHILIP COWEN, M.D.Lond., Assistant Medical Officer, County Asylum, Prestwich.

AT the last February meeting of the Manchester Pathological Society we made a preliminary communication upon this subject, limited to a description of the changes found in the cortical nerve-cells and the descending degenerations in the spinal cord. Since then we have examined a much larger number of cases, and can therefore give a fuller description, with observations upon other points in the morbid anatomy of general paralysis of the insane.

Early in our observations we were much impressed by the differences in degree of the morbid changes found after death in the nervous system, these apparently depending on the presence or absence of convulsive seizures during life.

Our research has therefore been conducted as follows :

1. We have made careful clinical notes of all cases, especially those of unusual interest, such as those running a very rapid course, or those accompanied with convulsive or paralytic seizures.

2. In all cases the cortex cerebri has been examined according to the most recent and reliable technique in order to show the changes found in the nerve-cells, neuroglia, and medullated fibres, the tangential layer being included among the last-named.

In twelve of these cases the spinal cord has been systematically examined to ascertain the amount of descending degeneration, and to what extent the posterior columns, posterior nerve-roots, and ganglia were affected in the disease.

Our reason for paying special attention to cases of unusual rapidity and to those accompanied by fits, with the corresponding changes in the nervous system, was our belief that the degree of toxicity incidental to this disease must necessarily exercise a direct influence upon its course, and upon the microscopic changes found. We hope to demonstrate that such a relationship does exist.

THE CORTEX CEREBRI.

Our systematic examination has extended over a series of twenty-three cases, and our methods have been the same throughout, viz. :

Thin slices of brain from the fronto-motor region were fixed in sublimate, and hardened in spirit, according to Heidenhain's method.

We have stained the sections with toluidin blue, Held's method, and Robertson's methyl-violet method.

Robertson's stain is much to be preferred, as it brings out the profound degenerative lesions more clearly and stains the chromophile elements much more distinctly, whether intact or broken down. In addition we have found it to be a permanent stain. In all cases we have fixed the tissues before post-mortem changes had time to set in.

With regard to the nerve-cells, we may say that a general description of the changes found at the different stages of the disease will be best, as such changes are practically common to all.

NERVE-CELLS.

We find that the degenerative process affects all the nerve-cells, even in early cases, but that the change is much more early and apparently more rapid in the smaller cells, so that our description of the initial stage of the degenerative appearances could only be studied in the large pyramidal cells.

The earliest change observed is that the chromophile elements—although staining well—have lost their regular outline, and very fine particles become detached and lie between the Nissl bodies. The chromophile elements then tend to break down into fine particles, sometimes around the nucleus, but more often at the base or side of the cell, and always with this change there is a general rarefaction of the chromophile bodies. As the chromatolysis advances the perinuclear region becomes involved, or occasionally it is confined more especially to one or other side of the cell. The degenerated area is seen to be occupied by a mass of finely granular pigment, in which lie small particles of broken down chromophile elements retaining their affinity for the methyl-violet staining. The chromatolysis then extends to the protoplasmic processes, the apical process usually being affected last, and should one side of the cell be more affected than the other, in like manner the processes arising from the affected area are the more profoundly degenerate. In the final stages the cell loses its processes and definite outline, until only a small mass of diffusely staining, slightly granular protoplasm remains, surrounding a pale, faintly staining nucleus, to which in addition in many instances a small mass of pigment is adherent. Finally, the granular protoplasm disintegrates and disappears, leaving a faintly stained nucleus, in which the nucleolus is absent or distinguished with difficulty.

SMALL PYRAMIDAL CELLS are much more early affected than the large ones, and thus it is impossible to study the early changes in the former. They are seen in the later stages in various phases of advanced degeneration. The cell at this stage is usually represented by a small portion of cytoplasm containing a few broken down granules—the remains of the chromophile elements—surrounding the nucleus. The processes are lost; and in a large number there is a mass of pigment attached to the outside of the nuclear envelope.

In some instances it can be seen that the process has begun at the centre, *i. e.* perinuclear.

In the very last stage only a nucleus is left with a very small portion of pale, diffusely stained cytoplasm attached to it ; and occasionally free nuclei alone represent the once healthy nerve-cell.

Such are the changes which we have observed in the cytoplasm of the nerve-cells. Post-mortem change has been carefully eliminated, and the only departure from the above description is that of temperature change occurring in cases dying from hyperpyrexia, and in those who suffered from continued high temperature for some time before death.

The appearances observed—(complete chromatolysis)—coincided with those induced experimentally upon animals by Lugaro, Goldscheider, and Flatau, and with the severest type of temperature change described by Marinesco.

It is apparent that the chromatolysis is chronic, and differs from the changes met with in experimental poisonings, toxæmia and anæmia (acute), because under these conditions one usually finds a chromatolysis which commences at the periphery and rapidly involves the entire cell. Although in general paralysis the degeneration begins at the base of the cell, and more rarely around the nucleus, it differs from the secondary chromatolysis of Marinesco, induced by section of the nerve, because the process in general paralysis is more chronic, and there is a development of pigment in the cell which increases with the breaking down of the chromophile bodies.

Such a chronic chromatolysis, accompanied by increase of pigment, is by no means confined to general paralysis, but is found among the cortical cells of the aged, uncomplicated and complicated by insanity, as well as in those of the chronic insane.

We are inclined to believe with Marinesco⁽¹⁾ that all such chromatolytic changes in the nerve-cell, accompanied by increase of pigment, are of an involutive nature, and that the chromophile elements become chemically transformed into the so-called pigment. According to Marinesco all prolonged alterations in the nutrition of the nerve-cell are accompanied by pigmentary change. In slow progressive anæmia, chronic poliomyelitis, and after section of peripheral nerves—no repair having taken place,—marked pigmentary changes are found in the cells.

Most authors are agreed that the pigment is a regressive and not a nutritive substance, although Obreja and Tatusé⁽³⁾ seem to be inclined to take up the latter view. These authors found a disappearance, almost total, of the pigment in the cells of the cord of a dog strychninised and of a person dying from tetanus; on the other hand, they have seen accumulation of pigment in a case where the nerve-centres were inactive, as in a person who has been long bedridden.

To us it seems that the small amount of pigment observed in the cells of the strychninised dog, and in those of the person suffering from tetanus, represented the normal physiological pigment found in adult cells, as here the chromatolysis was necessarily an acute one, and would not be accompanied by pigmentary increase; while on the other hand, the nerve-cells of the bedridden person might easily show a certain amount of pigmentary change. Therefore the authors' conclusion, that in the nerve-cell the abundance of pigment is in direct relation to the inactivity of the cell, and that the function of the pigment is nutritive, cannot be accepted. The way in which the pigment develops *pari passu* with slow destruction of the chromophile bodies is entirely against such an opinion.

Regarding the chemical nature of the pigment many views have been advanced. We cannot enter into that discussion here, but most authorities consider that it is probably a complex product, partly of a fatty nature, perhaps lecithin according to Marinesco, or lipochrome according to Rosin. We agree with Marinesco that it presents certain reactions of a fat, but there is no doubt that in some respects there are points of difference.

We find that the pigment granules stain dark brown with osmic acid and the Weigert hæmatoxylin method, and that on the other hand they are insoluble in ether and chloroform.

Associated with the chromatolysis in the body of the cell definite changes are to be observed in the nucleus, corresponding in degree to the changes in the cell. In sections stained by the methyl-violet method, we note that in those cells where the chromatolytic change is early, the nucleus shows no appreciable departure from the normal. As the degeneration progresses the nuclear network breaks up into very fine granules, and the nucleolus tends to become paler and to pass towards the periphery, probably on account of the loss of support of the network which under normal conditions must hold it in

position. In cells showing more advanced changes in the cytoplasm, there is an appreciable diminution in the size of the nucleolus, which in many instances is seen to be attached to the inner side of the nuclear membrane. When the cell is completely degenerated, and the nucleus is free, the nuclear membrane is very faintly stained, and only a few granules can be observed arranged towards the inner side of its periphery, all trace of a definite nucleolus being entirely lost.

With the Biondi-Heidenhain stain, used in dilute solution, after sublimate fixation, as recommended by Levi⁽³⁾, we have endeavoured to make observations on the behaviour of the acidophile and basophile portion of the nucleolus.

Our researches with the stain are still in progress, but at present we are inclined to think that the basophile particle loses its staining reaction and disappears sooner than the acidophile.

Various theories have been propounded as to *the mode of removal of degenerated nerve-cells*, mainly on two lines—either by leucocytes or by neuroglia cells.

Turner⁽⁴⁾ has described and figured leucocytes destroying and removing nerve-cells in senile dementia and general paralysis. Bevan Lewis ascribes great importance to the part played by neuroglia cells in the attacking and removal of degenerated nerve-cells. Nissl⁽⁵⁾, in his most recent work on the relation between nerve-cell degeneration and the neuroglia in the various psychoses, affirms that neuroglia cells are capable of incorporating the products of disintegration of the nerve-cells. He is of opinion that when the nerve-cells become affected the bodies of the neuroglia cells, normally scarcely visible, become enlarged, and often contain coloured granules. In the nucleus a nucleolus, normally absent, is formed, often more than one.

Marinesco⁽⁶⁾ is of opinion that the neuroglia cell acts with the leucocyte as a destroying agent of degenerated nerve-cells. From our own observations we are inclined to the opinion that neither the neuroglia cell nor the leucocyte plays any part in the destruction and absorption of dying nerve-cells. We have examined numerous sections, and in no instance have we seen any appearance suggesting such a process. There is no doubt that it may be simulated by leucocyte and neuroglia nuclei lying in close proximity to nerve-cells, but careful focussing

reveals the fact that the cells in question are in quite a different plane to the nerve-cells. *We have never seen indentations of the nerve-cell containing leucocytes, nor neuroglia acting as phagocytes.*

Lugaro (⁷) admits that the neuroglia may play some part in the removal of degenerated nerve-cells, but supports our view that the leucocyte has no phagocytic action. It is highly improbable that any active part can be played by leucocytes or neuroglia in such a slow chronic degeneration.

We hope to show later on that neuroglia proliferation is to a great extent secondary to destruction of medullated fibres, and that such a proliferation merely reacts to destruction of tissue and irritation from the resulting toxins. As yet the process of absorption of degenerated nerve-cells has not been followed, as far as our knowledge goes, owing to the lack of observation of the relationship of lymphatics to the nerve-cell.

Recently several observers have been working at this subject, amongst whom Donaggio (⁸) is the latest. By a new method of staining he claims to have demonstrated the existence of fine canaliculi in the nerve-cell communicating with a perinuclear space. According to Holmgren (⁹) the canaliculi communicate with extra-cellular vessels.

It seems probable that absorption of the products of degeneration would be carried on by a lymphatic system, but in the absence of more definite observation on the anatomical continuity between such canaliculi and the general lymphatic system of the brain an opinion on such a point must be mere conjecture for the present.

MEDULLATED NERVE-FIBRES OF CEREBRUM.

In studying the medullated fibres of the cerebrum, we have confined our researches to the motor areas, and have investigated the tangential layer, the fine plexus of fibres existing between this layer and Meynert's pyramids, the fibres of this latter system, and the fibres in the white matter coursing towards the internal capsule.

We have used Weigert's hæmatoxylin method, Robertson's modification of Heller's method, and an osmic acid method of staining fresh nervous tissue, previously described by one of

us⁽¹⁰⁾. Marchi's method has been used in this study of the tangential layer, and of the coarser fibres passing towards the internal capsule.

Our examination of the medullated fibres extended over the same series of twenty-three cases in which we have previously described the nerve-cell degeneration. We have divided the above series into two main groups, according to their clinical history.

(a) Ten cases in which no convulsions were present during life. In this number are included two very acute cases of three and four months' duration each, six running a rapid course and dying within fifteen months from the onset of the disease; the remaining two were chronic cases, and died at the end of three and four years respectively.

(b) Thirteen cases in which many convulsions occurred previous to death. These cases were for the most part chronic, running a much longer course than the cases under the first heading. The convulsions, even when general, showed a marked preference for the right side with only two exceptions.

Our object in so dividing the cases was to ascertain whether the toxic influence, now admitted by all to be a potent factor in the course of the disease, had any influence upon the medullated fibres of the brain, commissural and descending.

To take up the tangential layer first.

(a) *In cases without fits.*—In those running a remarkably rapid course there was complete atrophy of the tangential layer in four cases, and a very considerable amount of atrophy in three cases. In one chronic case there was complete atrophy of this layer, and in another of the same nature a very considerable amount. In one early case the tangential layer was almost intact. This case was one of rather unusual interest. On admission the patient suffered from mania, alternating with melancholia, but presented no physical signs of nervous disease. Later unequivocal signs of general paralysis developed—grandiose delusions, with progressive dementia; Argyll Robertson pupils, and very brisk knee-jerks. He died four months later of pneumonia.

Post-mortem.—The naked-eye appearances of the brain were those usually seen in cases of general paralysis. There was

very advanced chromatolysis in the cortical cells, yet the tangential layer was practically intact, as were the very fine fibres lying between the tangential layer and Meynert's pyramids.

(b) *In cases with fits.*—There was complete tangential atrophy in nine out of the thirteen cases. In two the atrophy was very advanced, but was not complete; and in the other two about one third of the fibres was left intact.

Our conclusion must be, that in general paralysis there is a marked affection of the tangential layer, which shows itself by a degeneration and subsequent atrophy, of the finer fibres first, and of the coarser fibres later, the latter persisting in a very varicose condition for some little time after the former.

In examining sections prepared by the above-mentioned methods, it is apparent that in the early stages the degeneration affects some parts of the layer seen in the field more than others, causing a breach of continuity, so that at one part of the section the fibres may be fairly well stained, while at other parts they may be in a more advanced stage of degeneration or completely absent.

It will be seen that all our series, except two, were either cases of a very acute type, or chronic cases in which convulsions occurred. It is unfortunate that we have not in the series more than two of the simple demented type without fits.

In the very early case described above we pointed out, that the tangential layer was little affected. In one chronic case without convulsions there was a considerable number of fibres left. We would venture to suggest, therefore, that in these acute cases very virulent toxins are developed, and cause the patchy degeneration of the medullated fibres, and that these toxins are of a non-convulsive nature; whereas, in the more chronic cases, it may be that until convulsive seizures are established the tangential layer does not tend to degenerate so rapidly. We hope to be able to show later on that convulsive seizures exercise a direct influence in the production of degeneration of the descending system of fibres, and it is not unreasonable to think that they must also affect the other systems of medullated fibres in a similar manner.

Such a point could be easily settled by a systematic examination of a series of cases of general paralysis, accompanied or unaccompanied by convulsions, and especially of

early cases dying from intercurrent diseases within a few months of onset.

We do not altogether agree with Tuzek and Mott that the tangential system of fibres is the first to degenerate, and that the disease spreads back to the trophic centres (the cells). It seems to us that the nerve-cell degeneration is a much more constant and advanced change, as in several of our cases a considerable number of the fibres of the tangential layer still remained, although the disease had lasted some time; while in every case, even in the very earliest, the affection of the nerve-cells was of a very advanced character. In the single early case we have examined, this point is brought out markedly, but we reiterate that much more work is required in connection with very early cases before a decided opinion is given on such an important point. In the grey matter we note the disappearance of the very fine fibres, and also of the coarser fibres running from the grey into the white matter, as the disease progresses; and we agree with Epstein⁽¹¹⁾ that the amount of degeneration in these areas increases equally with that of the tangential layer.

With regard to the degeneration of the fibres which course from the cortex to the internal capsule, we prefer to discuss this point when we come to consider the descending degenerations in the pyramidal tracts.

The Neuroglia.—After examination of the neuroglia, we do not find that changes in the neuroglia are as constant or as extensive in general paralysis as the older observers would have us believe. In two very acute cases there was no perceptible affection of the neuroglia, and in one fairly acute there was some neuroglia hypertrophy. In three acute cases there was but a slight amount of neuroglia change; two cases of subacute character showed a fair to a considerable amount of affection. In one chronic case there was no affection of the neuroglia, and four showed a slight degree, and the remaining chronic cases, ten in number, showed a fairly considerable amount of neuroglia hypertrophy. When present, this neuroglia change was found in the innermost layer of the cortex, in the deepest layer of nerve-cells in the grey matter, and in the white matter, and coincided in degree, to a considerable extent, with the amount of degeneration of medullated nerve-fibres in the corresponding areas, replacing the atrophied

fibres. It is possible that it may react in some degree to irritation caused by products of degeneration. We consider that the neuroglia change is quite a secondary one, plays no active part in the destruction of the nervous tissue, and has an entirely passive *role*.

THE CRANIAL NERVES.

Degeneration in the nerves, and also their nuclei of origin, has been studied and recorded by many observers, with a view to determine the interdependence of the changes in the nuclei and their corresponding nerves.

We have studied the degeneration in the cranial nerves by means of the modified Marchi method. The nerves were teased out (except in the case of the optic nerve), and were examined in their whole extent within the cranial cavity. In the case of the vagus nerves a portion was taken on both sides from the neck. In every nerve there was abundant evidence of degeneration brought out by the modified Marchi method.

On many of the myelin sheaths small isolated black patches could be seen, indicating degeneration at these spots, which patches tended to spread along the sheath, but very seldom were seen to run into the large black droplets of altered myelin which one so commonly finds in secondary degenerations in the cord and peripheral nerves.

In many of the fibres there was very little trace of degeneration to be found, very small portions of the myelin sheath being affected here and there, while in others there was a more grave degree of affection, large segments of the sheath being involved, with intervening portions of apparently healthy myelin. In those fibres showing the greatest degree of degeneration the medullary sheath is studded with numerous little black patches of Marchi reaction, which are joined together in some places by their extremities, leaving clear unstained spaces. Between the fibres many small isolated droplets of myelin are to be observed.

It is evident, therefore, that a degeneration of this nature is a slow, progressive, and patchy one, and thus resembles markedly the primary degeneration, described by Vassale⁽¹³⁾ as being due to disturbance of nutrition resulting from experimental poisoning.

Vassale distinguishes clearly the difference between primary and secondary degenerations, and lays great stress on the fact that whereas the latter is a much more rapid and destructive process—the axis-cylinder being affected along with the myelin sheath,—the former is a very slow one indeed—the axis-cylinder remaining uninjured for a very long time,—and one from which the myelin sheath can recover on removal of the toxic agent.

As demonstrating the slowness of the primary degeneration, he finds that in the early stage, which is of long duration, the Marchi and Weigert methods give negative results, and that the affected fibres can only be demonstrated by other methods of staining, viz. safranin, Mayer's carmalum, and nigrosin. He is of opinion that in the last stages only of primary degeneration the Marchi method is of value, the atrophied myelin sheath then being merely represented by a few black droplets.

In the early stage of primary degeneration the staining methods used by Vassale show definite modification of structure in the nerves. The myelin sheath becomes thinner at certain points, until ultimately portions are left staining less perfectly than the remaining parts of the sheath. This localised thinning and absorptive process very gradually progresses, until clear spaces are left at these points.

When this stage has been reached by the degenerative process we believe that the Marchi method can now demonstrate the degenerated parts, for it has been seen that in the appearances described by us clear spaces are left in the sheath, bounded by spots of blackened altered myelin, and we consider that when the process reaches a certain stage—earlier than that given by Vassale—the Marchi method is of value in demonstrating the change.

We venture to suggest, then, that in the cranial nerves the process is a combination of slow degeneration and absorption, and this fact seems to account for the absence of the large degenerated droplets so characteristic of secondary degeneration.

The axis-cylinders have been examined by Van Gieson's method with negative result. The fibre stains well, and we have not observed any traces of degeneration upon it. We have examined the nuclei of origin of several nerves presenting the above changes, and have found these nuclei but very slightly

affected. The great majority of the cells present well-stained chromophile elements showing perhaps a slight irregularity of outline, and there is a tendency to hyper-pigmentation of the cell. A few of the cells only showed a moderate degree of chromatolysis, and that of a chronic nature, accompanied with the increase of pigment to which we have above referred.

It therefore seems to us the changes in the nerve-cells are neither sufficiently extensive, nor advanced, to account for the amount of degeneration found in the nerve-fibres, and in this we agree with Campbell,⁽¹⁸⁾ who has previously thoroughly studied this subject. This author notes that the changes are most advanced at the periphery of the nerves, and that such changes were always most extensively found in the vagi. As we have only studied the nerves in their course within the cranial cavity, and the vagus nerve to the middle of the neck, we cannot offer an opinion upon the first point.

Regarding the second point, our results differ very slightly from his, in that although much degeneration was undoubtedly found in the vagus, as much was present in the third and fifth nerves, while the fourth, sixth and seventh showed but very little less change, and the remainder of the cranial nerves showed a fair amount of degeneration.

It is difficult to account for the failure of Dr. Mott,⁽¹⁴⁾ and more recently Dr. Barratt,⁽¹⁵⁾ to demonstrate these changes in the vagus, except in one case, in which a single fibre was found to be degenerated.

Perhaps they have been unfortunate enough to examine very early cases only, where the degeneration was in an extremely early phase, and so could not be revealed by staining in osmic acid, or by the Marchi method, even after dissociation. We have referred to the changes in the cells of the nuclei of the cranial nerves, when they do occur, as being of the same slow chronic nature as that occurring in the large pyramidal cells of the cerebral cortex. Gerlach⁽¹⁶⁾ in describing these nuclei of origin, divides the changes observed into :

- (a) Fatty and pigmentary degenerations.
- (b) Homogeneous swelling.
- (c) Simple atrophy.

He finds that pigmentary degeneration prevails in syphilitic cases, and simple atrophy in cases where alcoholic abuse is demonstrated. His terms—homogeneous swelling, and simple

atrophy—can hardly be taken as descriptions of the cells in general paralysis, as such appearances are very seldom seen, even by Gerlach himself, and to our minds they resemble the changes due to hyperpyrexia, which we have observed in the pons and medulla of patients dying after continued high temperature. He affirms that the nerve-cell lesions differ according to their ætiology, but our observations do not at all confirm this opinion.

In conclusion, we are of opinion that the comparatively slight affection of the cells, and the character of the degeneration found in the medullated sheaths of the nerves, associated with absence of evidence of degeneration of axis-cylinders, seem to point to a toxic factor attacking primarily the medullated sheaths of the nerves, leaving the axis-cylinders practically intact until very late in the disease.

THE SPINAL CORD.

We have systematically examined the spinal cords of twelve cases of general paralysis, our examination including the cells of the anterior cornua, Clarke's column, the medullated fibres, paying especial attention to the descending tracts, and the tracts in the posterior columns, with the posterior roots and ganglia.

The methods of staining employed were toluidin blue, Delafield's hæmatoxylin, and Heidenhain's iron hæmatoxylin after sublimate fixation.

We find in the cells of the anterior horns changes similar to those found in the large pyramidal cells of the cerebral cortex, and in the nuclei of origin of some of the cranial nerves, and although the majority of these cells are affected by the chronic chromatolysis previously described, yet a certain number are apparently healthy. In studying the cells of Clarke's column, we found the slow progressive staining by weak Delafield's hæmatoxylin to be much more trustworthy than the regressive method of Nissl, or of any of its modifications. On account of the peripheric disposition of the chromophile bodies peculiar to those cells, recently insisted upon by Marinesco,⁽¹⁷⁾ one must be exceedingly careful not to come to too hasty a conclusion as to the presence of chromatolysis in these cells. We are aware

that some writers have described a central chromatolysis in these cells, with the nucleus passing towards the periphery, but such appearances naturally cannot be interpreted as pathological if one bears in mind that the nucleus is normally situated at one or other extremity of the cell, and that the arrangement of the chromophile elements round the periphery only is a normal histological appearance.

In general paralysis we have occasionally found a slight breaking up of the chromophile elements, and a tendency to the increase of pigmentary granules in the cell.

Beyond such hyper-pigmentation the large majority of the cells appear to be perfectly healthy.

PYRAMIDAL TRACTS.

We propose to describe the changes in these tracts first, as it is in them that the cord lesions characteristic of general paralysis are to be found. It must be understood that here we speak of general paralysis uncomplicated by tabes, as distinguished from a tabetic general paralysis, where the typical changes of both diseases are presented.

In the twelve cases examined by us we have found a constant affection of the fibres of the pyramidal tracts, crossed and direct, in all. There is a marked difference in the degree of the degeneration in the different cases, depending on the presence or absence of convulsions during life. Where there have been no convulsive seizures during life the degeneration is moderate in amount, and is fairly equal on the two sides; on the other hand, when "convulsions" have formed a feature of the clinical history, the degeneration is most marked on the side corresponding to the motor disturbance.

The Marchi method has been used to demonstrate the changes. The morbid fibres are shown stained black, but with many unstained healthy fibres intervening; where the case has been complicated by convulsions, a "mass" degeneration is seen, similar to the secondary degenerations found in hemiplegias. The degeneration of the pyramidal tracts has been previously described by Baedeker, Juliusberger, and Muratow, whose work on this subject is quoted by Starlinger. (¹⁸) The latter has himself conducted an elaborate research in a series of twenty-one

cases of general paralysis, and his work confirms the opinion which we hold on this subject, and communicated in a previous note. Starlinger, besides examining the cord, medulla, and pons in his cases, extended his research to the cortex, and found that there definite regions only were involved. His view contradicts the view that general paralysis is a diffuse disease of the brain, the morbid process attacking preponderately the motor convolutions. Most degeneration is found in the ascending parietal and frontal, but the adjacent parts of the frontal convolutions, and the hinder part of the first temporo-sphenoidal gyri are slightly involved. He is of opinion, however, that the process merely radiates a little to those regions.

From the motor areas of the cortex he has traced the degenerated fibres through the internal capsule into the pons, medulla, and cord. With him we are entirely in accord, as we have traced a similar course of distribution of degeneration.

We have referred to the large increase in degree of degeneration found in the affected side in general paralytics who suffered from convulsions.

This characteristic is a constant one, and is found in every case, and is obviously dependent on destruction of the cortical cells in the corresponding hemisphere of the brain. To take two typical cases :

(a) J. W—, male, æt. 46 ; three and a half years' duration. General paralysis with exaltation, Argyll-Robertson pupils, and brisk reflexes. Had many left-sided convulsions during the last few months of his life, often followed, as is common, by a transient left hemiplegia. The spinal cord showed a very great preponderance of degeneration in the crossed pyramidal tract on the left side, there being only a slight amount in the similar region on the right side.

(b) J. H—, æt. 49, two years and four months' duration. General paralysis with dementia. Pupils equal ; inactive to light. Knee-jerks very brisk. Soon after admission left hemiplegia suddenly developed without preceding convulsion, which gradually passed off. Two months later right hemiplegia developed similarly, which persisted longer. Nine months later left hemiplegia again appeared, and persisted. This was followed by right-sided convulsions, which continued off and on until his death, which occurred three weeks after this.

There was marked degeneration in both motor tracts of the cord, but more marked on the left side. The degeneration was traced up through the pyramids of the medulla and pons, where the difference in degree was still very evident, to the cortex.

This case is different in some respects from the first one, as here convulsive seizures were preceded by successive hemi-

plegias, which, however, persisted on the left side after the third attack, showing a very profound implication of the cortical motor cells, with corresponding progressive degenerations in the motor tracts. Although suffering from convulsions on the right side during the last three weeks of life, yet there was not time for the full amount of degeneration to develop.

There can be but little doubt that such degenerations as we have described are descending lesions, secondary to destruction of the large pyramidal cells of the cortex. The amount of degeneration in the motor tracts increases slowly in the ordinary demented cases of general paralysis, and is also present in cases running a rapid course, but should the case be complicated by convulsions, such a destruction of nerve-cells ensues as to cause a very much more marked and rapid secondary degeneration, with the prominently unilateral distribution above described. Although one can trace direct continuity of degeneration along the motor path, it is possible that a toxic factor may play a certain part in addition to the descending changes.

THE POSTERIOR COLUMNS.

We have found the study of the lesions in these columns a very difficult one, as the degenerations are subject to great variations in extent and distribution.

There is great diversity of opinion among the many observers as to these lesions. Some authorities are inclined to identify the posterior column degenerations found in general paralysis with those found in *tabes dorsalis*.

Thus Heveroch⁽¹⁹⁾ and Vyrubow⁽²⁰⁾ are inclined to consider that the lesions of general paralysis bear a marked similarity to those found in *tabes dorsalis*.

On the other hand Rubaud⁽²¹⁾ takes exactly the opposite view, and shows clearly how such lesions as are found in the posterior columns in general paralysis differ markedly from those of *tabes*.

He distinguishes such lesions from those of *tabes* by their variability in situation at different levels of the cord, and by their lack of anatomical continuity.

He believes that such lesions are not connected with corresponding changes in the posterior roots, but has found them

accompanied by alterations in the cells of Clarke's column, which only, however, exist in certain segments of the cord, and he thinks the medullated fibre lesions both exogenous and endogenous are secondary to these.

In all the cases which we have examined, lesions of the posterior columns have always been present.

Degenerated fibres are found scattered diffusely amongst the healthy fibres, and show no preference for any one tract or column, the endogenous fibres being affected quite as much as the exogenous, and occasionally the fibres of the external columns are affected more than the internal ones, and *vice versa*.

The intensity of the lesion varies considerably in the various regions of the cord, and even in segments in close proximity to each other.

These diffuse indefinite lesions are found in the great majority of the cords of general paralytics, but at the same time there is evidence to show that in a certain number of cases lesions exist which tend to assume a definite arrangement, but which are yet absolutely distinct from true tabetic lesions.

Sibeli^{us} (²³) draws attention to a definite lesion occurring specially in the cervical region, which is apparently in the situation of the "comma" tract of Schutz. He has found this appearance in six cases of general paralysis.

We have seen a cord presenting such an appearance in the cervical region in an early and acute case of general paralysis. It was more especially marked on the left side of the cord, and occupied entirely the most internal portion of the postero-external column, and towards the surface of the cord it assumed a curved form, passing towards the root zones. The lesion in the postero-external tract on the right side was extensive but much more diffuse.

The lesion on both sides diminished markedly as we passed down the cervical region, and disappeared on reaching the dorsal region.

Lesions such as Sibeli^{us} describes differ from the common lesions of general paralysis, as they assume a definite area and course, and are quite distinct from the more extensive system lesions of the posterior columns which one finds in true tabes associated with general paralysis.

We have not described the lesions found in tabetic general

paralytically, as they in no wise differ from the well-known morbid appearances found in true *tabes dorsalis*.

THE POSTERIOR GANGLIA AND NERVE-ROOTS.

There is great diversity of opinion as to the extent to which these structures are degenerated, and as to the relationship which lesions of the ganglia bear to degeneration of the posterior roots.

Campbell⁽³³⁾ and Fürstner⁽³⁴⁾ are of opinion that the changes in the ganglia are insufficient to account for the changes in the posterior roots, a considerable amount of degeneration being found in the latter, while in the former little abnormality is noticed beyond hyper-pigmentation of the cells.

Sibelius and Vyubow take the view that the degeneration of the posterior roots and columns are secondary to nerve-cell destruction in the intervertebral ganglia, and describe certain degenerative appearances in the cells. These alleged morbid appearances consist in breaking up of the chromophile elements into very fine granules, with increase of pigment, and also to a distinct paucity of cells, clear spaces being left in which no cell structure can be detected.

Before describing the morbid appearances seen by us, we should like to refer shortly to some of the normal histological features of posterior ganglia cells, as we think it not improbable that some observers have mistaken the peculiar arrangement of the chromophile elements in those cells for morbid appearances.

Lugaro,⁽³⁵⁾ in his recent work on the posterior root ganglia of the rabbit, goes thoroughly into the histology of these structures, and we have been able to confirm his results in our examination of the spinal ganglia of a healthy dog.

We cannot here enter into a detailed account of the histology of the ganglion cells, but would like to note the following points for purposes of argument.

1. The nucleus is usually more or less eccentric.
2. The chromophile elements, as a general rule, are scattered throughout the cell as fine granules—like dust—save towards the periphery, where they are larger and of much more definite form. In a small number of cells, however, the chromophile

elements are regularly formed, arranged concentrically round the nucleus, and are much less numerous than the finely granular ones in the other type of cell. It is very important to note that there is a zone at the periphery of the cell in which no chromophile elements exist, and that where the axis-cylinder leaves the cell there is a distinct lunule which is quite clear. In certain cells one can detect also a small, clear, perinuclear band.

For the study of these cells the choice of a fixative is of the utmost importance, and one must be exceedingly careful that in hardening and embedding, shrinkage of the tissues is reduced to a minimum, as should this occur the cells become detached and fall out of their spaces. We have, therefore, adopted Lugaro's method of fixation in Mann's fluid and in saturated sublimate solution, with subsequent embedding in celloidin combined with paraffin.

Having carefully compared the posterior root ganglia in general paralytics with the above-described normal histological appearances, we are inclined to the opinion that the pathological changes in general paralysis have been somewhat over-estimated. We have found comparatively little affection of the ganglion cells, the majority showing a hyper-pigmentation; but undoubtedly a few show a chromatolysis of varying degree, the granules tending to disappear in certain parts of the cell, usually towards the periphery, these parts either staining diffusely or being occupied by pigment.

While hesitating to venture an adverse opinion to such an experienced and accurate observer as Dr. Mott, yet it seems to us that the appearances figured and described by him⁽³⁶⁾ of some of the cells of the posterior ganglia do not differ from the normal histological structure. We refer particularly to the cells described by him in which the chromophile elements are seen as finely broken-down granules, and a peripheral clear part in which no granules are present. There can be no doubt that cells presenting such features have in no wise departed from the normal.

We would point out, further, that where spaces are seen in which no cells are present, one must hesitate before concluding that such an appearance is a morbid one, as the cells can be seen in normal ganglia to have fallen out where shrinkage has occurred, as a result of imperfect fixation.

We have always found degeneration in the posterior nerve-roots by the modified Marchi method. This degeneration varies in amount and intensity in the different regions of the cord. It is of the same patchy character as that found in the cranial nerves, but of less intensity. It does not seem to bear any relationship to the degeneration found in the posterior ganglia or posterior columns.

Conclusions.—We feel that there are several points on which we have touched but lightly. We refer more especially to the very delicate fibres found in the grey matter of the cortex, to the tangential layer, and to the tabetiform lesions in the posterior columns of the cord. With regard to the last point there is yet much more work to be done, and until we have seen more cases presenting definite tabetiform lesions we hesitate to form a definite opinion as to their nature.

With regard to the pathology of general paralysis, it would seem as if there was a primary affection of the nerve-cells of the cortex cerebri limited almost entirely to the motor areas, and that associated with the degenerative changes in these cells toxic substances are produced which affect the nerve-fibres primarily throughout the nervous system. It is only in this way that one can account for the degenerations which are found in the cranial nerves and the posterior nerve-roots, and it is probable that the diffuse scattered lesions found in the posterior columns owe their origin to this source.

In addition to these primary lesions secondary ones occur, and we agree with those observers who consider that the lesions in the pyramidal tracts are secondary to destruction of the cortical nerve-cells, as the descending changes can be traced throughout the whole motor tract from the cortex cerebri to the lumbar cord, and are seen to be intensified when large destruction of cortical nerve-cells occurs after convulsions.

It is yet too early to dogmatise as to the causation of general paralysis—a disease which is as yet so little understood ; but it seems reasonable, from what evidence there is, to put forward such a proposition as the following :—That the nerve-cells of certain individuals are liable to a premature decay, which decay may be precipitated and intensified by certain exciting causes of a toxic nature, such as alcohol, syphilis, influenza, lead-poisoning, and the like.

There is no pathological evidence at present to ascribe to

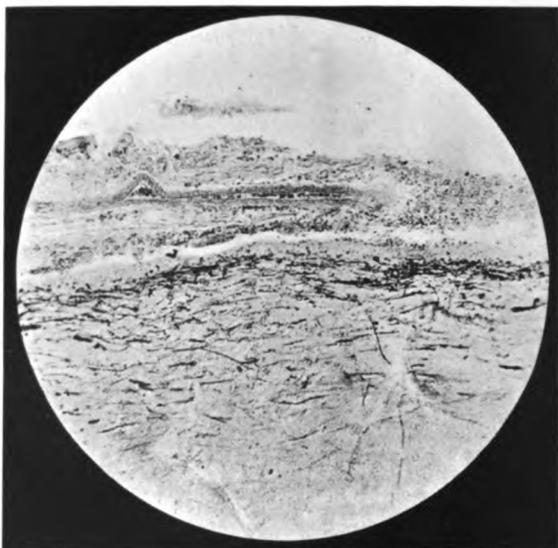


FIG. 5.

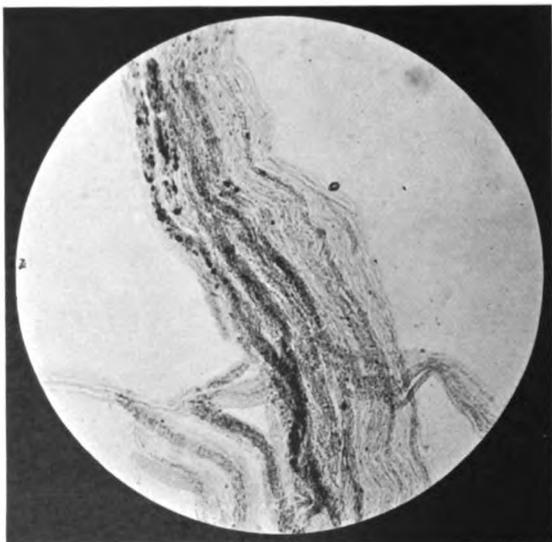


FIG. 6.

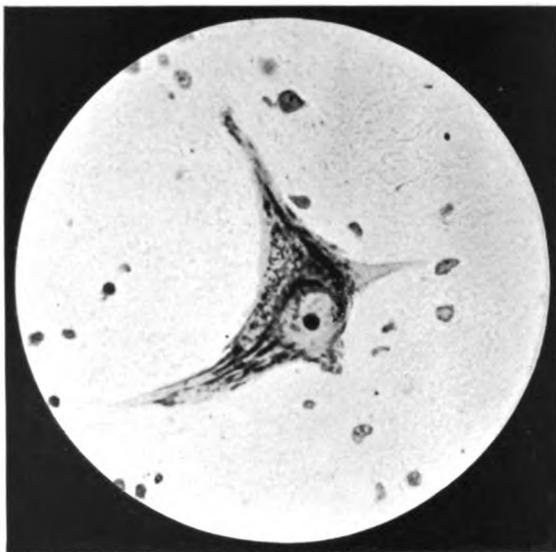


FIG. 3.

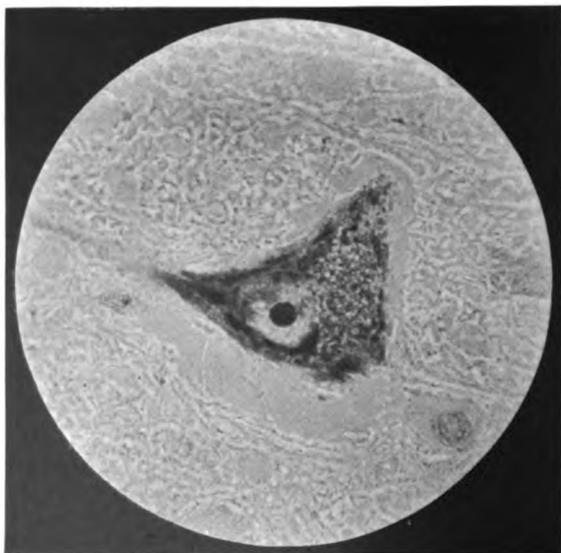


FIG. 4.

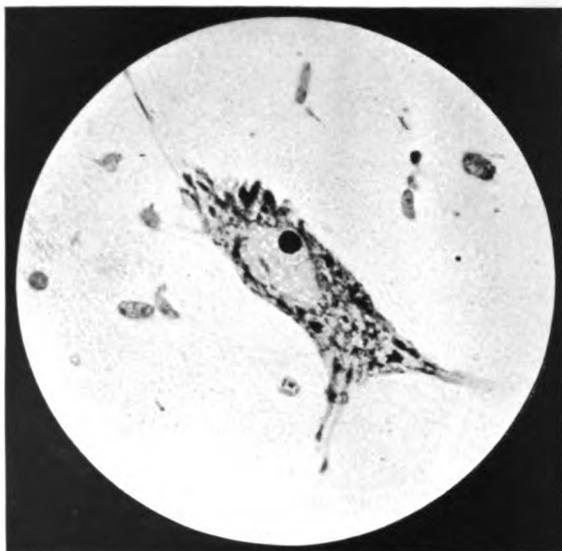


FIG. 1.

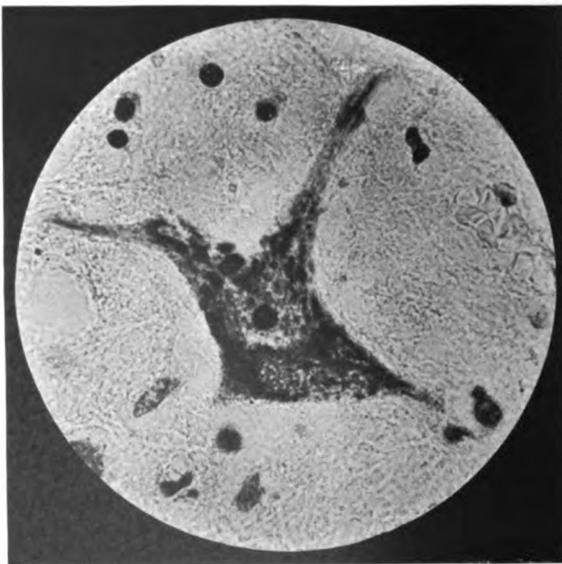


FIG. 2.

any one of these a predominating influence in the determination of the onset of this disease, with the single exception of one of its forms, namely, general paralysis associated with a true tabes.

In this disease, which is not at all a common one in our experience, there is both clinical and pathological evidence that syphilis is by far the most frequent antecedent and probable exciting cause.

REFERENCES.

1. MARINESCO, G.—*Revue Neurolog.*, Oct. 30th, 1899.
2. OBREJA et TATUSE.—*C. R. de la Soc. des Sciences Médicale de Bucarest*, Nov., 1898.
3. GIUSEPPE LEVI.—*Rivista di Patologia*, fasc. vii, 1898.
4. TURNER.—*Journal of Mental Science*, July, 1898.
5. NISSL.—*Archiv für Psychiatrie*, Bd. xxxii, H. 2, 1899.
6. MARINESCO, G.—*Pathologie de la cellule nerveuse*, Paris, 1897.
7. LUGARO.—*Rivista di Patologia*, 1896, p. 356.
8. DONAGGIO.—*Rivista Speriment. di Freniatria*, fasc. i, 1900.
9. HOLMGREN.—*Anatomische Hefte*, H. 38 (xii Bd., H. 1), 1899.
10. ORR.—*Journal of Path. and Bact.*, Feb., 1900.
11. EPSTEIN.—*Monatsschr. für Psych. u. Neurol.*, 1898, Bd. iv.
12. VASSALE.—*Rivista Sperimentale di Freniatria*, fasc. iv, 1896.
13. CAMPBELL.—*Journal of Mental Science*, April, 1894.
14. MOTT.—*Report of Pathologist to London County Asylums*, May, 1898.
15. BARRATT, *Archives of Neurol. Lab., London County Asylums*, vol. i.
16. GERLACH.—*Neurol. Centralb.*, No. 3, 1899.
17. MARINESCO, G.—*Revue Neurolog.*, Oct. 30, 1899.
18. STARLINGER.—*Monatsschrift für Psychiatrie und Neurol.*, Jan. 1, 1900.
19. HEVEROCH.—*Revue Neurolog.*, Nov. 30, 1899.
20. VYRUBOW.—*Neurol. Centralb.*, No. 19, 1899.
21. RUBAUD.—*Revue Neurol.*, June 15, 1899.
22. SIBELIUS.—*Revue Neurol.*, April 15, 1899.
23. CAMPBELL.—*Journal of Mental Science*, April, 1894.
24. FÜRSTNER.—*Neurol. Centralb.*, No. 10, 1900.
25. LUGARO.—*Rivista di Patolog.*, fasc. iv, 1900.
26. MOTT.—*Archives of Neurol. Lab., Lond. County Asylums*, vol. i.

EXPLANATION OF FIGURES.

FIG. 1.—Nerve-cell, showing rarefaction of the chromophile elements. Zeiss obj. apoch., 2 mm. Comp. oc. 4. Toluidin blue.

FIG. 2.—Nerve-cell showing chromatolysis with increase of pigment at one extremity of the cell. Similar magnification and staining.

FIG. 3.—Nerve-cell, showing the above-described pigmentary change. Similar magnification and staining.

FIG. 4.—Nerve-cell with advanced chromatolysis and hyper-pigmentation. Similar magnification and staining.

FIG. 5.—To show the degeneration of the fibres in the tangential layer. Note that only the coarser medullated fibres remain. From a case of chronic G.P.

FIG. 6.—To show the degeneration of the vagus nerve brought out by the modified Marchi method. Teased specimen.

Table showing Relation of Convulsions to Medullated Fibres and Neuroglia of Cortex.

No.	MALES.	Convulsions.	Tangential layer of motor areas.	Fine plexus of fibres in grey matter.	Hypertrophy of neuroglia, outermost layer.	Hypertrophy of neuroglia of 3rd and 4th layers.	Hypertrophy of neuroglia in white matter.
1	T. B.	Chronic case 5½ years; many convulsions	No fibres left	No fibres left 1st and 2nd layer; few fibres left 3rd and 4th layer	Fair amount	Considerable amount	Fair amount.
2	R. M.	Early general paralysis; none	Practically normal	Practically intact	None	None	None.
3	J. R.	About 400 fits; right-sided chiefly; chronic case	No fibres left	No fibres left; Meynert's pyramids much atrophied	Fair amount	Fair amount	Fair amount.
4	W. A.	Many fits; right-sided at first, general later; chronic case	Only a few isolated fibres left	No fibres left 1st and 2nd; a few fibres left 3rd and 4th	Slight amount	None	Fair amount.
5	J. F.	Many fits; chronic case	No fibres left	No fibres left 1st and 2nd; very few fibres left 3rd and 4th	Marked hypertrophy and proliferation	Fair amount	Fair amount.
6	M. K.	No fits; paralysis both legs; acute case	Considerable number left	No fibres left 1st and 2nd; considerable number left 3rd and 4th	Slight amount	Very slight	Fair amount.
7	J. N.	General fits in last month; chronic case	Considerable atrophy	No fibres left 1st and 2nd; few fibres left 3rd and 4th	Considerable	Fair amount	Fair amount.
8	J. W.	Left-sided and left hemiplegia; chronic case	Very marked atrophy	Very few left 1st and 2nd; many left 3rd and 4th	Fair	Fair amount	Slight.
9	G. E. K.	Many; right-sided; chronic case	Marked atrophy	Complete atrophy 1st and 2nd; very few left 3rd and 4th	Marked	Very marked	Marked.
10	F. J.	None; chronic case	Very marked atrophy	None left 1st and 2nd; few left 3rd and 4th	Slight	Slight	Very slight.
11	D. H.	None; acute case	Considerable number left	None left 1st and 2nd; none left 3rd and 4th	None	Slight	Slight.

12	R. S.	None; very acute case	A few isolated fibres left	Few left 1st and 2nd; most left 3rd and 4th	Slight	Slight	Slight.
13	J. H.	Many fits, especially right-sided; left and right transient hemiplegia; chronic case	Considerable atrophy	Very few left 1st and 2nd; very few left 3rd and 4th	Marked	Very marked	Marked.
14	W. M. A.	None; chronic case	Considerable number left	None left 1st and 2nd; many left 3rd and 4th	Considerable	Slight	Slight.
15	W. D.	A few general fits; chronic case	Considerable number left	A few left 1st and 2nd; many left 3rd and 4th	None	None	None.
16	J. L.	Many convulsions, especially left-sided; chronic case	Very few left on left side; marked patchy atrophy on right side	None left 1st and 2nd; very few left 3rd and 4th; Meynert's projection systems much atrophied	Slight	None	None.
17	FEMALES. M. K.	None; acute case	Entirely atrophied	None left 1st and 2nd; none left 3rd and 4th	Fair	Fair	Slight.
18	J. E.	None; subacute case	Entirely absent	None left 1st and 2nd; very few left 3rd and 4th; Meynert's projection systems much atrophied	Considerable	Considerable	Fair.
19	A. V. S.	Many fits, especially right-sided; chronic case	A few isolated fibres left	None left 1st and 2nd; a few left 3rd and 4th; Meynert's projection systems much atrophied	Considerable	Considerable	Considerable.
20	J. L.	None; subacute case	Fair atrophy; considerable number left	None left 1st and 2nd; many left 3rd and 4th	Fair	Fair	Slight.
21	M. B.	None; acute case	Marked atrophy	Very few left 1st and 2nd; very few left 3rd and 4th	Slight	None	None.
22	J. F.	Right hemiplegia; general fits later; chronic case	Complete atrophy	Complete atrophy in all layers	Fair	Fair	Fair.
23	E. M.	Many general fits; chronic case	Fair atrophy; considerable number left	Almost complete atrophy in all layers	Slight	Slight	Slight.

Demonstration of Preparations and Lantern Slides from the Pathological Laboratory of the London Asylums, at Claybury. By J. SHAW BOLTON, M.D.Lond.

THE preparations I am about to exhibit are taken from cases that have occurred during the past three months at Claybury. The first three are, I am afraid, of no neurological interest, but they are somewhat rare. The first is a case of aneurysm of the thoracic aorta. The patient died suddenly from hæmorrhage. Her age was forty, and she had had three attacks of hæmorrhage previously to the fatal one. She was a chronic drunkard and had had fits. The shape of the clot is rather curious. It is more or less cylindrical, and seems to have burrowed down into the chest, pushing the lower lobe of the left lung forward as its sac. The next specimen is one of rupture of the first part of the arch of the aorta. This patient was an old woman of eighty, who had been resident for about a year, and then developed an attack of bronchitis. In the course of two or three days she got rather worse, and one evening told the nurse she thought she was going to die the following morning. She did die, and the interesting point about it is, that the only other case of rupture of the aorta I remember seeing occurred in a man of about forty-five, and he, also, the day before he died, said he thought he was going to die. The blood had ruptured the aorta in a T-shaped manner about an inch above the coronary arteries, and passed down between the pericardium and over the wall of the aorta and ruptured into the former. The next specimen is an exceedingly rare one. The man was about seventy-seven years of age, and he had symptoms of sensory aphasia. He was quite unable to remember even his own name, or any other name, but if a name was mentioned to him he at once recognised it. In the same way, he could not write a single word, but he at once recognised a word which was mentioned to him, and he was able to write it. The aphasia was associated with symmetrical lesions of the angular gyri. The man died quite suddenly one evening while talking to another patient, and the cause of death was heart failure due to aneurysm of the left ventricle. I do not remember ever before seeing, except in a museum, an aneurysm of the left ventricle. The

true wall of the ventricle is about two to three millimetres in thickness, the pericardium is generally universally adherent, and the anterior part of the left ventricle is about an inch in thickness, owing to the existence of this aneurysmal clot.

Dr. Bolton then exhibited lantern plates of the cerebral lesions found in this case, and proceeded to describe and illustrate two cases of gross lesion of the right cerebral hemisphere. Both patients suffered from emotional instability and from epileptiform seizures, and neither developed dementia. The intact left hemisphere of the first case weighed only 500 grammes, and the patient was in the asylum for eight out of the ten years during which the lesion had existed. The left hemisphere of the second case weighed within the normal limits, and the patient earned her living as a washerwoman for ten years after the lesion occurred, and was only under asylum treatment for a few weeks. He drew attention to the difference in weight (nearly 100 grammes) between the right and left hemispheres in the two cases, and suggested that the emotional instability was probably due to a loss of balance between the two hemispheres. He explained the long residence of the first case in the asylum on the ground that her hemispheres, weighing normally only 500 grammes each, would probably, when 100 grammes were lost from one of them by a lesion, be unable to carry on their functions in a manner consistent with freedom from asylum *régime*.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

The PRESIDENT.—I am particularly interested in the last two specimens, which show an extremely interesting condition of the convolutions often found in the brains of imbeciles. In fact, had I not been told that they were cases of insane people, I should have been inclined to say they were. In cases of low intellect it is not at all uncommon to find convolutions which are from three eighths inch to one eighth inch in width.

Dr. CLOUSTON.—In reference to the lack of control probably being connected with a one-sidedness of action between the two hemisphere, a French author, over thirty years ago, published a large series of weights, showing that in epileptic insanity, more than any other form of mental disease, there is a lack of symmetry between the weights of the two hemispheres. As to whether the particular kind of wasting described by Dr. Bolton would cause such a lack of control is, I think, a difficult question to decide. My own opinion is that lack of control is always an energising quality; and it seems to me to be a somewhat too easy and too gross an explanation to say that a man loses control because one side of his brain is bigger or more healthy than the other. We know that atrophies, softening, and all sorts of degenerations are owing to vascular causes; but it strikes me very forcibly that some of the atrophy in Dr. Bolton's cases was owing to an innate lack of trophic power in the brain cells and parts of the cortex. One often sees

general atrophy without the least localised vascular defect. I have had such a case under my care. His speech gradually became circumscribed to the two words "oh, yes"; and when emotionally excited he had two other words. When he wanted an extra cup of coffee he would push out his cup and say, "Oh, yes; damn you." That comprised his whole vocabulary. There was no vascular lesion whatever; the two sides of the brain were uniformly atrophied; and I was perfectly satisfied that the atrophy took place from an innate want of trophic power.

Dr. CLAPHAM said that, from his own observations, he was inclined to concur in the view that a good deal of the loss of control was due to loss of symmetry as regards the weight in the two sides of the brain.

Dr. BOLTON.—I am very pleased to find that the President agrees with my remark with reference to the small brains found in asylums, and I hope, in the course of two or three years, when I have systematically examined this question, to be able to prove definitely that there is in asylums a large class of cases, who, if they were treated out of asylums, as was suggested in the President's address yesterday, would probably not have to go to asylums at all. I think that this would apply to my first case. I have not undertaken any microscopical examinations, because these are at present in the hands of Dr. Treadgold, who is investigating the condition of nerve-cells in idiots. When speaking of the loss of balance I was not referring to an isolated phenomenon, but to what is practically a general physiological law, namely, that a great number of the symptoms, not only in mental but in ordinary brain disease, are due to loss of balance between associated groups of neurones. The frequency with which patients suffering from one-sided lesions are liable to epileptic fits agrees with what I said, for this question of loss of moral control I conceive to be similar to the loss of physical control in the case of epileptic seizures. As regards the atrophic condition of the hemisphere in the first case, I would point out that the whole of the atrophy was in the middle and lower Rolandic area, and outer surface of the temporal lobe. In the second, the greater part was post-Rolandic in position. In reply to Dr. Dawson, as to the association centres of Flechsig, the posterior association centres were certainly affected without the patients suffering, but the lesions were in the right hemisphere, whilst the left hemisphere was quite healthy. As to the frontal region being concerned with the power of control, I may say that so far I have not seen sufficient evidence to make me believe that this is so. I have for some time been inclined to think that the frontal lobe is concerned with the power of attention, as distinct from control. The question of control is, I think, dependent upon the balance of action between the two hemispheres.

Lantern Demonstration on Changes in the Cortical Nerve-cells in General Paralysis. By GEORGE A. WATSON, M.B.

THE slides were taken from sections of the cortex of several cases of juvenile general paralysis, mostly stained by Nissl's method or one of its modifications. The work was done at the London County Asylums Laboratory at Claybury.

1. Slides were shown illustrating cases which had comparatively little congestion of vessels and little evidence of an inflammatory process. The cells in these cases exhibited only a chronic atrophic change, and the cells were much fewer in

number than normal. No acute changes were found in this class of case.

2. Slides illustrating great congestion of the vessels both of the pia and throughout the cortex, with thickening of their walls and leucocyte infiltration in the perivascular lymphatic spaces. Many of the cells in these cases showed acute degenerative changes. Various stages in these changes were illustrated, from swelling of the cell and its nucleus with commencing disappearance of the chromophile elements at the periphery of the cell and along its processes, to almost total disappearance of these elements and extrusion of the nucleus. A section of spinal cord was also shown with recent degeneration of some of the fibres of the crossed pyramidal tracts—these fibres being the projection fibres of certain of the pyramidal cortical cells, which had undergone acute destruction.

3. Several slides, by the kind permission of Dr. Mott, were shown from the cortex of animals which were the subject of experiments by Dr. Leonard Hill, in the production of experimental anæmia by the ligation of three or four of the cerebral arteries. Cells were exhibited showing the effects of anæmia of from half an hour to five days' duration, and these were compared with similar changes found in the cortex of certain cases of general paralysis, viz. those with marked venous congestion.

It was explained that the acute changes in the cells in the two conditions were probably due to the same cause, although produced in an opposite manner, in the experimental cases the anæmia being caused from the arterial side, in general paralysis from the venous; in the latter congestion or inflammatory stasis in the veins leading to anæmia of certain areas of the cortex.

It would appear that a slow atrophic degeneration is the primary condition as regards the cells in general paralysis, but that frequently owing to vascular disturbances (especially in those cases which have "seizures") an acute destruction of cells in certain areas occurs from time to time.

Some Pathological Changes met with in the great Nerve Cells of the Insane, with Special Reference to the condition known as "Reaction at a Distance." By JOHN TURNER, M.B., read at the Annual Meeting, July 27th, 1900, and illustrated by lantern slides.

THE pictures I am going to show are taken from photographs of the giant pyramidal nerve-cells of the upper part of the ascending frontal convolution, and the neighbouring paracentral, and my remarks refer entirely to this variety of cell. They have been studied in sections, stained after modifications of Nissl's method, and in film preparations in which the entire cell is seen.

More than 300 cases of insanity of all forms, of all ages, and of both sexes, have been examined.

I do not intend to describe all the different alterations seen in the cells of these cases, but only to refer to and illustrate a few of the more obvious and universal changes met with. By universal I mean where the whole or a preponderating majority of the cells are similarly affected. There are changes—various forms of chromatolysis, etc.,—which are found to a greater or less extent in all cases, and although these may be very important they will not be referred to.

I.—REACTION AT A DISTANCE.

Of the changes affecting all the cells by far the most interesting at present, to my mind, is that which is identical to the change produced experimentally in animals by dividing the axis-cylinder of a nerve-cell, the so-called "reaction at a distance." It is the change about which we have the most knowledge derived from experiments on animals, as to its cause, and its course and termination. If a nerve-root is cut through, certain changes are set up in the nerve-cells from which it originates. These have been studied by Nissl, Marinesco, Van Gehuchten, Flatau, and a host of others, chiefly in connection with the motor nerve-roots of the cranial nuclei, with fairly harmonious results. One of the earliest changes

noticed, and which begins within a few hours after the severance of the nerve-root, is a degeneration of the Nissl bodies, beginning at the centre of the cell, and spreading in all directions. The bulky Nissl bodies are broken up into smaller and smaller granules; the cell increases in volume, and the nucleus wanders to the side. These changes begin from twenty-four to forty hours after the injury, and proceed, getting more pronounced, for fifteen to twenty days.

If the cut ends of the nerves are allowed to re-unite, then after that period there is a gradual restitution of the cell, but with this stage we shall have very little concern. Ultimately there are always found, even after the restitution of the greater number of the cells, a few which are very pale, which are reduced in size, and which have evidently degenerated beyond the power of restitution. Now a similar series of changes, but passing on to the degeneration of the cells, is found affecting practically the whole of the large pyramidal and giant-cells of the cortex in certain forms of insanity, and in two of these cases, in which I examined the spinal cord, there was found by Marchi's method a degeneration of the crossed pyramidal tracts, which was in one case most marked in the lumbar and lower dorsal region, where it was obvious to the naked eye after the cord had been hardened in Müller's fluid, as a triangularly shaped pale patch; but higher up in the cervical region this patch of degeneration was barely visible, and after the treatment with osmic acid, the black spots of degeneration were more numerous in the former than in the latter region, whilst in the cortex in the immediate neighbourhood of the degenerated cells no degenerated fibres were seen.⁽¹⁾

Thus there appears to be associated with this condition of the nerve-cells an ascending degeneration of the nerve-fibres occurring in a motor tract. This is a question which has of recent years occupied considerable attention, but in the cases previously studied it has been brought about by injury to a peripheral part of the axon, and as far as I know has not been noted after changes in the cells themselves.

We can understand this phenomenon on the assumption that the most distant parts of the neuron are the first to succumb to trophic disturbances in the central part. (Pictures were shown illustrating the Marchi reaction in cross and longitudinal sections of the crossed pyramidal tract in one of these

cases ; also several normal stichochrome giant-cells entire and in section, and then a series of pictures illustrating various stages in degenerating nerve-cells corresponding to those obtained by experiment.)

Fig. 1 shows an early stage in the condition. The cell is swollen, the granular degeneration of the centre has involved nearly the whole cell body, which has now in its central part a pale, blurred, or washed-out appearance ; at the extreme periphery and in the apex are still numerous and bulky Nissl bodies. The lower end of the cell is occupied by yellow pigment. The nucleus, which is large and inflated, is somewhat displaced to the side of the cell.

Fig. 3, an entire cell, shows a very advanced stage. The cell is small, stained of a pale lilac tint, and much pigmented. There is no trace of chromophilic matter in the body or branches of the cell. The nucleus and its contained nucleolus are pushed right up against one side. A process can be seen passing off from the pigmented portion of the cell.

Roughly speaking, only in certain grave forms of melancholia, usually terminating quickly in dementia, and in certain imbeciles do we get the above changes, so far as my experience extends. I do not mean to say that one does not meet with occasional instances in other cases, but not to the marked extent found in those I have mentioned, where, indeed, they are practically the only kind seen, and in advanced cases will be found implicating, but in a lessening degree as we descend, the majority of the anterior cornual cells from the cervical region to the lumbar enlargement.

Dr. Wigglesworth was, I believe, the first to point out this condition, as early as 1883, in two cases of so-called melancholia atonita.

The following is a very brief *résumé* of the sixteen cases in which I have met with the change.

1. I. B—, a female *æt.* 45. History of alcoholism. The insanity is of eighteen months' duration, and was characterised by depression and occasional violent fits. When admitted she was delirious and exhibited involuntary jerking of the limbs. She died of pneumonia after a residence of a few weeks.

2. J. W—, female ; when admitted was excited and unruly ; rapidly became demented, and after six months' residence died, *æt.* 53.

3. E. E. W—, a female. Became insane when twenty-seven, and remained in a state of delusional insanity for many years. Imagined that plots were formed against her, and conspiracies to blow her up with dynamite. Became acutely melancholic in 1898, and by three months later was demented with marked twitching of muscles and diarrhoea, to which she quickly succumbed, æt. 45.

4. M. E. B—, female. Always hysterical; for past year nervous and apprehensive, and lost the use of her arms and legs. Admitted in a state of delirium, and died four days later of bronchitis, æt. 37.

5. A. E. C—, female. Chronic melancholia of ten years duration. Profoundly depressed, restless and agitated. Died of diphtheria, æt. 69.

6. A male. Acute delirium with loss of power in legs, and involuntary jerkings of his muscles. Died five days after admission, æt. 36.

7. W. A—, a male. Chronic melancholia of seven years duration, passing into dementia with paresis of lower limbs. Died of phthisis, æt. 52.

8. A. C—, female. Admitted from another asylum in a state of dementia inanimate, and dirty in habits; after three years' residence developed difficulty of swallowing, and jerky movements of hands and feet, which rapidly got worse, so that when interfered with she had an accession of spasm affecting her whole body. Her temperature rose to 109° F. just before her death, æt. 39.

9. C. Le G—, a male. At first melancholic, then passed through a period with delusions of exaltation, and bodily symptoms resembling general paralysis. Became demented and died, æt. 46. A history of syphilis.

10. F. B—, female. Became insane when thirty-one. Acute melancholia passing into a chronic condition, worse at night. In December, 1899, cellulitis of the leg supervened on an injury, and she rapidly became demented and died, æt. 55.

11. I. E—, male. Admitted in a feeble and demented condition with a diagnosis of locomotor ataxy (not confirmed by microscopic examination of spinal cord). Died a few days after admission of bronchitis and chronic Bright's disease, æt. 45.

12. A. E. B—, female. Very melancholic and agitated.
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with intervals when quite rational. Became depressed and demented a year after admission, and died exhausted, æt. 37.

13. E. J—, female. After suffering from melancholia for a year was admitted here in a state of acute delirium with twitching of muscles of left arm and hand, and lips. Died of pneumonia, æt. 45.

14. A. G—, female. Admitted suffering from chronic alcoholism with delirium; rapidly became demented with twitching of muscles of left hand, etc., and died of chronic Bright's disease, æt. 41.

15. R. T—, female. An imbecile, very childish and incapable of looking after herself. Died of phthisis, æt. 24.

16. A. S—, female. An imbecile, dull and inanimate, and dirty in her habits. She died of phthisis, æt. 27.

The first seven of these cases have been described more fully in *Brain*, Winter Number, 1899 (pp. 575—585).

The motor symptoms there referred to were marked in many of the later cases, notably Nos. 8—11, 13 and 14.

They were also a prominent feature in the two cases described by Wigglesworth.

At first sight it seems hard to understand why two such diverse conditions as melancholia and imbecility should be associated by similar cell changes, but I believe that we can reasonably account for this association on the assumption that states of melancholia and mania depend on dissolutions of the nervous system, affecting respectively the sensory and motor sides of the reflex sensori-motor mechanisms of which the nervous system is constructed; that is to say, in melancholia we get an interference with and blocking of the impulses coming in on the sensory side of the nervous system.

W. B. Warrington found that on cutting through the posterior nerve-roots of the spinal cord, at certain cells in the anterior horns of corresponding segments presented the appearance of reaction at a distance, and his explanation is that motor cells degenerate when they are prevented from functioning either by section of their axons or by depriving them of the sensory impulses which normally come to them. If this be correct, it is obvious why, when we have an interference with the sensory terminations of the reflex, such as I suppose to take place in melancholic conditions, a corresponding degeneration is met with in the motor cells with which these

sensory channels are in communication. And further we can see why in imbeciles, in whom there is very generally a blunting of all or most of the senses, and consequently a corresponding lack of sensory impulses to their higher motor nerve-cells, there should also be found this alteration.

II.—CELLS OF PYREXIA.

When rabbits are subjected to heat so as to raise their temperature six to eight degrees (F.) above normal for several hours, certain changes are found in the cells of the anterior horns of the spinal cords. And we find in men that diseases, in which there is a persistent (*i. e.* not falling at certain times of the day) rise of temperature of several degrees, are associated with cells of a similar character in the cord and in the brain.

We can recognise by studying different cases, etc., stages in this change. The cell appears to swell, and to present a gradual diminution in the size of its Nissl bodies, which in the centre of the cell begin to crumble; the achromatic substance takes on the stain, so that ultimately we get an uniformly coloured, *dull*, rather pale cell, showing no, or few, very fine threads of chromophilic matter in the apex. The dendrites also lose their Nissl bodies and stain uniformly and pale.

It is necessary to point out that, although these cells occur in pyrexial states, precisely similar ones are met with in diseases in which either there has been no pyrexia, or in which the pyrexia has been too slight to account for them.⁽³⁾

The film preparations give a better picture of this variety of cell, as they show the wealth of uniformly stained dendrites appertaining to each cell, and also by this method we can demonstrate a very important characteristic, and that is the great fragility of the cell and its processes; a very slight pressure is apt to cause the apex or other process to fracture, and in advanced conditions breaks up the cell body. Usually (*i. e.* in other than this condition) the films allow of very considerable pressure without fracturing the cell processes or permanently altering the shape of the cell, their great elasticity permitting them to return to their normal shape when the pressure is removed.

This feature of fragility is one means of differentiating this kind of cell from others which in sections present very similar appearances to pyrexial cells.

III.—CELL CHANGES MET WITH IN ACUTE DELIRIOUS STATES.

A number of slides were shown illustrating the changes met with in acute delirious mania, and other conditions of delirium. The whole cell is intensely stained, and in advanced cases it presents an ill-formed mass with few or no processes, and showing no detail. In films they retain their usual shape and number of processes until a very late stage of the change, but in sections, subjected to dehydrating agents, they shrink and appear as dark masses lying in wide pericellular spaces, and are generally deeply pigmented, and their dendrites are often fractured across, probably due to the shrinking of the cell by the alcohol.

Increased density with dark staining of the nucleus appears as one of the early changes. Ultimately this portion is often much shrunken, and occasionally displaced. Fig. 2 shows a cell in this condition.

IV.—SOME OF THE USES OF FILMS.

That films can ever take the place of sections is an idea not for one moment to be entertained, but they afford a valuable control to the very artificial picture of cells seen in optical section.

They are easily prepared, and are ready for inspection an hour or so after an autopsy, and often, especially in doubtful cases of general paralysis, allow of a definite diagnosis being made. They show the cell in a state most nearly approaching to its natural condition, and they show the entire cell and all its processes. They give a truer idea of the amount of pigment it may contain, and enable us to test its fragility or elasticity, etc.

Delicate changes in the nucleolus are brought out, which are often obscured or not visible in sections. Fig. 4 shows a cell



FIG. 1.

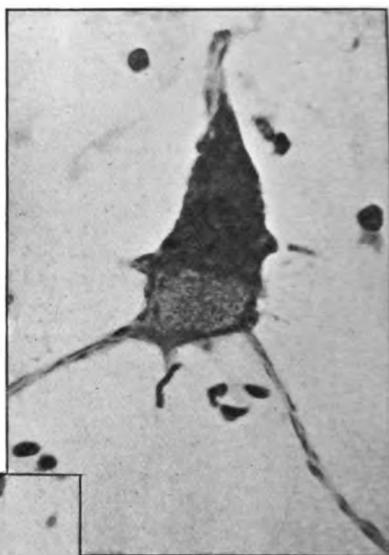


FIG. 2.



FIG. 5.



with a greatly swollen nucleolus, which measured 13μ , instead of as usual 8 or 9μ ; it was only faintly stained. This swollen condition was a common characteristic of the nucleoli of the giant-cells seen in films taken from the brain of a girl who died in an epileptic fit.

Both the pallor and enlargement were lost in sections of the same brain, and the nucleoli appeared much the same size as usual and darkly stained. It is also an excellent method for examining the smaller vessels and capillaries of the cortex.

Two slides were shown of cells with pigment tumours, one of which (Fig. 5) is reproduced. The cell shows a pedunculated outgrowth of yellow pigment, which it will be seen contains a large number of Nissl granules, staining blue in the specimen, and it is an interesting question why these appear here; it is unlikely that the excrescence existed as a part of the cell body, and then took on pigmentation changes; and on the other hand, if the growth was primarily pigmentation, it does not seem very obvious why it should contain chromophilic particles, unless they were pushed in with the advancing deposit and growth of the pigment.

(1) *Note*.—In some cases, as *e.g.* in one mentioned in *Brain* (Winter No., 1899), degenerated nerve-fibres are found in the white matter immediately adjacent to cortex,—a figure is given showing these. (2) Dr. Mott has recently in his 'Croonian Lectures' shown that the neuroglobulin of the nerve-cells will, on prolonged heating, coagulate between 107.6° and 109.4° F. He supposes that under these conditions there is a diffusion of the nuclei proteid into the achromatic substance of the cell, which coagulates and causes its death. This does not, however, exclude the possibility of other agencies besides heat, bringing about a diffusion and coagulation of the neuroglobulin, and resulting in a similar condition of the cell.

EXPLANATION OF FIGURES.

FIG. 1. $\times 580$. Swollen cell showing early changes characteristic of divided axon. In the lowermost part is some yellow pigment. From a section.

FIG. 2. $\times 580$. Section of a densely stained cell with a fractured process at right side and a mass of pigment in its lower half.

FIG. 3. $\times 400$. An entire cell, showing advanced and probably irreparable changes characteristic of divided axon. The nucleus and nucleolus is seen as a dark spot quite up against the right side of cell. No Nissl bodies visible. The cell is small and stains faintly. The lighter portion is yellow pigment.

FIG. 4. $\times 400$. An entire cell showing great increase in the size of nucleolus.

FIG. 5. $\times 400$. An entire cell with normal stichochrome appearance, and showing an outgrowth of pigment.

A Microscopic Demonstration of the Normal and Pathological Histology of Mesoglia Cells. By Dr. FORD ROBERTSON, Edinburgh.

DR. CLOUSTON in the unavoidable absence of Dr. Ford Robertson made the following remarks :—The first fact that I have to direct the attention of the meeting to is that Dr. Ford Robertson has devised a new method of examining nerve-tissues by depositing platinum in them. By the use of this platinum method he has demonstrated, amongst other things, that what is called the neuroglia is composed of two sets of elements instead of one, as is generally considered. The neuroglia, as exhibited by this and other methods, is attached to the arteries, to the fibres, and to the brain-cells, forming a generally supporting medium. Dr. Robertson has discovered that in addition to this there is another set of cells, which he has called the mesoglia cells, consisting in a typical form of a cell-body, a nucleus and a number of processes. These processes are in no way connected either with the vascular substance or with the nerve-cells or the nerve-fibres. The mesoglia cells are entirely different from neuroglia cells in appearance, and are found in both the white and grey matter, and in such abundance that Dr. Robertson thinks that there are as many mesoglia cells as there are neuroglia cells existing all through the brain. Sometimes they have no processes, sometimes two processes, but the illustrations show a typical mesoglia cell from the dog and from man. The exact function of these mesoglia cells we certainly do not know, but they certainly do not act in any way as a support to the general brain structure. The mesoglia cells seem to have a phagocyte action in certain pathological conditions. They supply, if not all, at least the greater part of the amyloid bodies which are found in some of the chronic brain degenerations. I think you will agree that it is very important that Dr. Ford Robertson should have discovered a new element in the brain, the particular use of which will doubtless be demonstrated by some of the large number of enthusiastic workers on this subject.

Some Observations on the various Physical Changes occurring during the Acute and Subacute Stages of Melancholia. By LEWIS C. BRUCE, M.D., M.R.C.P. Edin., Physician Superintendent, and H. DE MAINE ALEXANDER, M.D.Edin., Assistant Physician, Perth District Asylum, Murthly, N.B.

DURING the course of a series of investigations upon the arterial pressures in recently admitted cases of insanity, we were struck by the fact that the arterial pressures in cases of acute melancholia of recent onset followed a more or less definite course.

We found that during the early period of the attack, when the pulse was quick, the temperature sometimes elevated, the patient sleepless, and the mental symptoms acute, that the arterial pressure was high, varying from 140 to 180 mm. Hg. If the patients were kept in bed and the arterial tension taken regularly night and morning, we found that in the course of a period of very variable duration the tension gradually fell to 120 to 130 mm. Hg., this being preceded by a fall in the pulse rate; the temperature tended to be slightly below normal; all the mental symptoms lost their acute character, and the patients began to sleep again at night. So regularly did this sequence of events occur that we found ourselves almost unconsciously talking of the acute and subacute stages of melancholia.

Having got, as it were, a test in the sphygmometer between these two stages, we proceeded to examine into the physical condition of our patients when the blood-pressure was high—the acute stage,—and when the blood-pressure had fallen—the subacute stage.

We took first the urinary system. In all seven patients were examined. We found that in these patients in the acute stage of melancholia, the amount of urine excreted per twenty-four hours averaged 29·5 ounces, and the excretion of urea averaged only 200 grains *per diem*. (The average of urine in ounces, and the urea in grains, per twenty-four hours, in the acute and subacute stages, is given in the accompanying diagrammatic table.)

In four out of the seven urines examined albumen was present, not in sufficient quantity to be estimated, but sufficiently plentiful to be easily detected by boiling and precipitation with cold nitric acid.

In the subacute stage the secretion of urine rose to 41·2 ounces per twenty-four hours, and the excretion of urea to 430 grains *per diem*; albumen was never detected. These observations were verified when opportunity offered, and we believe they are fairly correct. Only one patient out of the seven examined varied from the above rule; in his case, even when actually melancholic, the amount of urine and urea excreted never fell below the average of health. We have not included these results in the diagrammatic table as we consider his case an unusual one.

Integumentary System.—During the acute stage the skin was in every case abnormally dry. In no case did we ever find a trace of nitrogenous excrete products in the perspiration of these patients.

In the subacute stage the skin became softer and more healthfully moist. At least two patients sweated profusely—especially at night—and the sweat contained much waste nitrogenous material.

Circulatory System.—Acute stage:—The pulse was quick, 90 to 120 per minute, hard, and irregular. Arterial pressure was high, 140 to 180 mm. Hg.

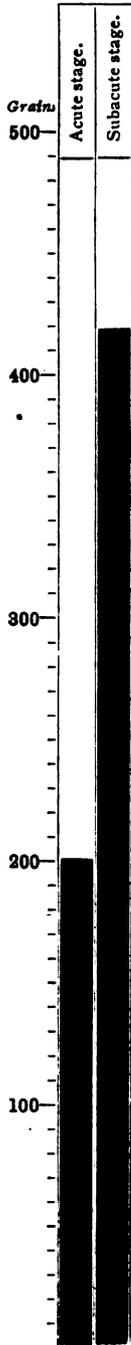
Subacute stage:—Pulse 70 to 80, softer, regular, but easily excited by a sleepless night, indigestion, etc. Arterial pressure lower, between 120 to 130 mm. Hg.

Alimentary System.—The stomach contents were examined in three cases. We found in the acute stage, after a test breakfast, that the quantity of HCl. and pepsin present was deficient, the digesting power of the filtered fluid upon the white of a hard boiled egg was *nil* after ten hours, and the motor power of the stomach was weak.

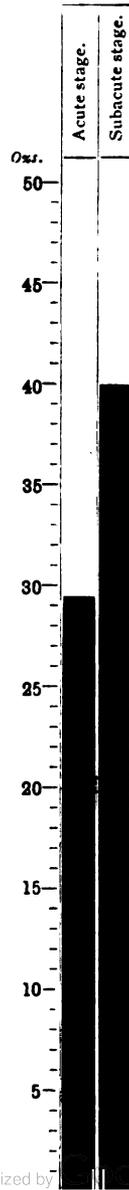
In the early period of the subacute stage the stomach had not yet gained power, and the digestive fluid was deficient in acid and pepsin, and still unable to digest the white of hard boiled egg; but at the end of ten hours there were signs of feeble digestive power.

Later, when the patients were nearer recovery, the gastric functions were active, and in five hours a portion of the white

Urea for 24 hours.



Urine for 24 hours.



of a hard-boiled egg, similar in size to those previously used as tests, was almost completely digested; but the motor power of the stomach was still apparently deficient.

In one acute case, at least, the salivary secretion was much disordered, the patient complaining of a bad taste in the mouth and constantly spitting.

Every one of the seven patients during the acute stage had flabby, furred tongues, with varying symptoms of impaired digestive power.

Nervous System.—In every acute case the skin reflexes were active, and the muscles of the limbs were readily thrown into a condition of inco-ordinate fibrillary tremor. This condition is not marked in the subacute stage.

Nutrition was deficient in the acute stage and the early period of the subacute. After that weight was gained steadily.

Hallucinations of a vivid nature were characteristic of the acute period, and affected the patient's conduct. In the subacute stage the hallucinations, if present, were not complained of, and as a rule did not affect the patient's conduct.

To sum up, then, our observations, we believe that the majority of recent cases of melancholia pass through a definite course prior to recovering or becoming chronic, and we divide that course into an acute stage and a subacute stage. The acute stage is characterised by the following symptoms:

(1) *Acute Mental Symptoms.*—Great depression, restlessness, vivid hallucinations, sleeplessness. (2) Pulse rapid, hard, tending to be irregular, 90 to 120 per minute. Arterial pressure high, 140 to 180 mm. Hg. (3) Temperature tending to be febrile, 99° F. to 100° F. (4) Urine scanty, excretion of urea deficient, trace of albumen present. (5) Tongue furred and foul. No desire for food or drink. Digestive power of stomach upon coagulated albumen practically *nil*. Motor power weak. (6) Skin dry.

The Subacute Stage is characterised by the following symptoms:

(1) Mental symptoms less acute. The patient generally sleeps well. Hallucinations, if present, do not affect conduct. (2) Pulse regular, softer, 70 to 80 per minute. Arterial pressure 120 to 130 mm. Hg. (3) Temperature never above 98.4°. (4) Urine more abundant, excretion of urea considerably increased. Albumen never detected. (5) Tongue clean,

taking food more readily. Digestive power of stomach juice at first weak, but later active. (6) Skin becoming moist ; sometimes perspiration profuse.

Treatment.—If these observations are correct, we believe that treatment should be directed to :

(1) Lowering the blood-pressure. (2) Increasing the excretion of urea. (3) Obtaining a healthy action of the skin. (4) Assisting digestion and assimilation by artificially digesting the food.

So far we have only had experience of lowering the general arterial pressure, for which purpose we use erythrol tetranitrate, upon the recommendation of Dr. Maurice Craig. Out of our seven cases we have had three very satisfactory results ; half a grain of erythrol tetranitrate given night and morning reduced the blood-pressure, induced sleep, and relieved the patients of acute symptoms. These three cases were all recent and treated at once, and the results of treatment strongly point to this conclusion that, if you can get a case of melancholia in the early acute stage, before the brain cells have undergone any organic change, relief, and perhaps rapid recovery, may follow this simple treatment. Of this, however, we are certain, that if you succeed in reducing the general blood-pressure you relieve the acute mental symptoms, and the patient generally sleeps without hypnotics. In some cases erythrol tetranitrate entirely fails to reduce the general blood-pressure, and in these cases one must fall back upon the usual hypnotics. Even then it is quite remarkable what an effect a good night's sleep has—even when obtained through the medium of a hypnotic—in temporarily lowering the general blood-pressure and relieving the acute mental symptoms. We do not know why in one case erythrol tetranitrate should act like a charm, and in another apparently similar case it should fail ; but when this drug fails to act we are inclined to look for a physical cause.

To increase the excretion of urea we employ ammonium carbonate in ten-grain doses thrice daily.

The skin is excited to act by means of hot air baths.

The admissions to Murthly Asylum are, however, few, and since coming to the conclusions stated in this paper no case of acute melancholia has been admitted, so that at present we are unable to say whether these measures will in future shorten the course of attacks of acute melancholia.

In conclusion, we may state that we treat all our melancholic patients in bed during the acute stage.

In the subacute stage we believe that moderate exercise is more beneficial than complete rest.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

Dr. RAYNER.—I cannot but feel that Dr. Bruce has hit on a very great truth set forth in his brief and valuable paper. At Hanwell I always treated very acute melancholiacs with rest in bed, with the best results; and I am quite convinced of the usefulness of reducing pulse-tension. I have generally found that more effectually done by hot vapour baths or packs rather than by hypnotics. I lately had a case of most acute melancholia with marked insomnia, together with a high tension pulse, which could not be lowered by any means until the vapour bath was used. As soon as the tension was reduced the patient got sleep and convalesced very rapidly. I would also support Dr. Bruce's observation with regard to the secretion of urine. It is my rule to induce melancholiacs to drink as much water as possible.

Dr. DAWSON.—I should like to know whether Dr. Bruce has found that erythrol tetranitrite produced excitement. Since reading Dr. Craig's paper I have tried it in a good many cases, and in two of extremely acute agitated melancholia, at least, it caused excitement.

Dr. MICKLE.—I think that the cases spoken of by Dr. Bruce as acute melancholia are those in which one gets very good effects by inducing copious perspiration, and purging with mercurials. Peptonised foods, of course, are also useful in such cases. I think that if we can avoid the use of very strong narcotics it is better for the patient in the end. With regard to ammonium carbonate, I have been careful under like conditions not to give it, because it is so easily changed into urea in the system.

Dr. CLOUSTON.—Some cases of melancholia undoubtedly have a very quick, hard pulse, and there are certain melancholiacs whose pulse is always over 100, sometimes running up to 120, 130 or even 140. That will go on during the whole of the early stage of melancholia. In the cases that do not improve it will continue for a year, and I have known it last for eighteen months. I have tried erythrol, but I am bound to state that hitherto I have never met with any drug or treatment that seemed to affect the pulse until a certain improvement took place, as it were, in the natural course of the disease.

Dr. JONES.—Dr. Mott pointed out, I think, that brain-matter decomposes into glycerophosphoric acids and cholin, and he has made very interesting experiments with the latter. Whether the cases that have been referred to are due to the accumulation of cholin, owing to metabolic changes in nerve-cells, we are not told. I am very much interested in this question, and very grateful to Dr. Bruce for his paper, but I think we must be a little careful in arriving at our conclusions. We have had seven cases quoted, and I should like to know what the ratio of the excretion of phosphates was to the excretion of urea; also whether there was any relation between the arterial tension, as caused by renal mischief, because we have in some of the cases the presence of albumen in the urine. Another sentence drew my attention, namely, "If we are able to lower the blood-pressure before the brain cells undergo any organic change, recovery may take place;" this is a strong phrase to use, for we at present know but little about changes in the brain cells. I am pleased to learn of the success of Dr. Bruce's treatment, and I consider his paper a valuable contribution to the clinical history of melancholia.

Dr. BRUCE.—I have never seen erythrol tetranitrite produce excitement. We began with half-grain doses, increased to two grains *per diem*. Our experience has been, that if it does not succeed within forty-eight hours it is well to stop the drug altogether. Ammonium carbonate was suggested by my colleague Dr. Alexander's recollection of the late Professor Rutherford's lectures. Sweating increases urea, and in the cases so treated there was an enormously increased

excretion. But it is quite possible that the ammonium carbonate may be changed into urea and then excreted. I never saw it do the patients any good whatever, but it was only tried in three cases. No man, however skilful, is able to estimate pulse-tension exactly. The sphygmometer takes a little time to learn, and each instrument requires knowing, just as you have to know your rod or gun, but when once it is known one can obtain most trustworthy results. I have seen a quick pulse in melancholia lasting for nearly a year, and during all that time the pulse rate was 120 a minute. I believe that when the patient is in the acute stage of melancholia you will elicit all the other symptoms, if you look for them. We have no criterion for dividing melancholia into various stages. Before using the sphygmometer I could not understand why one patient excreted 600 grains of urea during twenty-four hours and another only 200; but we always noticed that when the acute stage passed into the subacute (after only a few hours or after forty-eight hours) that the patient had a very heavy excretion of urea. Some excreted 600 or 700 grains. In those cases in which the quick pulse persists for a year, I believe that there is some organic change taking place in the patient's brain. I think that Dr. Mott said that cholin lowered tension. In a general paralytic, after a congestive attack the tension falls, as proved experimentally by Dr. Mott; but I do not think the same changes take place in the brain of a melancholiac as occur in a general paralytic. As regards renal mischief, there was absolutely none in the cases brought before you. Of these patients five have recovered, and the other two are convalescing. If you get a case of melancholia early, before the brain tissue becomes too deeply involved, and keep the blood-pressure reduced for ten days, the patient recovers. I have seen erythrol act like a charm in such a case, and have only seen it occasion headache in two cases. Why it acts in one case and not in another I cannot tell. From recent observations I am inclined to think that, in a case of melancholia with great and persistent tension you must look for the cause. I treated a case of puerperal mania to recovery. Afterwards she fell into a state of acute melancholia with persistent high tension dependent upon mammary abscess. We opened the abscess, and the blood-tension has fallen.

The Insane Jew. By CECIL F. BEADLES.

A COMPLETE analysis of the mentally-afflicted Jew is far too vast a subject to bring before this meeting, and any attempt to give you the entire result of my investigation into the subject would occupy far too much of your time.

Under these circumstances I propose to briefly touch on one or two of the more salient features that an examination of something over 1000 cases has revealed, and I look forward to hearing the experience of others who have been brought into contact with members of the race that have become insane.

First and foremost of all the conclusions that have been arrived at, is the abnormally great predominance of general paralysis amongst the men. The fact that this fatal disease is unusually common amongst the Jewish inmates at once forces

itself upon the attention of all who take charge of the male wards in Colney Hatch Asylum. The same, I am informed by Dr. White, is observable at Stone Asylum, which receives the Jews from the City. But when we work out the figures, the result is remarkable.

Reckoning on the admissions, we find that over 21 per cent. of all male Jewish admissions were cases of general paralysis. If we take individuals only it forms 23 per cent. In the Commissioners' Report for 1899, general paralysis formed only 13 per cent. of the average yearly pauper admissions into county and borough asylums. In the four London County asylums of Hanwell, Banstead, Cane Hill, and Claybury, during the year 1898, only 10 per cent. of the male admissions were cases of general paralysis. Forty-one per cent. of the male Jewish deaths are due to this disease. This may be compared with the deaths in county and borough asylums in 1898, where general paralysis accounts for 26 per cent. of the total male deaths.

What a striking difference! Amongst the Jewesses the proportions hold much the same ratio to the entire admissions and deaths as do those of the non-Jewish element.

What is there to account for the extraordinary difference? There is a growing belief that syphilis plays an important part in the production of this mental disease.

A question of the very first importance might be solved did we but know whether syphilis was common or the reverse amongst the Hebrew race. But it is beset with difficulties such as are inseparable from all Jewish questions that are approached. I have made inquiries in various directions. The result would seem to show that syphilis is fairly frequent, though doubtfully to the same extent as amongst the population in this country at large.

We must therefore look to other factors. Drunkenness would certainly seem to be less common amongst the poorer Jews than is the case amongst the lower classes of English. On the other hand, sexual excess figures in high ratio as an assigned cause for insanity.

By those who come in contact with the race in hospital and private practice, the men are looked upon as neurotic, the women as hysterical. Neurasthenia, and all that that term implies, would seem to be a common complaint amongst those

seeking medical aid. Hereditary insanity probably figures high in the race, but it is impossible to get at the proper proportion which this holds.

The mental strain resulting from excessive zeal in acquiring riches, and the worry and annoyance which must invariably accompany this greed for worldly goods, doubtless play no small part in the mental breakdown of these people.

It is difficult to arrive at the exact amount of insanity that is present amongst the Jews, owing to the absence of any exact figures, both as regards the entire Jewish population of this country, and of the whole of the Jewish inmates of our asylums. But so far as figures are available, the proportion works out to about the same as that of the total population of England and Wales; and for London in particular, perhaps slightly more than the former and a trifle less than the latter. It would seem that the Jews form about 1.5 per cent. of the certified pauper lunatics of London at the present time.

The average age at which Jews become insane is distinctly earlier than is the age of the non-Jews. This is so of both sexes. The admission age for Jews is thirty-seven; that for Jewesses is thirty-six. The average age of all admissions into the London County asylums in 1898 was forty-three for both men and women.

The ages at death bear somewhat similar proportions. The Jew's average age is forty-four; Jewesses forty-seven. That of the entire London lunatics was fifty-one for men and fifty-five for women.

As Colney Hatch is the special Jewish asylum for London, and the majority of the poorer members of the race who become insane are brought to that asylum, the relapsed cases find their way back to the same institution. For this reason one can better trace and follow up the course of a case than one can amongst the non-Jewish insane. The relapsed cases form 14 per cent. of the admissions, which is twice the amount formed by the entire admissions to London County asylums. This high figure is not entirely accounted for by the explanation already given; it is due in part to a greater frequency of relapses and the number of Jewish patients discharged as only relieved.

The recovery rate appears good; better, in fact, than amongst the non-Jewish patients, but there are certain reasons

to partly account for this. The recovery rate to the total admissions amongst the Jews is 34·4 per cent. (males 26·1, females 42·0); that of all the London asylums in 1898 was 30·49 per cent. (males 26·56, females 34·02). The recovery rate compared with the daily average number resident, and with the total number under treatment for recent years, comes out even better. It is dependent for the most part on the females.

The death rate is less amongst the Jewish patients. This again is due mostly to the small number of deaths amongst the women. The large amount of general paralysis naturally swells the number of fatal cases amongst the men.

The good recovery rate and low death rate amongst the women is in no small degree to be accounted for by the discovery of an interesting fact. This is the large proportion that the various forms of puerperal insanity hold to the total admissions. In over 15 per cent. of all the Jewish female individuals admitted to the asylum, the insanity was traceable to and associated with child-bearing.

Now in the four asylums, Hanwell, Banstead, Cane Hill, and Claybury, where the amount of Jewish admissions may be ignored as practically non-existing, puerperal insanity formed only 3 per cent. of the total female admissions, and the puerperal states are given as the assigned cause for insanity in only 4 per cent. The Commissioners give a rather higher figure for their five-year average, viz. 8·8 per cent. of female cases dealt with.

By deducting the Jewish from all female admissions into Colney Hatch for the past ten years, I find the proportion of puerperal cases in this asylum to be 6·18 per cent. of the non-Jewish admissions.

The difference in these figures, if not quite as remarkable as was the proportion of general paralysis in the men, is yet very striking.

We all know that puerperal cases are the most hopeful and the most recoverable of all cases received into our asylums, and this is so with the Jewesses. I think we must find an explanation of the foregoing in the neurotic temperament of the Jewish women, the early age at which marriage takes place, together with impaired nutrition from unhealthy occupations and surroundings in overcrowded centres. The excessive child-bearing

of the race would scarcely come into play, seeing that mental breakdown is most often associated with the first parturition.

Notwithstanding the seemingly good recovery rate for the Jewish insane, I am not inclined to look upon the prospects of complete mental recovery of those who have been mentally afflicted as particularly hopeful. Jewish patients are rarely discharged, except to friends, and the relatives of Jews are continually wishing to take the afflicted patients out of the asylum, even when they are obviously insane or far from well. The number of Jewish patients that are discharged relieved to friends is out of all proportion to the non-Jewish patients. Of those that are entered as recovered, the large majority are discharged after a month's trial, and they are rarely returned to the asylum until after their discharge is effected; but the number that break down soon after and are brought back as new cases is very considerable. This is shown in the fact that 27 per cent. of all the Jewish admissions into Colney Hatch have had previous attacks.

The foreign element in the Jewish insane, as we know it, is tremendous. Over 80 per cent. of the patients were either themselves, or their parents, born abroad. They mainly come from Russian Poland, or German states. The impoverishment and stress of living many of these have experienced before reaching this country would surely help to wreck their nervous systems.

Of the cases that accumulate in the asylum I have not a good word to say; they possess all the worse features, in an exaggerated degree, of the chronic and hopelessly insane.

I have touched but lightly on a few points of insanity as affecting members of the Hebrew race. There is much more that might be said, and possibly at no distant date I may publish in greater detail the results that have been forthcoming from my inquiry. For the present I have said perhaps sufficient to show that there are some features of interest concerning the insane Jew.

What Colney Hatch Asylum is for the Jews of the County of London, Stone Asylum is for the Jews of the City of London. As a considerable number of Jews reside within the City bounds, and mostly in its poorer districts, it stands to reason that a fair number find their way into the City Asylum. Dr. Ernest White, its Superintendent, being unable to be

present at this meeting, has asked me to present his views on the insane Jew as he knows him. Briefly these are—

There is a relatively large proportion of Jews admitted from the east end of the City. The majority of these are paupers, though there are a few private patients. They are all of low vitality and readily succumb to pulmonary and other diseases. General paralysis of the insane is very common amongst male Jews, and runs a rapid course; the disease is rare amongst female Jews. Epilepsy is rare in the Jewish insane. Syphilis is very rare amongst both the males and females. Drink is more frequently a symptom than a cause of insanity with them. Mental anxiety and worry are the most frequent causes of mental breakdown. They are all excitable and live excitable lives, being constantly under the high pressure of business in town. In all forms of mental disorder the prospect of recovery in Jews, both males and females, is less than with other patients, though the recoveries are fairly satisfactory amongst those under thirty years of age. The Jewish patients supply many of the noisy and troublesome patients in an asylum; they are all very indolent, frequently faulty in habits, morally degraded, and are destructive of clothing.

This excellent summary corresponds in all respects with the estimate one arrives at from a study of the Jewish insane in Colney Hatch Asylum.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

Dr. SAVAGE.—In private practice I see a very large number of insane Jews, and certainly agree with Dr. Beadles that the race, as represented in England, is highly neurotic. They present every form of neurosis inclusive of diabetes; but in my experience there is very little general paralysis either among the men or the women. Just as other races are affected, general paralytics among Jews have nearly all had some history of syphilitic degeneration. The forms of moral depravity common among Jews are very marked and disproportionate, and perhaps that is not altogether surprising, considering the history of the race.

Dr. SHUTTLEWORTH.—My former experience amongst imbeciles and idiots led me to suppose that the proportion of defective children in the Jewish race in this country was somewhat small. At the Royal Albert Asylum amongst 1600 or 1700 patients I only remember one Jew. This was in the North of England, and it may be that Jews are not so numerous there as in the South. At Earlswood we had about two Jews out of 500 patients. Since I have been engaged in other work, however, I have been struck with the mental instability of Jewish children. The parents, among the upper classes, are exceedingly neurotic; and I have seen a great number of children of unstable mental condition, sometimes, but not always, characterised by a considerable amount of moral perversion. After a good deal of experience at a large Jewish school in Whitechapel, I am not prepared to say that the children are more depraved or more degraded than children in other centres of London. The type to which they belong is as a rule not a very low

grade ; but they are all highly nervous, and require very careful training by teachers before they make very much progress.

Dr. MICKLE.—Dr. Beadles' statistics as to the frequency of insanity amongst the Jews are in accordance with those we already possess on the subject. Certain observers throughout Russia took a very accurate census years ago, and showed that although the Jews as a race suffered very much more from insanity and from nervous diseases than the other inhabitants, they had a much less percentage of general paralysis. That is in curious contrast with the very large percentage of general paralysis which appears to have occurred at Colney Hatch among the Jews drawn from London and the immediate environs. With regard to the large percentage of recoveries in Jewish patients, that may be easily accounted for. The moment a patient is better the relations desire his discharge, and there is a temptation to enter him as recovered. It is an absolute necessity among people who are highly neurotic that there should be a very large percentage of what may be summed together as periodical insanities, yielding returns of repeated recoveries. That accounts for the large recovery rate amongst the Jews, who are essentially marked by hereditary mental degeneration. Owing to the defective condition of the literature of the subject, I have only come to recognise these facts by being able to follow the cases during many years.

Dr. A. E. MACDONALD (New York).—Our experience in America is very much that which has been detailed. Our hospitals are largely occupied by Jews, and we can corroborate what has been stated by the reader of the paper as being in accordance with our own observations.

The PRESIDENT.—My experience at Darenth generally agrees with that of Dr. Shuttleworth, as there was a very small number of Jewish children there. But my more recent hospital experience has convinced me that nervous diseases, especially epilepsy, are very common among them. I have also seen a good many Polish Jews, who work in close rooms as tailors in London, and who suffer from neurasthenia or early stages of melancholia.

Alcoholic Homicide. By W. C. SULLIVAN, M.D., Deputy Medical Officer, H.M. Prison, Pentonville.

THE subject of alcoholic homicide has been so often and so ably treated in this and kindred societies, so fully discussed in the literature of mental pathology, that some explanation seems due from anyone who again invites your attention to this hackneyed theme.

In mitigation of censure I cannot allege that in the facts which I desire to bring before you there is any saving quality of freshness. I can but plead that as long as opinions on any question remain uncertain, and reflect their uncertainty in vague and arbitrary practice, a useful function may be served by bringing the old facts and the old arguments to the test of renewed debate. The problem of alcoholic homicide is in that position to-day, and thereby it holds a perpetual title to discussion. With that explanation I submit to you my paper ;

and if it succeeds, as I trust it will, in eliciting the matured views of those leaders in our specialty present at this meeting, my purpose will be attained and my presumption will be justified.

The standpoint of this inquiry is essentially clinical. It is based on a series of eighty observations, comprising thirty-six cases of homicide and forty-four cases of grave homicidal attempts, in which the criminal act could in some considerable measure be assigned to the influence of alcoholism. From the study of these observations it is proposed to sketch in outline the clinical type of alcoholic homicide, and further to trace through the characters of that type the connection between the intoxication and the act. To this end a detailed analysis of our figures would profit us little, for too many disturbing factors enter into the mechanism of homicide to admit of our bringing a mass of observations to such common denominators as a purely statistical method would demand. The occasional application of that method to the points where its use may be legitimate will be better made in the course of our discussion.

Now what are the characteristics of the homicide of alcoholism? To bring ourselves at once in contact with the actual we may take a concrete case, in which these characteristics are fairly exemplified.

Obs. 1.—K—, æt. 28, a sailor. Father mentally unstable, suffered from fits (of uncertain nature); paternal uncle died insane. Patient himself said to have had sunstroke. When sober appeared of normal feeling and intelligence; when intoxicated was violent. Drinking for about ten years at intervals determined by his occupation; convicted three times as drunk and disorderly, the first occasion six years before his crime.

On the evening of the eleventh day of a severe drinking bout was seen to go home with his wife, being apparently on boisterously affectionate terms with her. During the night killed her by cutting her throat with a razor as she lay in bed, and made an almost successful attempt to commit suicide with the same weapon. Professed to have no memory of the act, and could not at any subsequent time suggest a motive for it. While under treatment for his self-inflicted wound suffered from severe alcoholic symptoms, nervous and digestive.

This case is a good example of the automatic type of alcoholic homicide. As in the corresponding form of alcoholic

suicide, there is an entire absence of apparent motive ; the act is committed in a state of acute intoxication by a drunkard of some standing ; no trace is left in the agent's memory ; and finally, to show the identity in nature and origin of the two impulses, the murder is followed by a suicidal attempt. It is in the automatic form that alcoholic suicide finds its extreme and purest type ; so is it with alcoholic homicide. Without violence to the facts, it would be easy to arrange our observations in such serial order as to show how by the gradual attenuation of its salient characters our typical instance could be brought into connection with all the clinical varieties of this form of alcoholic crime. Considerations of time and space, however, demand a less lengthy procedure ; it must suffice, therefore, to illustrate this relation by indicating briefly the grading of tone in a few of the more essential characters of our type.

Let us first take the question of stimulus from the environment—the influence whose varying degree marks in a certain measure the connection of alcoholic homicide with homicide by the relatively normal non-intoxicated criminal. In our typical observation stimulus from without seemed entirely absent. From instances of this kind up to cases where the provocation is so nearly adequate that the act is hardly abnormal, one might form a chain of cases differing in the degree of apparent importance and relevancy of the extrinsic cause. In one observation, for instance, the alleged and only apparent motive for a homicidal attempt was the fact that the victim had neglected to prepare a meal with sufficient expedition : in numerous cases the plea in palliation of wife-murder was nothing more plausible than the woman's addiction to " nagging." At the other end of the series we should find a few instances where the alcoholic murderer was genuinely aggrieved by pecuniary injustice or marital infidelity, and where presumably the *role* of the intoxication in determining the act was relatively less significant.

In connection with this point of extrinsic stimulus we have also to bear in mind a consideration which, as we shall see later, is vitally important in the whole question of alcoholic action, viz. what may be termed the psycho-motor excitability of the alcoholic. As is well known, the motor tendency of the image is in certain phases of intoxication considerably exalted, and whether it comes as a suggestion from without, or is due to the

influence of the earlier upon the successive stages of an act, it acquires a force out of proportion not only to the initial stimulus, but also to the primary emotional erythism of the subject. The second mode of agency—the influence of the earlier on the later stages of the act—would account for the transition often observable from the trivial inception to the ultimate excessive violence of aggression, and would also explain that exaggeration of fury which so frequently characterises the homicide of the alcoholic. Cases of external suggestion are less common, or at least less obvious. The following observation may perhaps be regarded as an instance of this influence, though the absence of corroborative evidence, and, assuming his veracity, the blurred condition of the culprit's memory, leave the point in doubt.

Obs. 2.—P—, æt. 31. No fixed occupation. Mother died of a "fit;" said to have been demented for some time before her death. A cousin on the maternal side idiotic; another committed suicide. A brother suffered from convulsions in childhood.

Prisoner was always idle and unstable; lost several engagements through drunkenness; drinking for over ten years before crime; was once convicted summarily for drunkenness. Had had rheumatic fever and syphilis, and suffered from mitral disease.

Three days before the crime, prisoner took a room in a brothel, and went on a steady drinking bout with one of the girls of the house. On the day of the crime, in the afternoon, he went out with this girl; having had some drink in a tavern they entered a cab, directing the driver to take them back to the brothel. On arriving there P— got out of the cab, and told the driver that he had killed the girl, that she had asked him to do so. She was stabbed to the heart with a penknife. P— could give no further account of the affair: the woman told him to stab her, and he obeyed, as one might in a dream.

A clearer instance of the same agency is given in a case recorded by Prosper Despine, where one of four drunkards, who were carousing together, suggested the hanging of the most intoxicated of the party—a suggestion promptly carried out, with results which only failed of being fatal through the accident of outside intervention.

Let us now turn our attention to the state of consciousness at the moment of the crime. In our first cited observation there was, after the event, an absolute blank in the perpetrator's mind: next to instances of this sort are cases where memory is more or less blurred, where the act is vaguely remembered though not its motive, or where there is an apparent recollection of intent and motive but a total amnesia of the actual occurrence. Finally we reach those cases where the agent's consciousness is entirely lucid, and presents no break in continuity between the phases coincident with the act and the phases considerably anterior to it.

Closely bound up with this point is the question of so-called "motive," taking that word in its narrower popular sense. Considering, for simplicity's sake, only cases of purely alcoholic origin, *i. e.* those in which the part of environmental influence is trivial, we find the fact of motive apparently clear in most conscious homicides. The alcoholic who has a more or less definite delusion of his wife's infidelity, and who murders her in a condition of fairly lucid consciousness, explains his act as the result of his belief. But another drunkard, who has not developed such delusions, may do a precisely similar act in an automatic phase, and will be quite at a loss to assign a motive for it. Now in cases of this latter sort it sometimes happens that though the alcoholic acted automatically, and though he had no delusion before or soon after his crime, he develops later ideas which, had he entertained them at the moment of his act, would have been held to constitute his motive. For instance, in two cases of our series the prisoners, who had committed their offences in a state of obscured consciousness manifested some time subsequent to their incarceration, ideas, in one case of poisoning, in the other of marital infidelity, whereby in a confused fashion they retrospectively justified their actions. Facts of this nature are very significant of the real relation of the alcoholism to the act.

In determining the condition of consciousness which accompanies the act, the chronicity of the intoxication would appear to be a factor of special importance: this is so at least to the extent that, while in all cases the homicidal tendency implies a certain chronicity in the poisoning, this degree is notably more considerable in conscious deliberate homicide; the converse does not hold true, for even in very late stages

of the intoxication we may encounter automatic homicide. For instance, in one of our cases the murderer, who committed his crime in a state of automatism, was over eighty years of age, and his drinking habits dated from early manhood.

We have said that in all cases a certain chronicity of intoxication is requisite. This is conspicuously evident in regard of individuals who were primarily of relatively normal organisation. In such subjects the development of homicidal impulses is invariably related to an advanced stage of alcoholism. But the rule needs qualification in the case of individuals in whom there exists initially some degree of mental instability, hereditary or acquired. There may then be a very precocious development of impulsive automatism. In one or two instances, indeed, in our series the appearance of this condition was so very early in the alcoholic career that the *role* of the intoxication was largely overshadowed by that of the primary mental disorder. Cases of this kind form the transition to insane homicide independent of alcoholism.

Another feature of alcoholic homicide which we have indicated is its association with suicidal impulse. This character is closely connected with the factor of environmental stimulus. That is to say, in cases where the homicidal act is in any important degree determined by influences from the environment, there is far less likelihood of an accompanying suicidal tendency than there is in cases where the aggressive impulse is of mainly intrinsic origin. This consideration applies both to cases where the external stimulus is of a kind naturally to provoke the emotion of anger, and to cases where, as in Despine's observation and in our own Obs. No. 2, there is merely a direct suggestion of the act, initially at least without angry emotion. Where, on the other hand, the environmental factor is insignificant, the coincidence of suicidal impulse is frequent. In our series the association of the impulses was noted in fifteen instances, all being cases where the extrinsic influences were slight or apparently absent. In automatic cases the impulse to suicide is evidenced by an actual attempt; in conscious and deliberate cases either by an attempt or by elaborate preparations, as in the following observation.

Obs. 3.—L—, æt. 46. No occupation; well educated and

of independent means. A brother, weak-minded epileptic ; nothing else notable in the family history.

L— drunkard from about the age of twenty. Owing to his suspicion and threats his wife was obliged to leave him, and arrangements were made for the payment to her of a separate allowance. L— continued drinking, and after a time professed to be dissatisfied with the financial conditions of the separation. An interview was appointed at the office of the wife's solicitor ; L— arrived with a revolver, locked the door, and shot at his wife and the solicitor. It was found that before repairing to the interview, L— had visited an undertaker, and had made detailed arrangements for his own funeral.

The remaining points in alcoholic suicide, which are somewhat characteristic, concern the special expression of the impulse—the victim against whom it is directed, and the weapon by which it is executed. With regard to the former we may note that in the large majority of cases the victim is the wife or mistress of the murderer. This sexual relationship existed in twenty-four out of the thirty-six actual homicides in our series.

Consonant with the impulsive nature of the crime, the weapons employed were generally articles of domestic use, or tools customary in the murderer's ordinary avocations.

We have completed our clinical sketch of alcoholic homicide : it remains to discuss the interpretation of the facts which we have observed, to investigate the mechanism lying behind them.

This portion of our inquiry I would preface by a quotation from the master analyst of the unconscious in mind.

"Every internal organ of the body," says Dr. Maudsley, "has independently of its indirect action upon the nervous system through changes in the composition of the blood, a specific action upon the brain through its intercommunicating nerve-fibres, the conscious result whereof is a certain modification of the mood or tone of mind. . . . These organic effects of the physiological consensus of organs determine at bottom the play of the affective nature ; its tone is the harmonic or discordant outcome of their complex interactions ; the strength of the force which we develop as will and the emotional colour in which we see life have their foundation in them."

Now in the chronic intoxication by alcohol there is disorder

of function throughout the economy ; the organic sensations which are the core of the affective personality are altered in character ; and there results a depressed emotional tone, which becomes more dominant as the higher cerebral functions dwindle, more stable as the visceral conditions from which it arises grow more fixed.

The clinical study of chronic alcoholism yields us this result ; and, did our inquiry envisage any other of the chronic intoxications, its lesson would have been the same. Everywhere we should find that cerebral enfeeblement accompanied by general visceral disorder has as its psychic expression dementia with negative emotional tone, manifest in disorder of feeling, thought, and will.

Let me so far trespass on your patience as to recall briefly a few of these other varieties of the toxic temperament. In chronic lead-poisoning dementia and depression are the basis of the mental state : Tanquerel des Planches notes the extreme irritability of saturnine patients, the ease with which slight provocation inflames them to maniacal frenzy ; their melancholic attacks with destructive and suicidal impulses, visual hallucinations, and following amnesia are exact counterparts of the delirium of alcohol. In chronic ptyalism the clinical picture is the same : summing up its action, Kussmaul says that mercury "invariably depresses the emotional tone, and renders the patient sad ; it excites painful visual hallucinations, and sometimes leads to a true *raptus melancholicus*." In pellagrous poisoning the same symptoms are met with : Dr. Sorbets has emphasised the disposition to suicidal and homicidal acts which accompanies the dementia in the advanced stages of the disease ; Roussel has pointed out the special character of the suicide of the pellagrous, its appearance of half-unconscious execution in a state of "torpeur intellectuelle." In the intoxication by bisulphide of carbon, again, there is the same evolution of dementia with apathy and depression ; Delpech, in even the small series of cases which he has recorded, cites one instance of suicide and one of homicidal violence in subjects suffering from this poisoning in its chronic form.

Thus in all these intoxications we find an identity of organic disorder involving a corresponding identity of mental disorder. Chronic alcoholism is only a special instance of this relation, though of course deriving from the accident of its enormously

preponderant prevalence a practical significance that cannot attach to the rarer poisons.

And as the dementia and depression which are the essential psychic results of this general visceral disorder are common to all these intoxications, so of necessity are also their expressions in action. In all of them we note the impulse to suicide, and to suicide under similar appearances ; and in all we find the allied impulse to violence, to homicide.

The visceral disorders produced by the chronic intoxication involve, therefore, a special proneness to the development of those reflexes which underlie the emotion of anger. In lesser degree this undue readiness of reaction is shown in response to real environmental stimuli, and seems morbid only because it is disproportionate to its provoking cause. In more markedly toxic cases, where the organic factor is of greater potency, extrinsic stimulus may be insignificant, or may appear entirely absent. These are the observations which show in least equivocal form the relationship of the intoxication to the act. For clearness' sake we shall limit our view to cases of this nature, and amongst these to cases where initially the subjects were of relatively normal brain.

We start from the typically automatic homicide, where the crime is committed in a state of actual drunkenness, and the agent remembers nothing about it. Here the visceral disorders, transitory or permanent, which chronic intoxication has wrought in the drunkard have laid the foundation of a new affective nature, a new temperament prone to impulses of aggression. But this nascent temperament is still under the control of the higher centres ; before it can dictate action without appeal it needs that these higher centres be paralysed by the added acute intoxication. Later on the disordered organic stimuli become more articulate, the memory of the act is clearer, though its motive be still obscure to the agent ; it will be that a " something," he knows not what, " came over him." In a further stage an obscure motive may appear, some suspicion, perhaps, which in sober moments is, professedly at least, abandoned. And later still we come to those cases where the act is deferred until the vague organic intimations have been formulated in a definite delusion, crystallised in shapes determined by the antecedents of the individual, by the circumstances of the immediate environment, and perhaps, too,

by some obscurely specific character in the visceral sensations, as when the dyspeptic drunkard suspects poison in his food, or the impotent drunkard distrusts the honour of his wife.

In cases of this kind the translation of morbid feeling into morbid thought is completed before the occurrence of the homicidal act, and thus the illusion is given that the delirious idea is the cause of the impulse. The true origin of the impulse, its immediate dependence on the disorder of cœnæsthesia is consequently better seen in the earlier automatic cases, and best of all, perhaps, in these instances to which we have referred, where, subsequent to the automatic execution of the crime, a continuance of the morbid travail which generated the impulse evolves a delirious idea of corresponding content. Thus in relation to the impulse the disorder of thought is of very secondary importance; it may never occur, or it may only appear long after the impulse. Its real significance is that it denotes a more profound disorganisation of the normal *ego*, a later period in the growth of the pathological temperament.

Beyond the delusion there is one more stage in the morbid process to mark the complete ascendancy of the affective disorder in the mental life; governing action and governing thought it may at last extend its command to the senses of external reference, and evoke the relevant hallucination to justify its impulse, and to confirm its delusion. No observation in our series will so well illustrate this evolution as a case discussed some years ago in the JOURNAL from the medico-legal aspect by Dr. Savage, and more fully reported by Dr. Cassidy. I refer to the case of Baines, who was tried in 1886 for the murder of his wife. I may quote the facts in some detail, as they are a very epitome of the psychology of alcoholism.

Obs. 4.—David Baines, æt. 41, fish dealer. No definite evidence of hereditary taint; his long resistance to alcohol suggests a normally stable brain. His drinking habits dated back some twenty or twenty-five years, and within two or three years of his crime he had several attacks of delirium tremens; also, without actual delirium, he often suffered from hallucinations, tremors, and insomnia. Under the influence of drink he was wont of late to become extremely violent, and would manifest suspicions of his wife's fidelity; he would then

accuse her, watch her movements, threaten, or even assault her; on two occasions when in this state he attempted to commit suicide. When sober he did not entertain, or at least did not express these ideas.

From June to Christmas day, the date of the murder, Baines drank very heavily. On Christmas Eve he had a violent quarrel with his wife; the wrangling lasted late into the night; Baines stayed up, walking about the house, talking to himself, and occasionally beating his head against the wall. Early on Christmas morning the woman went to a neighbour's house to ask the time. Baines, who had got possession of a knife and had sharpened it, followed her there and stabbed her fatally. Arrested immediately after he said: "It is all over last night's affair; I saw it with my own eyes; I did it deliberately over that." Thirty hours later he was hallucinated and delirious, his ideas referring to the murder of his wife and to his own bodily condition, "his inside was taken out, half of his penis was cut off."

Questioned subsequently regarding his crime, he stated that his wife, who constantly deceived him, brought a man to the house on Christmas Eve; he went to bed, leaving them together, and soon after, the door being partly open, he heard filthy conversation between them, and on looking out saw them having connection in the presence of the children. After this the woman and her paramour left the house separately. Baines slept for the rest of the night. Next morning, armed with a knife, he followed the woman to the neighbour's house; his intention was merely to frighten her, but at the last moment "something came over me, and I could not help doing it—I don't rightly know how it happened—I was not master of myself."

This remarkable case is an almost diagrammatic illustration of the genesis of alcoholic homicide. As the psychical counterpart of the organic disorders consequent on twenty years of intoxication, the affective personality is altered, the emotional tone is depressed; the suicidal impulses are immediate expressions of this morbid change; gradually the influence extends to ideation, and disorder of feeling evokes correspondent disorder of thought, taking the form of delusions of marital infidelity; these ideas and the disposition to react in the direction they indicate become more prominent with

temporary aggravation of the alcoholism ; later on, exacerbation of morbid feeling calls up the visual hallucination of the wife's adultery, and the homicidal impulse issues in action. And as it were to give still more unequivocal indication of the essential condition underlying these various phases, we have in the subsequent hallucinatory attack, with its delusions of visceral and, most notably, of genital mutilation, a final emphasising of this *leit motif* of vitiated organic feeling.

With this case we may fitly close our review of alcoholic homicide. Everywhere we have found behind the divergencies of clinical appearance the same unity of organic causation. On the bodily side diffused visceral disorder reacting on an enfeebled brain, on the mental side an altered, a depressed, affective personality—that is the formula of the toxic temperament.

This temperament has as its immediate expression the destructive impulse—suicidal or homicidal,—which issues in action sometimes with and sometimes without a corresponding disorder of ideation. When such disorder does exist, its relation to the act is merely through dependence on a common cause in vitiated organic sensation. And in the case of the delusion this dependence is more remote ; it is, in a certain measure, an inference, presenting some analogy with the *ex post facto* explanations which epileptics and hypnotics sometimes offer of their automatic acts ; or, to invoke a larger fact, it may be compared with the normal tendency of our consciousness to assign to our actions “ motives ” which may differ widely from the real organic determinants of the will. Indeed, in the insane drunkard the commentary of consciousness on the motives of conduct is in some ways nearer to the truth, in that it at least draws its inspiration more directly from the same visceral source whence arose the impulse it would interpret ; its explanation is not merely reasoned from the occurrences of a less immediately relevant environment.

We rest, then, in the conclusion that in the phenomena which we have studied the fundamental factor is the disorder of organic sensation ; that disorder generates morbid action and morbid thought ; but action is the first-begotten, thought is a later and feebler offspring.

The excessive length of this paper will be my sufficient excuse for omitting the discussion of the practical aspect of

the question,—the legal responsibility of the alcoholic. I confine myself, therefore, to simply indicating that the clinical facts of alcoholic homicide are an excellent illustration of the futility of standards of so-called responsibility which would professedly judge action solely by reference to the agent's consciousness.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

Dr. CLOUSTON.—We have to face a great difficulty with regard to alcoholic homicide. A man commits murder when he is drunk, and the crime is thereby aggravated; he commits murder whilst labouring under alcoholic insanity, and is consequently held irresponsible. I have always thought that there was a close relationship between alcoholic homicide, mania, and convulsions. It is merely an accident that one man when drunk will stab his wife, another will have a short attack of mania, and another will have convulsions. The result is due merely to what particular organic system the toxic agent acts upon. I can recall three similar cases to those mentioned by Dr. Sullivan. There is no doubt whatever that there are some cases where alcoholic homicide may be put down to a reversion to the savage condition of our ancestry.

The Influence of Psychoses on Nervous Glycosurias. By DAVID BLAIR, M.A., M.D., County Asylum, Lancaster.

The rarity of glycosuria among the insane.—When one observes how frequently nervous influences can be regarded as predisposing factors in glycosuria, one naturally expects in communities of the insane to find the condition common. Yet I think the asylum medical officer who follows the routine habit of making a careful examination for sugar in the urine of every case with which he is entrusted, is rarely rewarded for his trouble. The frequency with which it does occur is differently stated by different individuals. But with one exception, the percentages of the insane who suffer from this dystrophy would appear to vary in different asylums from about five to two.

Apart from insanity, various circumstances influence the prevalence of the affection. It is far more common among the higher than the lower classes. Dr. Hale White found sugar in the urine of 4 per cent. of the inmates of Bethlem, but in only 2.6 per cent at the Surrey County Asylum.

The condition is much more commonly observed in men than in women. Kleen gives three males to one female, while

out of twenty-three cases of non-diabetic glycosuria recently reported by Saundby only three were females ; so that we are quite prepared for the high percentage of five recorded by Dr. Bond among male patients.

But the difficulties in the way of full and exhaustive investigation for statistics of this kind can hardly be overcome. It is as incredible that every observer has accepted the same quantity of sugar in urine as the standard of pathological significance, as that there has been entire uniformity in the specimens of urine from which statistics have been compiled. If, however, we strike an average of these percentages, and tentatively accept it as a standard of the prevalence of glycosuria among the insane, we find it certainly not greater than that recorded of sane persons.

Its prevalence among the sane.—Emil Kleen states emphatically that if samples of urine be taken an hour after dinner from one hundred brain workers between the ages of forty and sixty, it will doubtless be found that fifteen of the hundred samples contain an amount of sugar that is distinctly pathologic.

Worm-Müller, the Norwegian specialist in diabetes, found pathological quantities of sugar in eighteen, and Nylander in fourteen samples of urine from one hundred healthy individuals. These observations have been confirmed by the similar experience of others, and seem to show the great commonness of slight but pathologic glycosuria. The term healthy as here applied is probably only relative. Careful inquiry would doubtless elicit collateral symptoms of a more or less nervous, gouty or dyspeptic nature. Yet the statistics are sufficiently applicable for comparison with those of asylums, and tend to show that glycosuria, far from being specially prevalent among the tenants of these institutions, is markedly less than among sane people.

The comparative rarity of this condition among the insane is somewhat remarkable, and is not without significance. For, however imperfectly understood, the different pathological conditions underlying glycosuria may be, there can be no doubt that in most cases these affect the central nervous system.

Glycosurias other than nervous.—Of course besides nervous glycosurias several other forms are well known and have been

recorded. It appears after the ingestion of large quantities of grape-sugar, both in the healthy and diabetic subjects. It is found in morbid conditions of the liver and pancreas. Finally, almost any poisonous substance, if injected into the blood, impedes the assimilation of carbo-hydrates and causes glycosuria.

But alimentary glycosuria is only physiological, while the toxic form will disappear shortly after the elimination of the poison from the system. Pancreatic and hepatic disorders are probably quite as common among the general public as the insane.

Division of nervous glycosurias.—Nervous glycosurias may be conveniently divided into those which are associated with organic lesions of the cerebro-spinal and sympathetic systems, and those which accompany functional nervous disturbances.

With the first of these we have little to do. For in the first place I do not know that it has ever been shown that, apart from the insanity, other lesions of the nervous system are commoner among the insane than other people. But, although this were fully established, it is very doubtful if glycosuria is more frequently met with among those affected by such lesions than among ordinary brain-workers. I am quite aware that it would be almost impossible to cite any lesion of the nervous system with which this condition has not been recorded. Nor do I desire to cast any doubt on the obvious causal connection which exists between different parts of the brain and cord and glycosuria. But is not our knowledge of this connection rather evolved from experimental pathology than from the records of clinical experience? One observer, Kahler, in twenty-three cases of organic disease of the central nervous system, found that in only four was the power of assimilating carbo-hydrates appreciably diminished, and this is the highest percentage I can find. Certainly in the cases of this kind which have come within my observation I have always failed to find glycosuria.

Functional nervous glycosurias.—It is, however, that group of cases which refer their onset to functional nervous disturbances in which we are specially interested.

Glycosuria is a disease of the highly nervous and emotional,
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a fact which is proved by a comparison of its prevalence among different races, as well as among different sections of the same race. The highly nervous Hindu is so susceptible that almost every family among the upper classes in Calcutta has lost one or two members from this dystrophy, while one author estimates the deaths from diabetes in the same city at ten per cent. of the entire mortality.

On the other hand, among the Chinese, whose emotional life is so slightly developed, the condition is hardly to be met with. One observer who practised among 15,000 Chinese labourers came across only one case in a seven years' sojourn.

Among the aborigines, or any people beyond the pale of culture, it is hardly to be found. But with the advance of civilisation, attended by keener emotions, more earnest struggle for existence, and higher nervous development—in fact, *pari passu* with the very conditions which accompany the increase of insanity—we find more glycosuria.

Hereditary influences and alternation of neuroses.—Still further, a nervous predisposition is by far the most common of the hereditary influences which are so important in the ætiology of this affection. Diabetes itself is often hereditary, but it is more frequently the mere manifestation in one individual of a neurotic history which in his forebears showed itself in some form of mental disease. Dr. Maudsley has recorded as his experience that it is not uncommon to find a history of diabetes in the parents or near ancestors of insane patients. Dr. Savage states that diabetes in a parent may be directly related to insanity in the offspring; and further asserts that this alternation may occur not only in the family but also in the individual. A patient may suffer from diabetes for a time and may become insane, when all symptoms of diabetes disappear, only to reappear on the recovery from the insanity. Thus we have suggested one reason for the rarity of glycosuria among the insane—namely the alternation of neuroses. But I think it even more depends on another consideration. When glycosuria and insanity occur in the same individual the one is not due to the other, but they are more probably both due to the same cause.

Immunity of the insane from the causes of glycosuria.—But the blunted sensibility which is so attendant on pronounced

insanity prevents the action of the cause which would produce glycosuria in a sane person just as asthma is abolished by dementia. For example, grief and bereavement are well-known causes of this dystrophy, especially among those who have a predisposition to neuroses. As these nervous disturbances are often transient, so is the excretion of sugar which accompanies them. But if they are prolonged and become permanent, so will the glycosuria.

Should a person thus affected by the pangs of grief suddenly become maniacal, the susceptibility to painful emotion seems to vanish. In short, the cause of the glycosuria will cease to exist for practical purposes, and with the cause the effect. Such at all events would appear to be suggested by the following cases which have recently come before my notice.

CASE 1.—M. L— was admitted to the Lancaster County Asylum on April 15th, 1897. Before admission she had been employed in a confectioner's shop; had suffered for some time from headaches and had been run down physically. Finally, she had been cruelly jilted by her lover, as a result of which she became extremely wretched. When first entrusted to our care she threw herself about, screamed, laughed, cried, and was in speech and action irrational and erotic. For a time there was marked tenderness over the uterus and ovaries, and she only menstruated once during the first six months.

Towards the end of July her excitement began to abate, till one day she became suddenly depressed and attempted to strangle herself. In the mornings now she was bathed in perspiration without obvious cause. A few râles were detected at the apex of the right lung, but there was nothing abnormal about the temperature, respiration, or pulse. At the same time her urine was observed to contain a considerable percentage of sugar, with phosphates and a slight trace of albumen. The knee-jerks were found to be totally abolished. For ten weeks the urine was daily examined, and every second or third morning on an average sugar was found present, while the specific gravity was not less than 1030.

From the earliest detection of the glycosuria she was put to bed and kept exclusively on a milk diet. During this period she was very depressed and disinclined for conversation. At times, however, she confided to the nurse what she had suffered before admission. About the middle of October her mental gloom began to clear, one knee-jerk returned, followed in a short time by the other, while her urine ceased to contain sugar. From this date she rapidly became more cheerful and energetic, and was soon discharged restored to her mental and physical health.

CASE 2.—The next case was about fifty-two when she broke down mentally. The cause of her insanity was ascribed to persistent worry

over lack of success of business, with the struggle to keep up appearance despite the "res augusta domi."

She entered the asylum on January 25th, 1894, acutely melancholic and suicidal. She had attempted suicide immediately before admission by drinking half a pint of brandy and an ounce of laudanum. She was in a very low, hopeless state; said it were well if she had never been born; that she had done wrong all through and could not see her way to right. She had to be fed by the stomach-tube and required a padded room at night.

She had always been regular, sober, industrious, and affectionate, but highly nervous and excitable.

There is no note of her urine having been examined at this time.

From being acutely melancholic she became maniacal, and suffered almost continuously from chronic mania for nearly six years. She was very cheerful, erotic, slept well, and rushed headlong at every man she met to embrace him. She conversed rationally, but always on flippant topics. Her reading consisted exclusively of silly love stories. She was very clean and neat in appearance, but posed as a young girl, decked her head with leaves and flowers, and promised to be recognised a queen. She heard unmoved of the death of her husband, to whom she had been greatly attached. At rare intervals during this period she became slightly depressed and hypochondriacal, but this condition invariably passed off in a day or two. She often complained of indefinite pains for which there was no physical sign. I frequently examined her urine, but never found a trace of sugar.

About the beginning of May of this year quite suddenly she became acutely depressed and returned to the identical mental state in which she was when admitted. She resisted her food with great violence, constantly marched up and down in an agony of despair, and required a padded room at night. She exercised no control over her excreta, but her urine, whenever it could be got, contained a considerable percentage of sugar. After a few weeks her depression became less acute, she began to take her food, and exercise self-control, while simultaneously the quantity of sugar in her urine decreased. She is still sad and subdued, but I think she is a nearer approach to her normal self than she has been since admission more than six years ago. A trace of sugar is still at times to be found in her urine, but not more, I think, than is often met with in old people without special significance. The specific gravity has fallen to 1015 or even less.

Comparison of the two cases.—The history of these two cases is almost parallel though, unfortunately, incomplete. It is impossible to say if the initial depression that ushered in the insanity was attended by glycosuria, although I think it highly probable.

It is certain that it was entirely absent in all specimens of urine examined during the maniacal period. We are equally sure that it accompanied the onset of that depression which marked the mental change preceding recovery and coincident,

I think, with the re-awakening in the patient of the realisation of these depressing circumstances which caused her nervous "breakdown." The glycosuria in both cases disappeared coincidentally with the recovery of the patient.

Phase of insanity in which glycosuria is most commonly seen.—In connection with the phase or degree of insanity with which sugar in the urine is generally found, the investigations of Dr. Bond are interesting.

Out of 114 recent cases of melancholia he found sugar in the urine of eleven, whereas in eighty-two recent cases of mania he found sugar in the urine of none. As the exuberant feelings of mania usually express themselves in muscular activity, the freedom of the urine from sugar during maniacal periods might be ascribed to the increased consumption of blood-sugar in the muscles. While conversely, as feelings of mental depression are commonly associated with muscular inactivity, the appearance of sugar in the urine during periods of melancholia might be held to arise from decreased consumption of blood-sugar in the muscles. Such a contention is probably true to some extent, but is negatived in the latter case I have described. Here the melancholia was so acute and the patient so restless, that the expenditure of muscular energy was much greater when melancholic than maniacal ; while her consumption of food during the former period was much less than in the latter.

In neither of the cases was there polyuria or increase of thirst or appetite.

Epilepsy and glycosuria.—It is stated that epilepsy is attended by glycosuria. I cannot speak of epilepsy among the sane, but my experience of epilepsy among the insane would suggest that the occurrence of sugar in the urine in this connection is quite exceptional. I have examined the urine of insane epileptics many times both before and after fits, while I have had it drawn off and examined during fits ; but I have never once detected sugar.

Thyroid preparations and glycosuria.—Diabetes has been said to abound in paradoxes ; one of the most recent refers to the action of thyroid extract. It is about as common to see it lauded for its therapeutic value in diabetes as accused of the

production of glycosuria. One writer says it is capable of producing true diabetes.

I have used the drug to a considerable extent. During its administration I have watched the urine of the patients carefully, and have never seen sugar result from its ingestion. I have satisfied myself that the preparation of thyroid I use does itself contain lactose, which is less soluble, but a much stronger reducing agent than sucrose. It precipitates cuprous oxide when gently heated with alkaline cupric solution, but does not ferment with common yeast unless it has been inverted into glucose and galactose, which both ferment. Lactose passes unchanged into the urine after smaller amounts are taken than do the other saccharids.

Probably in some of the cases reported the sugar may have been only alimentary or have resulted from hypodermic injection of the drug.

Psycho-physical Perception. By F. W. EDRIDGE-GREEN,
M.D., F.R.C.S.

IN the perception of a sensation there are the following factors to be taken into consideration :

1. The physical stimulus.
2. The sense-organ receiving this stimulus.
3. The nerves conveying the effects of the stimulus.
4. The centre of memory receiving the whole impression.
5. The perceptive centres conveying to the mind information concerning individual portions of the impression.

Therefore, imperfect perception may be due to a defect in any one or more of the above five factors.

1. *The physical stimulus.*—The physical stimulus is the force which acting upon the body gives rise to a sensation. It is often confused with the sensation itself, whereas the two are quite distinct. For instance, the force which acting upon the eye gives rise to the sensation of light, when falling upon the back of the hand gives rise to the sensation of heat, and may, when falling upon the head, covered by hair, give rise to no sensation whatever. Again, different physical stimuli may

cause the same sensation, as a blow on the eye causing the sensation of light. It is very probable that there are many forces of which we are not cognisant, because they do not act upon any sense-organ, and yet these forces may be of the greatest importance. All physical stimuli agree in their ill-defined character, and the fact that they can be arranged in a series which has no definite commencement, no definite termination, and no definite unit. It is easy to arrange time in a series, but it is impossible to conceive a commencement to time, or that time can ever end, or that we can conceive a portion of time which cannot be subdivided; the portion of time that light takes to pass through the space of an inch can be divided into millionths. It is the same with the stimuli that cause the sensation of heat: there is a perfect series from the lowest to the highest possible temperature, and it is evident that there are innumerable gradations from one degree to another. In the case of the physical stimuli which give rise to the sensation of light, we know that similar stimuli exist below the red and above the violet, and that a regular series exists from the red to the violet. There may be waves far below the red or above the violet which may be performing very useful work in the scheme of nature, but of the existence of which we can only conjecture.

2. *The sense-organ receiving the physical stimulus.*—The effect of the sense-organ upon the physical series which I have just mentioned is that the series now has a definite commencement and a definite termination. For instance, though we know that the rays below the red and above the violet are physically similar to those of the spectrum, they are not perceived. Very high and very low notes are not perceived. It is the same with all other physical stimuli. As an example of the sense-organ I will take the sense of sight, as this is characteristic of the others, and is the one at which I have specially worked. I believe that light acting upon the retina liberates the visual purple from the rods and a photograph is formed. The impression is conveyed to the brain through the cones and optic nerve-fibres. Kühne, who made so many observations on the visual purple, stated that it could not be essential to vision, and could not be the visual substance, because it is absent from the cones, and only cones are to be found in the fovea centralis, the region of most distinct vision. He also stated that frogs

whose retinas had been bleached saw as well as other frogs. The last objection does not seem to me of much moment, as the retina might be secreting sufficient visual purple for the purposes of vision. The first objection furnished me with a ready means of testing the truth of my theory. I have made numerous experiments which prove that light may fall on the fovea centralis without producing any sensation. The following experiments can be repeated by anyone.

(1) If we look at two small isolated stars of equal magnitude, either may be made to disappear by looking fixedly at it, whilst the other remains conspicuously visible. I found that the phenomenon was most marked on a dark night and when the star looked at was in a portion of the sky comparatively free from other stars, and when only one eye was used. On a very dark night a considerable number of small stars occupying the centre of the field of vision may be made to disappear, whilst stars occupying other areas of the field of vision are plainly visible.

(2) Other lights or objects when small and with dark surroundings, as, for instance, a piece of white cardboard on black velvet, may be made to disappear in a similar manner.

(3) No change can be observed if a very bright light, a group of stars, or a uniformly illuminated surface be made the object of the experiment.

(4) If we look at an illuminated object through a pin hole in a piece of black cardboard surrounded by black velvet, we find that unless it be very bright it will not be visible at all. On moving the eye so that the image does not fall on the centre of the retina the object appears brighter.

This view of the relative functions of the rods and cones of the retina is, as far as I am aware, entirely my own, and every experiment I have made on after-images, perception of luminosity, etc., supports not only the theory that there is a visual substance, but that this visual substance is purple. I find that the after-image of any spectral colour and of white light is purple, if we take care not to look at the colour too long. The following is an easy method of proving this. Look at a dull white cloud for a second or two and then close the eyes, covering them with the hands so that no light can enter the eyes through the eyelids. A dull purple will first be seen, and for a few seconds this gets brighter and brighter, giving the sensa-

tion of a bright purple light. This gradually fades away without changing colour. It is best seen if the eyes be kept closed before being exposed to light, and then only opened for a second. The image is positive the whole time, the bars of the window are seen dark. The after-image is bluish at first, and then rapidly changes to purple. It is difficult to see an after-image of this kind if the eyes be previously exposed to light for some time. These after-images are quite distinct from the well-known negative after-images. The purple probably only gives the sensation of purple when in excess. Several very important experiments bearing on this point have been made by Mr. Shelford Bidwell.

It will be seen from this view that the cones themselves are not directly sensitive to light, but only to the products of decomposition of the visual purple. The actual length of the spectrum varies in different persons, just as individuals differ in their ability to perceive very high and low notes. I have shown that we may have shortening of either end of the spectrum without any other defect of colour perception. In these cases there is loss of light perception as well as colour perception, which is not the case in colour blindness due to defective psycho-physical perception.

3. *The nerves conveying the effects to the physical stimulus.*—The visual substance, being decomposed by light, sets up by chemical, mechanical, or some other physical action, impulses which are conveyed to the brain through the cones and optic nerve-fibres, the cones being the terminations of the perceptive fibres in the retina.

4. *The centre of memory receiving the whole impression.*—This I believe to be situated in the optic thalami; space will not permit me to give my reasons here.

5. *The perceptive centres conveying to the mind information concerning individual portions of the impression.*—The whole impression being brought to the centre of memory, different portions of the impression, colour, form, size, luminosity, etc., are conveyed to the mind through definite perceptive centres.

A psycho-physical series.—By a psycho-physical series I mean a physical series as it appears to the mind. A psycho-physical series is a sensation which is referred to external objects. It is obvious that the product of the physical

stimulus may be considerably altered before it reaches the mind.

The chief points in which a psycho-physical series differs from a physical series are, that it has a definite commencement, a definite termination, and consists of certain definite units. The limitation of the series is probably due to the external sensory apparatus, and any unit of a physical series not coming within the defined range is not perceived. A high note which is heard distinctly by one person may be quite inaudible to another, and therefore he can form no opinion respecting its qualities. It is the same with the sense of smell. Professor Ramsay informs me that he has met with many persons who are unable to distinguish that hydrocyanic acid has any odour whatever, whilst they are able to recognise other odoriferous bodies. It is obvious that if this condition were general, prussic acid would be said to be odourless. Therefore, the definite standard length of a psycho-physical series having been found for the majority of persons, any increase in this length for any individual will be a gain, and any decrease a loss for the person examined. When the psycho-physical series is shortened, the physical stimuli occupying the shortened portion will not be perceived, and the same result will be produced as if the physical stimuli did not exist.

Unfortunately we cannot form series of other physical stimuli in the same way that we can with the rays of light, and therefore the study of the psycho-physical perception of these stimuli is attended with as much difficulty as the study of colour without the aid of the spectrum. Taking, for instance, odours, we are unable to range these in a series, though a good deal of light has been thrown upon the subject by Professor Ramsay, who suggests that a series might be formed in accordance with the molecular weight of the odoriferous body.

An absolute psycho-physical unit.—The absolute psycho-physical units are the basis of every psycho-physical series. When a person has succeeded in obtaining a match which to him appears perfect, it is evident that he has brought both stimuli within one of his absolute psycho-physical units, because all physical stimuli included in one of these units are regarded as identical. When a violin is tuned to the piano the following

takes place. The A string of the violin is tuned until it is vibrating in harmony with a certain A of the piano. When a person has succeeded in getting the two strings to vibrate in apparently perfect unison, it is evident that he has brought the two into one of his absolute psycho-physical units.

A musician with a more accurate ear, to use the common expression, would probably not be satisfied with the result. Again, a person with no ear for music, to use the ordinary expression, would be perfectly satisfied with a match which was markedly incorrect to most persons. A person who could not distinguish any difference in sound between the bass and treble notes—and I have met with such cases,—would be perfectly satisfied with any match whatever. The perception of weight could be ascertained by giving a number of persons a series of weights, and telling them to pick out those which are identical. To sum up, a perfect match indicates that the physical stimuli are included in an absolute psycho-physical unit.

An approximate psycho-physical unit.—An approximate psycho-physical unit contains physical units which appear to be nearly alike. A difference can be distinguished between different portions of an approximate psycho-physical unit; but it is a slight difference. An approximate psycho-physical unit may be defined as a portion of a psycho-physical series containing absolute psycho-physical units the similarity between which is greater than the dissimilarity. A few examples, taken from the sense of taste, will make this clear. All physical stimuli which could be correctly defined by the word "sweet" would come within one approximate psycho-physical unit. There are many varieties of sweetness apart from the intensity of the sensation; thus sugar, honey, glycerine, and saccharin have each a particular characteristic sweetness, which would enable them to be distinguished from each other. If portions of the same liquid were sweetened with the above four substances, it would be evident enough on tasting one of these portions that it was sweet, but it would not be so evident which of the four substances had been used. On tasting successively the four liquids, the sweetening agent used for each would be evident. When we have obtained two mixtures which apparently taste exactly alike when compared very carefully, the physical stimuli are included in an absolute psycho-physical unit. An approximate psycho-physical unit

can be recognised without comparison; thus it is not necessary to taste an acid substance to find out whether another substance is sweet or not. The approximate psycho-physical units in a series are comparatively few.

It is when we apply this theory to colour that we get the strongest confirmation. Every fact of colour-blindness and colour perception falls naturally into its place, and appears as a consequence of the theory. The spectrum forms an admirable example of a psycho-physical series; the approximate psycho-physical units are the colours which have received definite colour names, such as red and green; the absolute psycho-physical units are the varieties of the different colours, such as sage green, olive green, yellow green, etc. The colour blind may be classified according to the number of colours they see in the spectrum, five, four, three, two, or one, and they form a regular series from the normal sighted to the totally colour blind. When the spectrum is shortened the junctions of the colours are found to be nearer the unshortened side than in the normal sighted.

Space has only permitted me to give my views in the barest outline, and further information on the subject will be found in my two volumes in the International Scientific Series, but in this paper I have put the subject in a different form and added many facts which are not to be found in my books.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

Dr. HAYES NEWINGTON.—These problems are very curious, and one that has always been most curious to me is how a first-rate violinist can play out of tune. Dr. Green mentioned the great pain that occurs to a first-rate violinist when anybody plays out of tune, but how can a first-rate violinist play with a lot of other instruments, and yet play out of tune? I knew a case years ago of a very first-rate amateur who led an excellent orchestra. To me it has always been a puzzle that a thorough musician, hearing what the pitch of the music going on around him was, could receive an impression and coin it, so to speak, into a pitch of his own, and not discover the discrepancy.

Dr. JONES.—A most interesting case is where, with total deprivation of a particular sense, it is possible for a person to have a delusion of that sense; that is to say, in a case of congenital deaf-mutism, is it possible that the patient can have hallucinations of the sense of hearing? Dr. Dundas Grant informs me that it is quite possible. It is a very subtle point, and little is known about how the outside world does affect the terminal sense-organs; whether the changes are physical, chemical, bio-chemical, or electrical. Sir William Crooks has suggested upon the theory of the X rays that there may be some very subtle mental waves acting in a very peculiar and subtle way upon nerve-cells. This Society has encouraged psycho-physical, or experimental psychological papers, and it has been a great pleasure to hear one by Dr. Edridge-Green, who is a well-known authority upon these subjects.

Dr. EDRIDGE-GREEN, in reply to the question raised by the President as to whether the disappearance of lights was not caused by exhaustion of the retina, said that the retina would become more readily fatigued by a bright light, whereas the experiment was made best with a feeble light and the difficulty increased in proportion to the brightness of the light. In his dark room he used four doors, and so had an absolutely dark room, and he arranged his lantern so that the centre spot only could be seen, and one eye was used. In a few seconds all light disappeared, leaving the whole field of vision quite dark. When the star was in a dark part of the sky, directly one looked at it, it disappeared, so that there was not enough light to cause exhaustion. He had mentioned two of Kühne's arguments, and a third was that there were many animals that did not possess visual purple, and were yet able to see perfectly well. He had not thought this was important enough to mention, because they might have a similar substance that was colourless to our eyes. When reading a paper at the Royal Society some years ago, he had explained how trichromic cases of colour blindness saw colours. Up to that time no person had mentioned any such case. Physicists said that normal vision was trichromic, but it is not. With regard to the point raised by Dr. Newington, he suggested whether there was not a tendency to get back to the natural scale. It had been pointed out to him that a certain violinist was playing out of tune, and on calculating the points on the string it was found he was passing on to the natural scale, while the rest of the musicians were playing on the arbitrary scale, and that he was really playing in tune. He thought that if the musician were better than his fellows, he was extremely likely to be put down as defective. As an illustration, he mentioned a case which had been brought to him as colour blind, and on examination he found that the man could see seven colours in the spectrum. In another case, that of an artist's pupil who was said to be more or less colour blind, on examining the patient he found that he possessed extraordinary colour perception, so much so that he could recognise what an Associate of the Royal Academy could not, namely, the faintest wash on a white surface. With regard to Dr. Jones's remarks, the sense of colour could be destroyed so as to leave the perception of light and shade perfect; everything was seen in degrees of light and shade just like a photograph.

Dr. HAYES NEWINGTON said he did not think the explanation was quite satisfactory, because practically there was no natural scale. The scale in which the violinist was playing was uniformly abnormal in whatever pitch the rest of the orchestra were playing.

Clinical Notes and Cases.

On Two Cases of Leptomeningitis. By J. O. WAKELIN BARRATT, M.D.Lond., F.R.C.S.Eng., Pathologist to the West Riding Asylum, Wakefield.

IN the following two cases of leptomeningitis the opportunity occurred of studying not only the histological, but also the bacteriological conditions present; and in this respect the cases are of more than usual interest, particularly the second one. Both were complicated by the co-existence of changes in the pia arachnoid prior to the advent of a terminal leptomeningitis. The clinical history throws but little light upon the semi-

purulent effusion into the meshes of the pia arachnoid. Much more information is, however, afforded by the post-mortem examination. In neither case was the leptomeningitis recognised during life, the co-existence of other lesions rendering the diagnosis of this condition of much difficulty.

CASE I.—This case of leptomeningitis occurred in a patient who suffered from extensive tuberculosis affecting bone in various situations and subsequently invading the lung tissue. Amyloid degeneration was present in a marked degree. Streptococci were present in the exudation in the meshes of the pia arachnoid.

Clinical Account.—Patient was a male epileptic imbecile, twenty-three years of age at the time of his death, which occurred one year after admission to the asylum. Prior to admission here patient had been for two years in another asylum. Patient required hand feeding, had a vacant expression, and answered questions in a loud voice at random. He was in a spare condition at the time of admission, with discharging sinuses on the front of the chest, said to have formed during the preceding twelve months, and from which portions of the right second rib were shed. The pupils were equal and reacted briskly. There was slight congenital defect of speech. Gait feeble. Knee-jerks present.

The heart's action was rapid. Mitral sounds loud; first sound impure. There was dulness over the apices of both lungs, especially the right. Expiration was, here and there over the chest, prolonged and harsh in character. The urine was amber-coloured and cloudy, with a copious deposit of mucus, but free from albumen; sp. gr. 1012.

As time went on patient's mental state underwent little change. At intervals of about a fortnight or longer he had a succession of three or four fits, which left him very prostrate for a time. The sinuses on the front of the chest underwent improvement, but the patient's physical state gradually deteriorated, a psoas abscess forming on the right side about two months before death. No suspicion of leptomeningitis was entertained during life.

The patient's mother stated that the tuberculosis was of seven years' standing.

Post-mortem Appearances.—The skull-cap, which was thick and dense generally, was thinned at the anterior part of the left temporal region over an area measuring 35 mm. by 30 mm. At the outer border of this area the bone was thickened by osteoplastic deposit. Between this area and the dura mater was a collection of cheesy material about 6 mm. thick. The dura mater was adherent to the margin of this area. On the inner surface of the dura mater, at the vertex, chiefly on the right side, a very thin reddish pellicle was observed.

The pia arachnoid membrane (Fig. 1) was slightly opaque and milky in aspect, especially about the vertex, but also to a less extent at the base and over the upper surface of the cerebellum. This membrane stripped readily over the left motor area without causing erosions of the subjacent cortex. The subarachnoid space contained an excess of clear yellow fluid, except in the following situations, where foci of thin pus, not sharply limited, but merging gradually into the sub-

arachnoid fluid, were noticed :—opposite the left temple, corresponding in position to the collection of cheesy material between the bone and dura mater ; over the posterior part of the upper end of the left ascending parietal convolution ; in both fissures of Sylvius, particularly on the left side near the bifurcation ; in the cisterna magna and cisterna pontis ; and on the upper surface of the cerebellum near the entrance of the veins of Galen. On cutting up the brain the exudation was found to extend from the Sylvian fissures to the islands of Reil, but was otherwise essentially confined to the situations mentioned above.

The appearance of the pia arachnoid is well seen in Fig. 1. This membrane, instead of its usual net-like character, was granular in aspect, being occupied by a semi-solid exudation. This is well seen in the fissure of Sylvius (*f. s.*), where the exudation is extremely abundant, but is also well seen in several other sulci at their outer part. The distension of the subarachnoid space with clear fluid, which was also prominent at the time of the post-mortem, has disappeared in the hardened section shown in this figure.

The brain, which was symmetrically formed, and weighed 1215 grammes, exhibited some wasting of the cerebral cortex, not considerable in degree, together with slight widening of the sulci. The cerebral tissue was soft (the post-mortem examination was made twenty-four hours after death), but exhibited in no part any gross focal lesion. The ventricles were distended to a moderate degree with fluid. The ependyma was everywhere smooth, with a thin coating of lymph deposited irregularly on its surface. The choroid plexuses were healthy in aspect. No microscopic change was present in the basal ganglia, cerebellum, pons, and medulla oblongata.

The heart (195 grammes) was small, the myocardium being atrophied and somewhat friable. The aortic valve was thickened, but no other lesions were noted. There was commencing atheroma of the root of the aorta.

The right pleura exhibited extensive old adhesions ; the left was healthy. The right lung exhibited considerable tubercular consolidation and caseation, chiefly at the right apex, with several fibroid scars scattered through its substance. The left lung exhibited scars here and there, particularly at the apex ; but no tubercles were present.

The liver (3255 grammes) and spleen (185 grammes) were greatly enlarged and exhibited marked amyloid change.

The kidneys (right 105 grammes, left 105 grammes) were small. The capsules were slightly adherent in places, the surface of the kidneys presenting a mottled mulberry aspect, and the cortex being atrophied. On microscopic examination considerable cirrhosis was noted, together with amyloid change, chiefly affecting the pyramids.

The peritoneum was free from tuberculosis. The small intestine showed amyloid change.

The right sterno-clavicular articulation was tuberculous, and discharged externally by a sinus lying over the sternum. The lower dorsal and upper lumbar vertebræ were carious ; a psoas abscess, not discharging externally, was present on the right side.

Several scars, as well as a small sinus, were seen on the front of the chest, due to old caries of the sternum and of the anterior ends of the

upper two right and the upper three left ribs and of both clavicles. There was also an old scar over the left side of the sacrum.

The body was extremely emaciated. Bedsores were absent.

Microscopical and bacteriological examination.—Sections of the pia-arachnoid made in the situation of the inflammatory exudation (Fig. 2 A) exhibit a dense infiltration of this membrane with new cells, chiefly multinucleated and with scanty cytoplasm, and identical with pus cells. In addition a fair number of mononucleated cells with more abundant cell-protoplasm are also met with. As the latter predominate where the exudation visible to the naked eye is least marked, they must be regarded as forming part of the cell infiltration, which accompanies the opacity and thickening of the pia-arachnoid associated with chronic brain atrophy. No basophile cells were met with. In addition to the cell infiltration of the pia-arachnoid, there is abundant fluid exudation, which, however, is for the most part absent from the section shown in Fig. 2 A. No well-formed fibrin fibrils are recognisable. In some places the nuclei in the exudation do not stain well and the section assumes an amorphous aspect, most of the formed structures having become disintegrated. The appearance of these foci is seen in Fig. 2 B.

In addition to the cell infiltration above described, and the excess of fluid in the meshes of the pia-arachnoid, blood-vessels are seen of varying size, usually much more numerous than in the section shown in Fig. 2 A. Strands of wavy connective tissue are also seen, especially under a high magnification. These are everywhere abundant, and where the small-cell infiltration is least marked it is readily seen that the connective tissue of the pia-arachnoid is increased in amount.

The cortex, stained by v. Giesen's method, exhibits little structural change. The nerve-cells are well seen; there is no increase in the neuroglia cells, and the blood-vessels are not increased in size. As a rule perivascular cell infiltration is not observed in the cortex, but occasionally a vessel is seen descending from the pia-arachnoid, as in Fig. 2 A, round which new cells can be recognised for a short distance from the surface. The optic nerves, stained by Marchi's method, showed degenerated fibres in moderate numbers.

Sections of the exudation, stained by Loeffler's or Gram's method, show streptococci in the badly-staining areas referred to above, in which few formed elements are recognisable (Fig. 2 B). The chains which these form are frequently of considerable length. Sometimes they are present in large numbers; sometimes, as in Fig. 2 B, they are scanty, and in places they are absent from the exudation. They are chiefly found in the necrotic areas; less frequently do they lie among the infiltrating cells, and they are not found in those parts of the pia-arachnoid which are free or nearly free from inflammatory exudation. The diameter of the individual streptococci varies somewhat even in the same chain. The average diameter is about 7μ . As already indicated they retain the stain by Gram's method. No tubercle bacilli were found in the exudation in the meshes of the pia-arachnoid.

Film preparations of the exudation made at the time of the post-mortem examination showed abundant pus cells, together with a few streptococci staining by Loeffler's and by Gram's method.

Inoculations on agar, peptone broth, and peptone gelatine were made.

but no growth occurred. This failure is probably to be explained by the circumstance that micro-organisms are not present in all parts of the exudation.

Summary.—In conclusion attention may be specially drawn to the following points of pathological interest in the case under consideration.

1. Two pathological conditions existed together in the pia-arachnoid membrane at the time of death, one recent, the other of old standing :

(a) The patient suffered from a leuco-serous exudation distributed in a patchy manner in the meshes of the pia-arachnoid, there being intervening areas apparently free from inflammatory exudation, though distended, like the ventricles of the brain, with clear yellowish fluid. The exudation contained streptococci in large numbers, agreeing in morphological appearances and staining reactions with *Streptococcus pyogenes albus* [Figs. 1 and 2]. Lymph was also present upon the ependyma lining the ventricles, in which streptococci of the same appearance and similarly staining were found. The subjacent cerebral cortex, stained by v. Giesen's method, was free from gross change.

(b) The pia-arachnoid also exhibited the changes commonly found associated with chronic brain atrophy in asylums ; that is to say, it was thickened and opaque in aspect, and distended with clear fluid in the areas lying between the semi-purulent foci, showing under the microscope an abundance of connective tissue, in the meshes of which were found numerous mononucleated cells with much cytoplasm, all which changes were prior to the onset of the terminal leptomeningitis.

2. The leptomeningitis occurred towards the close of a widely distributed advanced tuberculosis affecting bone and lung tissue, and attended by extensive amyloid changes in the liver, spleen, kidneys, and intestines. No suppurating lesions coming to the surface were present, with the exception of a sinus over the sternum ; this was presumably the source of the infection of the meninges of the brain. A cheesy deposit was found between the dura mater and bone opposite the left temple, but no tubercle bacilli were found in the pia-arachnoid.

3. During life no symptoms were noted suggesting the possible existence of leptomeningitis.

CASE 2.—The patient was an epileptic dement in whom leptomeningitis occurred as a terminal complication. The autopsy revealed extensive suppuration in the liver ; ascites and jaundice were also present. Diplococci were found in the exudation in the meshes of the pia-arachnoid.

Clinical Account.—Patient, a female, suffering from epilepsy since puberty, was admitted into the asylum at the age of thirty-three, with a diagnosis of epileptic dementia, the present being her first attack of insanity. On admission she was excited, incoherent in her speech, and violent towards others. She exhibited considerable defect of memory. Patient was a soldier's daughter ; married at the age of fifteen ; had five children, three living, two dead of bronchitis. The epileptic fits occurred regularly at the menstrual period. No history of insanity, epilepsy, apoplexy, or drink in patient's family ; patient had received no injury and had not suffered from any fever.

The pupils were equal and reacted normally. Sight good. Speech

well formulated. No facial tremor or asymmetry; tongue straight, scarred on edges and tip. Hysterical tremor of limbs at times. Complained of a sharp piercing pain through temples, which had persisted for some years past. The respiratory, circulatory and digestive systems were normal, except for defective appetite. The urine had sp. gr. 1018, was acid, pale, and free from albumen or deposit.

Subsequently to admission patient's condition showed but little change. The fits continued, usually at periods of about one month. Patient was at times quarrelsome and excited, and her memory continued defective. These symptoms appear to have slowly augmented as time went on.

Eight months before death, which occurred fifteen years after admission, slight icterus appeared. The liver dulness diminished; the abdomen was soft and not tender. Patient was free from pain. Subsequently the jaundice became more marked, but physical examination remained negative. Patient was emaciated and feeble. Three and a half months before death the icterus was much improved, and patient's physical condition also improved, but she became demented. Seven weeks before death the jaundice became aggravated and ascites developed with remittent pyrexia, the temperature rising in the evening to about 104°. This continued for about three weeks, when the patient died comatose, with a temperature of 105° F. Leptomeningitis was not diagnosed during life.

For the clinical notes of which the above is an abstract I am indebted to Dr. E. Birt.

Post-mortem examination.—The skull-cap was thick but not dense, the diploë being present in fair thickness. The dura-mater appeared healthy, and was free from thickening or adhesion to the skull-cap. The subdural space was empty. The pia-arachnoid was fairly thin, and its transparency but little changed. The subarachnoid space contained clear yellowish fluid, except in the following situations, where a thin semi-purulent exudation was present, both on the free surface of the brain and extending into the sulci; on the outer surface of both cerebral hemispheres near the great longitudinal fissure, especially in the frontal region; in the cisterna magna; and in the cisterna pontis. The clear fluid in the subarachnoid space was not, it may be observed, in large amount. The longitudinal and lateral sinuses were healthy. The arteries at the base of the brain exhibited atheroma, not marked in degree.

The brain (1370 g.) exhibited little change in aspect beyond the fluid and exudation in the meshes of the pia-arachnoid just described, and the corresponding atrophy, slight in amount, of the brain mantle. The lateral and third ventricles were dilated, but not to a considerable extent, containing only a small amount of fluid. The ependyma was everywhere free from granulations, but on its inner surface a very thin coating of lymph was observed. The choroid plexuses presented no change. No focal lesions were found in the cerebrum, pons, cerebellum, or medulla.

The lungs showed oedema and congestion, the left having a cretaceous nodule at the apex. The pleuræ were healthy.

The heart (330 g.) was large and flaccid. The heart-muscle was pale but of fair consistence. All the valves were normal. The coronary arteries were free from atheroma.

The peritoneal cavity contained seven pints of clear bile-stained fluid.

The liver (1870 g.) was enlarged, fatty, and exceedingly soft and flabby. It exhibited numerous small, softish, yellowish-white nodules beneath the capsule and scattered through its substance; also numerous small abscesses, deeply seated, and one about two and a half centimetres in diameter in the centre of the right lobe. The gall-bladder, which contained gall-stones, was distended, measuring about twelve centimetres by seven; the cystic duct was not much enlarged. The hepatic and common bile-ducts were much widened, the latter admitting the passage of two fingers.

The spleen was unchanged in aspect and presented no lesion.

The kidneys (R, 180 g.; L, 185 g.) were large, yellowish, very flabby and anæmic; they contained no cyst or calcareous deposit. Capsule thin and transparent, stripped readily. The adrenals exhibited no change.

There was considerable induration about the head of the pancreas.

Attached to the margin of the ductus communis choledochus in the second part of the duodenum, and projecting in a polypoid form into the lumen of the gut, was a pyriform soft growth measuring about three centimetres in length, and about two centimetres in diameter. With this exception no change was found in the alimentary canal. No enlargement of the glands of the mesentery could be detected.

The uterus presented a small fibroma in its anterior wall. The ovaries were small and fibrous. The Fallopian tubes and ligaments of the uterus were free from enlargement or inflammation.

The body was much emaciated. The abdomen was considerably distended. The surface was everywhere of a citron-yellow colour.

Microscopical and Bacteriological Examination.—Special attention was given to the condition of the pia-arachnoid membrane and to that of the liver.

As already mentioned, there was inflammatory exudation into the meshes of the pia, focal in its distribution, accompanied by a diffuse fluid distension of this membrane. After hardening the condition of the pia-arachnoid, especially in respect of the solid effusion, was much more readily and more accurately studied. It was found that not only was the exudation more dense than appeared at the time of the post-mortem examination, but that a certain amount of inflammatory exudation was also recognisable where previously only fluid distension was apparent. In the most affected situations (which have been already enumerated in the preceding section) the meshes of the pia-arachnoid are filled up in an irregular manner with an opaque, greyish-white, putty-like material, giving this membrane a finely mottled, muddy character (Fig. III); elsewhere the opaque exudation was thinner, and distributed in small masses or points in the areolæ of the pia, while in a few situations (as in the upper mesial sulci of the left frontal lobe in Fig. III) no trace of exudation could be recognised.

On making sections of the pia-arachnoid in different situations, the thickness of its connective-tissue framework, where the inflammatory exudation was relatively inconsiderable, could be recognised to be increased, though to the naked eye this membrane appeared at the autopsy to be fairly thin and delicate. At the vertex in the deeper part

of the pia-arachnoid, where the semi-purulent exudation is least, a fairly abundant infiltration of cells having large nuclei and abundant cytoplasm is seen (Figs. IV and V). This condition is evidently part of the pathological change in the pia-arachnoid ordinarily seen when, as in this case, the brain mantle is atrophied and the subarachnoid space contains fluid. Elsewhere the pia-arachnoid presents a small-cell infiltration varying in degree in different situations, and separated from the molecular layer of the cortex by the layer of large protoplasmic cells just mentioned. Where the small-cell infiltration of the pia-arachnoid is considerable, extensive areas of this membrane may be densely packed with cells, no other structures being recognisable. In such cases foci of disintegration can sometimes be recognised, as in the case previously described. Elsewhere the small-cell infiltration was less abundant, and more or less diffuse, but smaller foci formed by the small cells were frequently found distributed in the meshes of the pia-arachnoid. In some situations, again, the meshes of this membrane appeared distended with a fibrinous exudation, consisting sometimes of well-defined interlacing fibrils (Fig. IV), and sometimes resembling an irregular sponge-work. It was, however, frequently difficult to distinguish between the fibrin fibrils and the finer collagen fibres, even when a fibrin stain was used.

The small-cells infiltrating the pia-arachnoid were $8\ \mu$ to $9\ \mu$ in diameter, and contained irregular, horse-shoe shaped, or more frequently multipartite, nuclei (Fig. V), with somewhat scanty protoplasm, and were indistinguishable from the multinuclear leucocytes found in the blood. The large protoplasmic cells were similar to the one represented in the lower right-hand corner of Fig. V. They were largest and most abundant close to the molecular layer of the cortex, and were sometimes distributed irregularly, sometimes arranged side by side in rows between the connective-tissue strands. No basophile cells were seen.

The areas of small-cell infiltration were frequently quite free from micro-organisms. In a limited number of situations, especially where some disintegration was observable, the small amount of interstitial amorphous material lying between the cell nuclei (Fig. V) contained short, elongated micro-organisms, sometimes singly, more frequently arranged in diplococci, varying slightly in size, but usually about $1\ \mu$ in length, and staining by Loeffler's method. Where present in large numbers these micro-organisms sometimes appear to lie on the cells, and it is occasionally difficult to say whether the diplococci are on, in, or between the cells. Nevertheless, by far the greater number of the micro-organisms are clearly extra-cellular, and any other disposition is quite exceptional. The diplococci generally failed to exhibit a distinct capsule.

The blood-vessels of the pia-arachnoid are numerous, and usually filled with blood, except where the cell infiltration is dense, when few or no vessels can be seen. The small-cell infiltration is nowhere definitely perivascular, even at the edges of the large collections of these elements.

The vessels of the cortex, whether the inflammatory exudation in the pia was marked or slight, usually exhibited some degree of thickening, but were free from surrounding cell infiltration. The cortex itself,

stained by v. Giesen's method, showed no marked structural alteration.

The optic nerves exhibited degeneration, not marked in degree, by Marchi's method of staining.

The exudation in the pia arachnoid, examined in cover-slip preparations at the time of the autopsy, was found to exhibit fairly numerous diplococci $.8 \mu$ to 1μ long, which stained readily by Loeffler's and Gram's methods, and some of which were encapsuled, and resembled in these

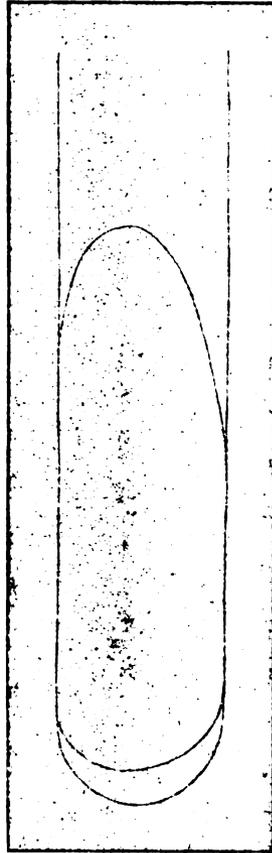


Fig. VI. — Case 2. — Culture from the exudation into the meshes of the pia arachnoid membrane of Case 2, made upon nutrient agar. Twenty-four hours' growth. Translucent colonies resembling fine droplets of dew, just visible to the naked eye, are seen upon the surface of the agar.

Slightly magnified.

respects, and in their general aspect, Fraenkel's *Diplococcus pneumoniae*. The lymph covering the ependyma of the ventricles, similarly examined on cover-slips, showed numerous polymorphonuclear leucocytes, between which were diplococci, which, when stained by Loeffler's method, corresponded in shape and size to Fraenkel's diplococcus. They exhibited no distinct capsule, and, like the preceding, were not contained in cell-protoplasm.

At the time of the autopsy inoculations from the inflammatory exuda-

tion into the pia-arachnoid were made upon two peptone-agar tubes, care being taken to avoid accidental contamination. At the end of twenty-four hours at 37° C., colonies were observed in each tube having the form of droplets of dew (Fig. VI), just recognisable with the naked eye, and arranged along the line of inoculation. During the two following days they increased in size, but their growth soon ceased. Cover-slip preparations from these cultures showed that they were made up of diplococci of the same size as those above described, not exhibiting capsules, not unfrequently arranged in short chains, rarely in long chains. These micro-organisms stained by Loeffler's method, and also by Gram's method. No further growth took place after the expiration of a week. The cultures appeared to be quite pure, no other micro-organisms beyond those just described being met with, and no other colonies developing subsequently.

To recapitulate, the diplococci present in the meshes of the pia arachnoid were frequently encapsuled, and resembled Fraenkel's *Diplococcus pneumoniae* in morphological characters and in growth upon agar. Both in cover-slip preparations of the exudation and in agar culture the diplococci stained readily by Loeffler's method, and also retained the stain by Gram's method. Nevertheless in sections of the pia-arachnoid after the brain had remained for ten days in Orth's fluid, and subsequently for nine weeks in Müller's fluid, the micro-organisms in the exudate slowly gave up the stain by Gram's method, and were completely decolourised if left long enough in alcohol. The same is true of the lymph present on the ependyma of the ventricles. This change in staining reactions must be attributed to the hardening fluid used, since the diplococci present in the exudate examined at the autopsy and in agar culture retained the stain by Gram's method.⁽¹⁾ The staining reaction exhibited by the micro-organisms in the exudation taken at the post-mortem examination and by the cultures indicate that they must be regarded as identical with Fraenkel's *Diplococcus pneumoniae*, and serve to differentiate them from Weichselbaum's *Diplococcus intracellularis meningitidis*,⁽²⁾ which closely resembles Fraenkel's diplococcus in morphological aspect and growth on agar, but does not stain by Gram's method, and is mostly intra-cellular, and also from the diplococcus described by Still,⁽³⁾ which is not stained by Gram's method, and on agar grows more rapidly, forming larger and thicker colonies.⁽⁴⁾

Sections of the liver, hardened in alcohol, showed in the foci of abscess formation numerous diplococci lying among the pus cells closely resembling those found in the pia-arachnoid in form and size, and staining both by Loeffler's and by Gram's method.

The polypoid growth in the duodenum at the orifice of the ductus communis choledochus was a large papilloma, apparently simple in character.

The head of the pancreas exhibited marked interstitial fibrosis.

Summary.—The principal features in this case may now be recapitulated:

I. Two pathological conditions were present together in the pia-arachnoid, one recent, the other of old standing.

(a) A leucofibrinous exudation into the meshes of the pia-arachnoid existed, distributed in an irregular manner. The exudation contained diplococci agreeing in morphological appearances, staining reactions,^(b) and cultural characters with Fraenkel's *Diplococcus pneumoniae*. Similar micro-organisms were present in the lymph covering the ependyma of the ventricles. The subjacent cerebral cortex appeared free from gross change when stained by v. Giesen's method.

(b) The pia-arachnoid, on microscopical examination, was found to be thickened and infiltrated with cells having abundant cytoplasm, these changes being such as are commonly associated with chronic brain atrophy and excess of fluid in the sub-arachnoid space and ventricles.

2. The leptomeningitis occurred in conjunction with suppuration of the liver substance. There was a papilloma at the opening into the duodenum of the ductus communis choledochus, which was dilated, as was also the gall-bladder, which contained gall-stones. The head of the pancreas was the seat of chronic pancreatitis. The foci of suppuration in the liver contained diplococci resembling those present in the pia-arachnoid, and were probably the source of the infection of this membrane.

3. During life any symptoms which may have been attributable to the condition of the pia-arachnoid were obscured by those due to the abdominal lesions.

(¹) The same was observed in the preceding case. A portion of the pia-arachnoid placed in alcohol at the time of the autopsy exhibited streptococci staining by Gram's method. After hardening in Orth's fluid (six days) and Müller's fluid (ten weeks) the streptococci ceased to stain by Gram's method, though they still stained readily by Loeffler's method.—(²) *Fortsch. der Med.*, Bd. v, 1887, 18 and 19.—(³) *Journ. of Path. and Bacteriol.*, 1898, p. 147. Compare also Bonome, *Ziegler's Beiträge f. path. Anat.*, Bd. viii, Heft 3.—(⁴) Fraenkel's *Diplococcus pneumoniae* is the organism most commonly found in meningitis. Thus Netter ["Recherches sur les méningites suppurées," *Archives gén. de Médecine*, Paris, 1889] found out of forty-five cases collected from various sources, Fraenkel's diplococcus in twenty-seven cases, Weichselbaum's *Diplococcus intracellularis meningitidis* in ten, and *Streptococcus pyogenes* in six.—(⁵) *Cf. p. 772.*

DESCRIPTION OF THE ILLUSTRATIONS.

Fig. 1.—Case 1.—Frontal section of the right hemisphere through the anterior portion of the temporo-sphenoidal lobes, in front of the optic chiasma. The arachnoid is thickened generally, and the meshes of the pia-arachnoid are filled up by inflammatory exudation, chiefly lying in the fissure of Sylvius (*f.S.*), and over the anterior portion of the island of Reil, but also recognisable at the great longitudinal fissure, and to some extent in most of the sulci, at least in their outer part. Microscopical examination of the pia-arachnoid in these situations shows the existence of numerous cellular elements, with or without streptococci.

l.v., anterior horn of the lateral ventricle; *n.c.*, nucleus caudatus; *c.c.*, corpus callosum. Above the lateral ventricle is seen the main mass of the corpus callosum lying behind the genu; below is seen a narrower layer of this structure, lying behind the rostrum, while connecting the two in the middle line is seen the septum lucidum; *opt. n.*, right optic nerve; *ol. n.*, right olfactory nerve, lying in the olfactory sulcus; *l.s.*, anterior extremity of right temporo-sphenoidal lobe.

The section passes through the commencement of the Sylvian fissure, *f.S.* just touching the operculum, and including the anterior part of the island of Reil.

Natural size.

Fig. II A.—Case 1.—Section at the summit of the posterior end of the third left frontal convolution in the neighbourhood of a focus of inflammation in the meshes of the pia-arachnoid. A portion of the grey matter (*a*) of the convolution is represented covered by the pia-arachnoid (*b*). The grey matter does not appear much altered in aspect. Three of its layers are seen, the molecular layer, next the pia; the layer of small pyramidal cells in the middle; and still deeper the layer of large pyramidal cells. The pia-arachnoid is increased in thickness by the presence, in very large numbers, of cells. The closeness with which these are packed together varies in different levels. In some situations the cells do not stain well; this feature is not well seen in the figure, though in other sections from this case, where the pathological process is more advanced, it forms a prominent feature. The pia-arachnoid exhibits some wavy strands of connective tissue in the middle of its extent, and also at the surface of the grey matter; elsewhere no connective tissue is recognisable under this magnification. Two blood-vessels are seen in the pia-arachnoid, and also a fine twig descending in the cortex.

As already mentioned, the section is made at the summit of a gyrus. Over the sulci the thickening of the pia-arachnoid is considerably greater, as is indicated in the preceding figure.

v. Giesen's stain, $\times 55$.

Fig. II B.—Case 1.—Section of a necrotic area lying in the inflammatory exudation in the pia-arachnoid. Very little evidence of structure can be made out, though here and there a nucleus can be recognised. Streptococci are seen in moderate numbers, forming chains sometimes of considerable length.

Stained by Loeffler's method, $\times 650$.

Fig. III.—Case 2.—Frontal section of the brain through the anterior extremities of the temporo-sphenoidal lobes, about half an inch in front of the optic chiasma. The subarachnoid space is everywhere wide; least so over the summits of the gyri, and usually considerably distended over the sulci, especially the Sylvian fissures. Inflammatory exudation is present in places in the meshes of the pia mater giving it a dull opaque character and a putty-like aspect, thus completely changing the normal appearance of this membrane, which is that of delicate threads or strands of connective tissue supporting blood-vessels of varying size. This exudation is most marked in the Sylvian fissures and over the third frontal convolutions. Accompanying the inflammatory exudation there is also fluid distension, which in some situations, particularly over the upper frontal region, is equally marked with the former. There is also some distension of the ventricles. A thin coating of lymph, which on close observation was recognisable on the ependyma, is not shown in the figure.

T.S., tip of the temporo-sphenoidal lobe; *F1, F2, F3*, first, second, and third frontal convolutions; *f.S.*, outer part of fissure of Sylvius; *ol.t.*, olfactory tracts, lying in the olfactory grooves; *l.v.*, anterior cornua of the lateral ventricles with the septum lucidum lying between, and more externally, on each side the caudate and lenticular nuclei, separated by the anterior portion of the internal capsule. Outside the lenticular nuclei are seen the claustra.

Natural size.

Fig. IV.—Case 2.—Section at site of exudation into the pia-arachnoid. To the right is seen the molecular layer of the cerebral cortex. This portion of the cortex is unchanged in aspect; in particular it will be noted that the blood-vessels are not increased in size and there is no perivascular cell infiltration. To the left lies the deeper portion of the pia-arachnoid membrane, separated, during the preparation of the section, by a short interval from the molecular layer. Owing to the greatly increased thickness of the pia-arachnoid, it is not possible to represent the whole of it in the figure. This membrane exhibits three distinct portions: next the molecular layer is a stratum consisting of a framework of

F.1.

F.1.

F.2.

F.2.

F.3.

F.3.

f.s.

f.s.

T.S.

T.S.

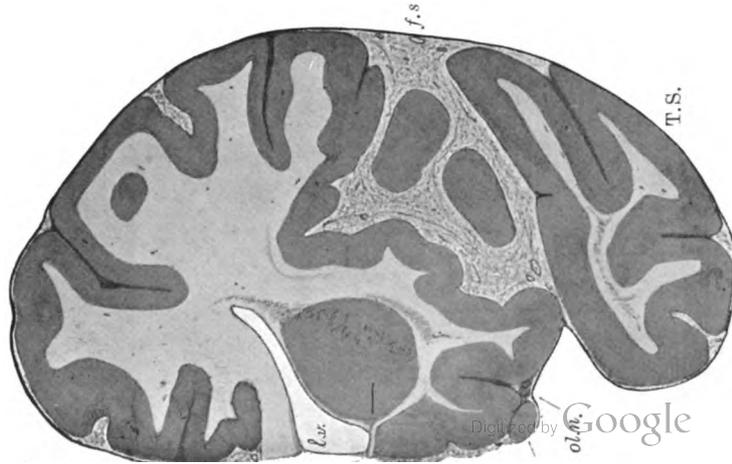


FIG. 1.

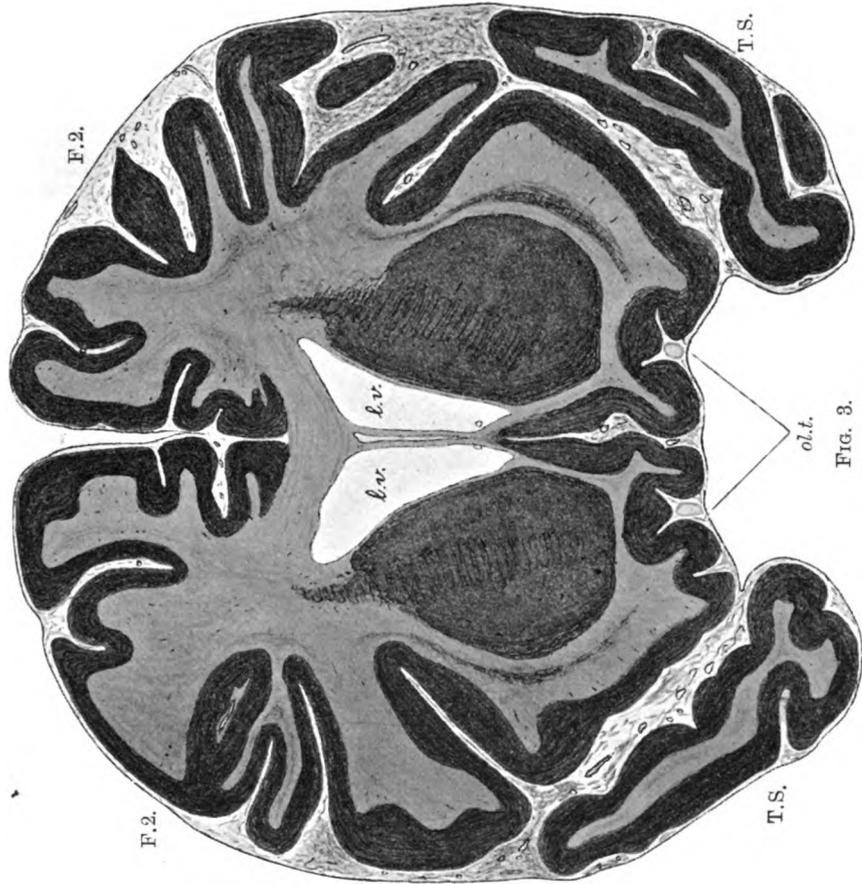


FIG. 3.

To illustrate Dr. BARRATT'S paper.

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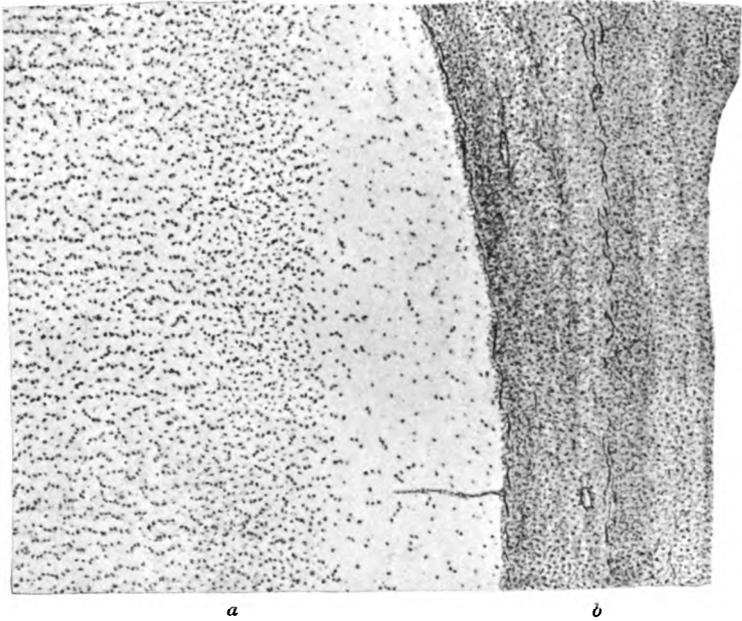


FIG. 2A.

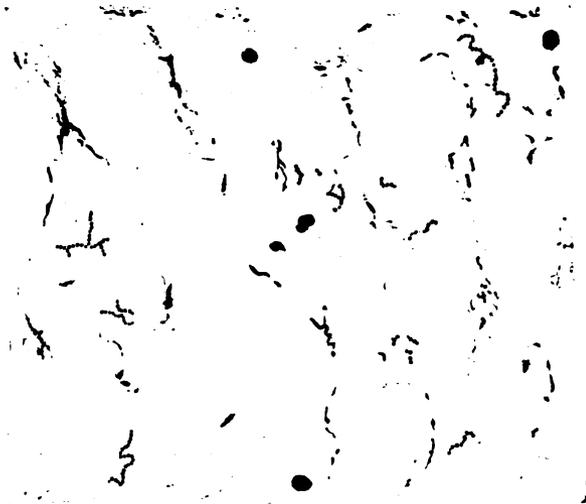


FIG. 2B.



FIG. 4.

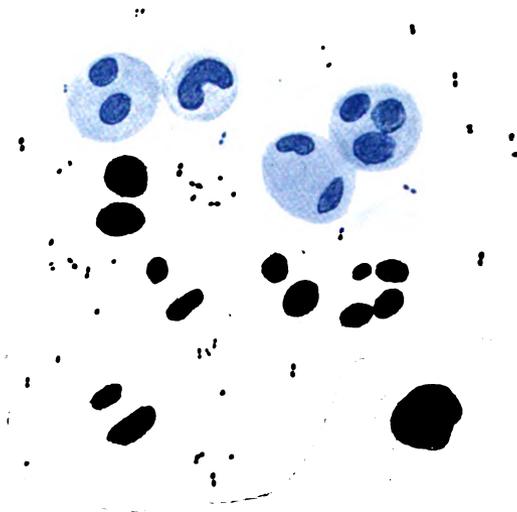


FIG. 5.

connective tissue, in the meshes of which are large numbers of cells of considerable size. The spaces in this layer are caused by tearing during the preparation of the sections. Next is seen a wedge-shaped area in which the meshes of the connective tissue framework of the pia-arachnoid are occupied by a network of fibrin presenting a finely reticulate structure, in which are recognisable a few cells. The rest of the section is occupied by a dense collection of small cells, among which no strands of collagen are to be found.

v. Giesen's stain, $\times 80$.

Fig. V.—Case 2.—To the left and above is a collection of multinuclear leucocytes embedded in a homogeneous material, apparently derived from the disintegration of the other small cells, staining unevenly in different parts, and containing micro-organisms, varying slightly in size, and generally, but not invariably, arranged in pairs. This sketch is made from a portion of the dense cell infiltration shown in the preceding figure.

Below and to the right is represented, for the sake of comparison, one of the large cells found in the deeper part of the pia-arachnoid, at the junction with the molecular layer (see Fig. IV). It possesses a large nucleus and its cytoplasm is very abundant.

Loeffler's method. $\times 1200$.

An Angeioma of Broca's Convolution. By A. F. SHOYER, M.B., Assistant Medical Officer and Pathologist, County Asylum, Lancaster.

ANGEIOMATA of the internal organs are not common and have usually been found in the liver. Including the present case I can find record of but seven instances of this tumour occurring in the brain. For the purposes of comparison I have examined the records of four previous cases, all that I could get access to, and shall preface the account of my own case with a short notice of each of these four cases.

The first case was one of a calcified angeioma in the centrum ovale of a female suffering from melancholia. The notice of the case is in the *British Medical Journal* for 1884, and is very short, containing no details.

In the *American Journal of Medical Sciences* for November, 1894, there is a record by Allen Starr and McCosh of an operation in which a plexiform mass of veins in the pia mater was removed from the parietal region. The patient suffered from epilepsy subsequent to two falls on the head, and the result of the operation was a cure. The brain substance beneath this tumour was normal.

In the archives for neurology of the London County Council Dr. Cecil F. Beadles describes a case of an angeioma in the left frontal lobe, in which there was a peculiar varicose con-

dition of the vessels of the pia mater, similar to what I shall describe below in my own case. The patient was an epileptic and became insane.

Dr. Ohlmacher describes a case in the *Journal of Nervous and Mental Diseases* for July, 1899, in which there were multiple cavernous angiomas, one in the callosal gyrus, another in the optic thalamus, and another in the cervical cord. In the same case there were also a fibro-endothelioma of the cerebral dura mater, an osteoma of the spinal arachnoid, and a hæmatomyelia. The patient was aged forty-eight, and subject to epileptic seizures, but was quite sane. He attributed his disorder to a blow on the head which he received at the age of twenty-five.

Dr. Ohlmacher considers that the angiomas had started in the pia mater, and invaded the brain substance.

The clinical history of my own case is incomplete, and her previous history impossible to ascertain, as she was a friendless pauper.

E. H—, a female aged 61, was admitted to the County Asylum, Lancaster, on the 5th of May, 1896. She was stated to have been insane two months, and the predisposing cause given was paralysis.

On admission she was described as “demented, restless, and fretful; said her life is poisoned. She is feeble and aphasic; right side is shrivelled and contracted from infantile paralysis.”

During the four years of her life in the asylum she was sometimes maniacal, and twice had epileptiform seizures, once in August, 1896, when the left limbs were convulsed, and again in July, 1897.

She died on February 4th, 1900, of colitis.

Autopsy.—External appearances.—Well-nourished; varicose veins on both legs, and pigmented scars on lower two thirds of each leg. Limbs on right side are contracted and their muscles atrophied, but the bones appear of equal length with those of the opposite side. *Skull* is thick and dense. Dura mater thickened and adherent to vault of skull all over.

Pia-Arachnoid.—Thickened, and at site of Broca's convolution adherent to tumour described below. The vessels in the pia mater over both hemispheres were dilated in an irregular varicose manner, some being as thick as a crowquill, and all being distended with clotted blood. These dilated vessels lay in the sulci, which gaped to receive them, as if from atrophy of the gyri. The dilated condition of the vessels was most marked over the left hemisphere, but still the largest vessel was in the right occipito-parietal sulcus. There was distinct flattening of the left frontal and parietal lobes. At the site of Broca's convolution was a somewhat bulging black tumour presenting a surface about an inch in diameter. The membranes over it were thick and adherent, and showed indistinctly the outlines of the gyri. To inspection and touch it appeared like a cyst full of coagulated blood. On horizontal section through the centre of the tumour it was seen to be a fairly well demar-



FIG. 1.

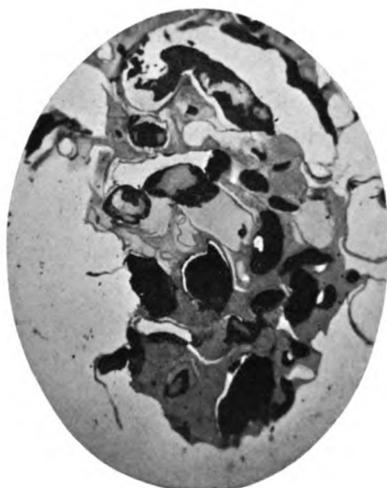


FIG. 2.



FIG. 3.

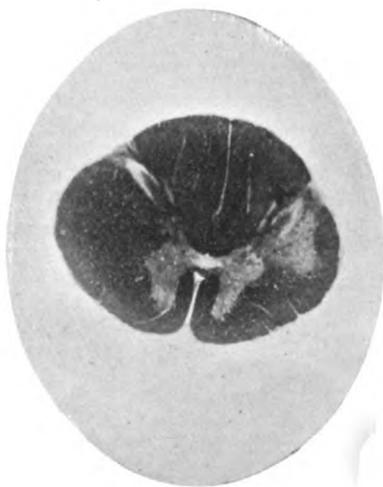


FIG. 4.

cated cavernous body, extending for about an inch in all directions, but not encapsuled, consisting of a mass of sinuses full of clotted blood. The left middle cerebral artery was very much thicker than the right, and in the Sylvian fissure gave off a stout branch to the tumour, after which it was of normal size. The white matter in the neighbourhood of the tumour had a porous appearance, owing to the presence of numerous small spaces or lacunæ in its substance. The left crus cerebri was about half the size of the right; the left half of the pons was shrunken, and also of the medulla, and the left pyramid small and dark in colour. On section of the cord the right crossed pyramidal track stood out by reason of its darker colour. There was extensive ulceration of the whole of the large intestine, and of at least the last two feet of the small intestine. The aorta was slightly atheromatous, and the kidneys moderately cirrhotic. The state of the other organs called for no note.

Histology.—1. The tumour itself is made up of spaces of varying size full of blood-clot, whose walls are comparatively thin, and composed of fibrous tissue, mostly lined with endothelium resembling that of a vein.

The substance between the sinuses occupies much less space than they do, and is evidently altered nervous material proper to the situation. There is a basis of connective tissue developed from the neuroglia, a very few degenerated nerve-cells, and a fair number of beaded, degenerated medullated fibres seen in sections prepared by Pal's method. The arteries have much-thickened walls, in which a hyaline change is taking place, giving them a glazed appearance in contrast to the clearly stained surrounding tissue. Around the arteries are dilated lymph spaces containing a few nuclei of cells, whose branching processes make up a fine areolar network. The pia mater over the tumour is very thick and contains numerous nuclei. There are numbers of normal capillaries in the matrix of the tumour.

2. The porous-looking white matter described above is seen to owe its appearance to the existence of numerous lacunæ of varying size, each of which contains the section of one or more blood-vessels, supported in a very loose network of areolar tissue, being probably the dilated perivascular lymphatic spaces.

3. The cortex in the near neighbourhood of the tumour shows marked changes, the pyramidal cells being scanty, and the tangential fibres altogether absent.

4. Sections of the cortex of the ascending frontal convolution at some distance from the tumour presented a fairly healthy appearance, the pyramidal cells being numerous and their processes well formed, while the tangential fibres are plentiful.

5. In the pons the left pyramidal fibres are largely replaced by connective tissue.

6. In the medulla there is old degeneration of the left pyramid, and the right nucleus of the twelfth nerve is smaller than the left.

7. Sections at various levels of the cord show sclerosis of the right crossed pyramidal track. The right anterior horn is in all sections considerably smaller than the left, but the cells are fairly healthy and more free from pigmentary and other changes than is usual in the chronically insane.

Remarks.—The curious condition of the vessels of the pia mater found in both this case and that of Dr. Beadles, and the case of Starr and McCosh, when the membranes only were affected, would seem to support Dr. Ohlmacher's conclusion that the condition originates in the soft membranes, but in the present case, as in that of Dr. Beadles, the main blood-supply was from the middle cerebral. Anæmiomata of the liver have been said to often arise from an injury, and it is interesting to note that in several of these cases of anæmiomata of the brain there is a history of previous injury to the head, just as in the present case there was previous hemiplegia, so that possibly the condition starts at the site of an old hæmorrhage, and is due to disturbance in the circulation of the brain.

DISCUSSION.

At the Annual Meeting of the Medico-Psychological Association, London, 1900.

Dr. MICKLE.—I have never come across any case of the kind, and I should think this one now described by Dr. Shoyer is almost unique. I did not hear anything as to whether the functions of the third frontal showed impairment during life, whether the case was right-handed or left-handed.

Dr. SHOYER.—The case is one of infantile hemiplegia. The patient was completely aphasic.

Occasional Notes.

The Annual Meeting of the Medico-Psychological Association.

THE old-time Annual Meetings when holden in London were always voted successful and delightful, and so forth. At least the country members always enjoyed them, and when our dear old friend Dr. Paul negotiated a dinner at the "Ship" every one carried away the most agreeable recollections of Greenwich and its neighbourhood.

Annual meetings nowadays are different, in accordance with the more strenuous spirit of the age. So when we record that a second consecutive annual meeting has been held in London, and has been most useful and successful, we do not mean merely from a social point of view.

The 1900 meeting has shown many noticeable features, and set out a fine record of work.

It has been the boast and the reproach of our speciality, its glory and its shame, that we cover too large a field ; but if we can always maintain as high a general level as that arrived at on the occasion of the recent London meeting we need not be ashamed of the extent of ground we cover.

The Presidential Address of Dr. Fletcher Beach was of unusual merit and interest. Departing from the general custom of presidents, he did not content himself with a mere review of the year, or with generalities of any sort. In selecting his subject he was happily able to deal with a topic on which he can speak with special authority, and a topic which none of our presidents appear to have made the subject of an Annual Address during the last forty-five years. Dr. Fletcher Beach's address, therefore, had not only the advantage of its own inherent interest and importance, but was also striking through its perfect freshness—a quality very rare in similar discourses.

The majority of our speciality do not practise in the particular branch in which Dr. Beach has risen to eminence, and are perhaps too little acquainted with its history. Accordingly they have heard or will read with interest his admirable account of the progress which has been made during the last sixty years in the treatment of certain defective classes of society, such as idiots, imbeciles, the feeble-minded, the epileptic, and juvenile delinquents. Though England and Scotland can claim to have been early pioneers in the work of improving the condition of the lunatic, and to have held the first place in this work for many years, yet the same cannot be said with regard to the care of idiots and the defective, wherein we have been neither very early nor very advanced.

Let us hope that the interest which the President's Address will arouse in the minds of our members, and the example of the useful, humane, and unostentatious work done by Dr. Beach, Dr. Shuttleworth, and Dr. Warner of recent years may stimulate some of our younger associates to devote themselves to this field, which is still so full of opportunities.

Dr. Barratt's paper on "Two Cases of Leptomeningitis" was very valuable, and well deserved the complimentary remark of the President that the demonstration of streptococcus in the brain in these cases was one of the most advanced observations that had recently been made.

Dr. Turner's able paper on "Some Alterations produced by

Disease in the Giant Nerve-cells of the Cortex" contained work of the very first order. Many competent judges agree in the opinion expressed at the meeting that Dr. Turner's preparations were the best of the kind that ever have been shown at the meeting of any society in this country.

Among the multifarious subjects which must engage the attention of alienist physicians, asylum construction will always hold a place. So able an exponent of modern views on this subject as the Treasurer to the Association described at the Annual Meeting the plans of the New Sussex asylum, and a lively discussion followed upon Dr. Hayes Newington's remarks.

Among other interesting contributions we must notice one from Dr. Wynn Westcott on alcoholism. Considering the importance which this subject is now assuming, we are glad to welcome at our meetings those who, though not belonging to our Association, approach this question in a scientific and humane spirit. Dr. Westcott's analysis was full and minute, though not perhaps containing very much that was not to some degree familiar to most of those who have our opportunities of becoming acquainted with the subject. It gave rise to an interesting discussion.

Other papers, such as those by Drs. Orr, Cowen, and Blair, will commend themselves to our readers; and this remark might well apply to the whole of the work which found a place on the agenda paper.

On the whole the matter brought before the Annual Meeting was varied and excellent.

British Medical Association: the Section of Psychology at the Annual Meeting.

The Section of Psychology at the Ipswich meeting was well attended, and the list of papers read bears testimony to the very considerable amount of work done. As will be seen in Notes and News, we have to thank Dr. Whitwell for a summary of the proceedings.

We congratulate the president of the section, Dr. Percy Smith, upon his important and interesting address, which will no doubt find attentive readers in the pages of the *British*

Medical Journal. He presented his conclusions relative to the prevention of insanity in a manner which should prove of definite value, for he impressed upon the medical profession the duty of advising against the marriages of persons strongly predisposed to insanity, and indicated the legal provisions which are necessary to limit the action of alcohol in the production of insanity and of syphilis in general paralysis. It is, indeed, of little avail to emphasise the apparent inefficacy of medicine in the cure of insanity while the captious critics refrain from attacking the evil at its source. Dr. Percy Smith's address cannot be too widely published, for until the country recognises that insane heredity, alcoholism, and syphilis are prime factors in the evolution of mental disorders, and until it acts upon that conviction, we cannot expect a marked alleviation of the burden which is so irksome to bear.

We need not refer to the other papers, important as some of them are, for their aim and scope are indicated in Dr. Whitwell's *résumé*, and they will be found in detail in the pages of the *British Medical Journal*.

We note that the members present adopted a resolution recommending that the section should in future be called the *Section of Psychiatry*, and suppose that the intention is to make *psychology* apply to normal conditions and *psychiatry* to abnormal. There is a decided convenience in being able in a word to discriminate between the two, and we are already familiar with the term *psychiatry*, as it is used on the Continent, although it has not met with entire approval among us. We want more distinctive terms, just as we require a convenient self-contained word to express that morbid condition characterised by fixed and limited delusions of a persistent type. *Paranoia* is an unfortunate word, *Psychiatry* may be normal or abnormal—there is nothing in either to denote the limitations which we desire to convey. Here, then, are two more questions for Notes and Queries.

Education and Psychology.

The Master of Downing College, Cambridge, Dr. Alexander Hill, has recently delivered two lectures on *Brain Tissue as the Apparatus of Thought*. These lectures, before the distinguished

audience of the Royal Institution, contained much interesting matter, skilfully arranged and characterised by originality of view. What is of interest to our readers, however, is not so much the contents of the lectures, but their significance.

That part of the English educational system which is represented by those archaic establishments, the Universities of Oxford and Cambridge, has hitherto so slightly recognised the existence of psychology as an aid to teaching, and of the brain as the fundamental fact of mental development, that the phenomenon just reported is at once astonishing and of good omen. That a Master of a College in Cambridge should appear before the public as a teacher competent to direct pedagogues in accordance with scientific methods opens vistas of hope for the expansion of our educational system in consonance with the dictates of modern psychology. The deadly upas of mediæval culture has too long spread its baleful influence over those educational establishments; but with Dr. Hill at Cambridge, and Dr. Burdon Sanderson at Oxford, the pure light of science is already proving a revivifying antidote to the bacteria of scholasticism.

Neurologists and Alienists.

Specialism in medicine, as in other departments of knowledge, has its special dangers in contracting the mental vision; but it has undoubtedly done much for scientific progress. Medical specialism, in addition to scientific advantages, offers a certain convenience to the public in enabling them to obtain the advice of those who have intimate knowledge of particular forms of disease, and who are therefore presumably best qualified to treat them.

Medical specialists, as a rule, abide by their specialism, and promptly relegate to other consultants any case which does not appear appropriate to their limitations. For instance, we should hardly expect that a patient who had strayed into the rooms of a neurologist would be retained for an operation to relieve him of a cataract.

It is, indeed, of frequent occurrence that one specialist in the course of his medical duties finds it necessary to have further

advice from another specialist. We have known a case of detached retina, apparently suffering from visual hallucinations, so obscure in local symptoms that the diagnosis could not be absolute without the opinion of a skilful ophthalmic surgeon.

This reasonable division of labour, which cannot but be productive of the best results for the patients affected, does not apparently hold good in regard to cases of mental disease. Herbert Spencer tells us that the labourer in the village ale-house says very positively what Parliament should do, and there are not a few occasions when the plain man declares himself a complete arbiter. Indeed, a learned judge placed it on record that he considered himself or any other intelligent man capable of diagnosing insanity. We need not enter on that discussion again, but would rather inquire how it is that neurologists have come to treat mental disorders which lie beyond the range of their ordinary practice.

This has arisen, no doubt, to a large extent owing to the circumstance that the friends of insane patients are most unwilling to recognise the fact of mental disorder. They prefer to consult a neurologist rather than any physician whose name is associated with the treatment of insanity, just as they prefer to speak of mania as hysteria and of gross delusions as mere fancies.

There is no doubt that the records of asylums and the case-books of alienist physicians show that insane persons are treated by neurologists in considerable numbers. Often these patients have been under the care not of one, but of several neurologists, a progress which has been described, perhaps with undue levity, as the "regular neurological round."

Whether the neurologists are specially qualified to treat mental disorders, or whether they should relegate them to the alienists, is a question for neurologists individually to decide. The alienist, however, to whom these patients usually come sooner or later, after running the gauntlet of such a pharmaceutical buffeting as is entailed by the regular round, is compelled to recognise that such a course of preliminary treatment, often combined with the stock prescription of travel, has not unfrequently introduced an ætiological factor of no small prognostic importance, and the moral is that the cobbler should stick to his last.

Notes and Queries.

Dr. Mercier's suggestion has not awakened that amount of interest which we expected ; but we are favoured with these replies, which may yet be followed by others.

As to the children of general paralytics begotten in the early stages of the malady, Dr. Clouston can only recall one case of idiocy.

Dr. Norman, in reference to the meaning of the word degenerate, is unprepared to say very much, as he conceives Dr. Mercier's query is intended to draw some expression from those who use the term degenerate with the looseness which has become so common. "Let the galled jade wince." But he thinks it may clear the ground for further discussion to point out that Morel, from whom the moderns who talk of degeneration profess to have derived their inspiration, thus defines degeneracy or degeneration (*la dégénérescence*):—"The clearest idea which we can acquire of degeneracy of the human species is by representing it to ourselves as a morbid deviation from a primitive type." Again, he speaks of what "*les êtres dégénérés*" really are: "a morbid deviation from the normal type of humanity." The vagueness of this has apparently been the cause from whence sprang the quite unscientific modern use of the word, but it should be remembered that Morel only implicitly sanctioned such usage, which he probably did not foresee. In his book on degeneracy he deals almost exclusively with very definite causes which tend to bring about short-lived and morbid varieties of the race—alcohol, lead, paludic poison, the essential factors of cretinism and of pellagra, starvation, etc.

The word is commonly applied to any and every phase of structure, conduct, mind, or appearance, normal or abnormal, to which the user of it wishes to apply an abusive term with a scientific flavour. A man is called a "degenerate" if he is a thief or a murderer, a sexual pervert, or any other form of criminal ; if he is insane, or eccentric, or a genius, or clever, or stupid, or commonplace ; if he has a misshapen jaw, or ear, or

head, or nose, or hand, or foot ; if he has a tattoo mark on his arm, or a wen on his neck, or a cast in his eye, or a carious tooth ; if he is solitary or social, benevolent or morose, a philanthropist or a miser, married, single, or widowed, tall or short, black-haired or red-haired. There is nothing that can be predicated of man that may not be called a mark of degeneracy.

C. A. M.

Dr. Urquhart asks, What is the meaning of the word *neurotic* ?

The word "neurotic" has much the same meaning as the word "degenerate." The meaning commonly attached to it would be best expressed by "something the matter with the nerves," "the nerves" being understood in a popular and ladylike sense. If a man has epilepsy, he is neurotic. If he had chorea when a child, he is neurotic. If he starts on hearing a noise, he is neurotic. If his grandfather was insane, he is neurotic. If he does not sleep very well, he is neurotic. If he suffers from migraine, if he has tic convulsif or tic douloureux, if he has asthma or neuralgia, if his great-aunt committed suicide, or his nephew is in Earlswood, if he is addicted to drink, or is a fanatical teetotaler, if he is worried by loss of money or elated by success, if he is dyspeptic, or gouty, or diabetic ; if, in short, we want to say of him something that will comfort us with the assurance that we know more than we do know about him, we call him neurotic ; and we receive an access of complacency from the use of the term. Neurotic is the Mesopotamia of neurologists. It is such a comforting word !

C. A. M.

Dr. Clouston suggests for consideration the question, Is there any record of murder having been committed by a general paralytic while he was as yet in the early stage of the malady ?

Part II.—Reviews.

The Grammar of Science. By KARL PEARSON, M.A., F.R.S. Second edition, revised and enlarged. London: A. and C. Black, 1900. 8vo, pp. 548, with 23 figures in the text. Price 7s. 6d. net.

That a second edition of this remarkable work should be required in a comparatively short time is gratifying evidence of the lively and wide-spread interest that is now taken in the fundamental problems with which it deals. Of its very great value in helping us to define and clarify our concepts of the fundamentals Space and Time, Matter and Motion, Mechanism and Life, it is needless to speak; and if, in what follows, the attitude assumed is mainly critical, it must be understood that this attitude is not adopted out of any inclination to disparage the great merits of the book, but rather to indicate that in spite of its somewhat dogmatic tone, the last word has not yet been said upon the questions of which Prof. Pearson treats.

The book is essentially psychological in its standpoint. "We are often told," says Prof. Pearson, "that the scientific method applies only to the world of phenomena, and that the legitimate field of science lies solely among immediate sense-impressions. The object of the present work is to insist upon a directly contrary proposition, namely, that science is in reality a classification and analysis of the contents of the mind; . . . in truth, the field of science is much more consciousness than an external world." This being so, it is to be regretted that the author's psychology is sometimes at fault, owing no doubt to the fact that his life's work has been done in another field, into which we shall not attempt to follow him.

The distinction that he draws in his first chapter between the "accurate classification of facts and observation of their correlation and sequence" on the one hand, and "the discovery of scientific laws by aid of the creative imagination" on the other, is scarcely valid. Classification of facts is but the discernment of likeness and unlikeness among them, the grouping together of the like and the discrimination of the unlike; and the discovery of a scientific law is neither more nor less than this. It is still the assimilation of likeness and the discrimination of unlikeness. Classification presupposes a principle under which the classification is made. The discovery of a law is merely the discovery of a new principle of classification. The processes are identical in nature, the only difference being that by the discovery of a scientific law we usually mean the discernment of wider, more recondite, more far-reaching similarities, and of nicer shades of discrimination, than in what we are accustomed to call classification.

Professor Pearson assumes freely the licence which is customary among psychologists of using old words in new senses, and of using new words for meanings which established usage has attached to old words. He follows Lloyd Morgan in calling a percept a "construct"—a very unnecessary innovation; and he gives to "sensation" a meaning that it has never had before. The passage in which this occurs is

very important, and needs examination. "Turn the problem round and ponder over it as we may, beyond the sense-impression, beyond the brain terminals of the sensory nerves, we cannot get. Of what is beyond them, of 'things—in themselves,' as the metaphysicians term them, we can know but one characteristic, and this we can only describe as a capacity for producing sense-impressions, for sending messages along the sensory nerves to the brain. This is the sole scientific statement which can be made with regard to what lies beyond sense-impressions. But even in this statement we must be careful to analyse our meaning. The methods of classification and inference, which hold for sense-impressions and for the conceptions based upon them, cannot be projected outside our minds, away from the sphere in which we know them to hold into a sphere which we have recognised as unknown and unknowable. The laws, if we can speak of laws, of this sphere must be as unknown as its contents, and therefore to talk of its contents as *producing* sense-impressions is an unwarranted inference, for we are asserting *cause and effect*—a law of phenomena or sense-impressions—to hold in a region beyond our experience. We *know* ourselves, and we *know* around us an impenetrable wall of sense-impressions. There is no necessity, nay, there is want of logic, in the statement that behind sense-impressions there are 'things-in-themselves' *producing* sense-impressions. About this supersensuous sphere we may philosophise and dogmatise unprofitably, but we can never know usefully. It is indeed an unjustifiable extension of the term knowledge to apply it to something which cannot be part of the mind's contents. What is behind or beyond sense-impressions may or may not be of the same character as sense-impressions, we cannot say. We feel the *surface* of a body to be hard, but its core may be hard or soft, we cannot say; we can only legitimately call it a hard-surfaced body. So it is with sense-impressions and what may be behind them; we can only say sense-impression-stuff, or, as we shall term it with a somewhat divergent meaning from the customary, *sensation*. By sensation we shall accordingly understand that of which the only knowable side is sense-impression. Our object in using the word *sensation* instead of sense-impression will be to express our ignorance, our absolute agnosticism, as to whether sense-impressions are 'produced' by unknowable 'things-in-themselves,' or whether behind them may not be something of their own nature. The outer world is for science a world of sensations, and sensation is known to us only as sense-impression."

The most striking and important characteristics of this curious passage are the violent effort that Prof. Pearson makes to tear himself free from the necessity of admitting that there is some thing-in-itself behind sensory phenomena, and the ultimate and complete failure of his attempt. He begins by postulating a noumenon; scared by the Frankenstein monster that he has raised, he does his utmost to repudiate and reject it,

But ah, well-a-day! the devil, they say,
'Tis easier at all times to raise than to lay;

and he ends by taking it to his bosom under the extraordinary title of "sensation"—a meaning of that word which, as he truly says, is "some-

what divergent from the customary" ! Of "things-in-themselves," he tells us, "we can know but one characteristic, and this we can only describe as a capacity for producing sense-impressions." Here he definitely and positively admits the existence of noumena ; but the sea of metaphysics is too cold, and he quickly withdraws his foot, and tells us that "to talk of its contents as *producing* sense-impressions is an unwarranted inference ;" "there is no necessity—nay, there is want of logic—in the statement." But yet he cannot get away from the noumenon. He calls it first sense-impression-stuff, and then sensation ; he seeks to minimise it, to deny it ; three times does he deny it, but then the cock crows. It clings to him like the air in which he moves, and at last he is fain to reinstate it completely. "Our object in using the word *sensation* . . . will be to express our ignorance, our absolute agnosticism, as to whether sense-impressions are 'produced' by unknowable 'things-in-themselves,' or whether behind them may not be something of their own nature." He will not allow it to be called a "thing-in-itself ;" he prefers to call it "sensation"—he can call it *abracadabra* if he chooses,—but the admission is plain and loud that *behind sense-impression there is something*. Whether this something is called the noumenon, whether it is called the object, whether it is called the thing-in-itself, or the sense-impression-stuff, or what it is called, does not matter one straw. The important thing is that Professor Pearson, no more than any one else, can do without it, or get rid of it, or conceive its absence. To call it sensation is most unfortunate, for then we have the same word with two utterly contradictory meanings. The ordinary meaning of sensation is an affection of the mind—an affection which corresponds in some way with, is complementary and opposed to, something outside the mind. Professor Pearson would have it mean this something outside the mind, and thus give it a signification the very opposite of that which is its accepted meaning. By his previous avoidance of the term in its ordinary sense, and his substitution of the term sense-impression, he seems to try to avoid the necessity of admitting the existence of that something beyond sensation to which sensation is due ; but his effort is fruitless. The very term sense-impression implies not only an impression received, but an impression given ; not only something which is impressed, but something which impresses ; and the same implication lies patent or latent in every term that could be selected. Try as we may to shut ourselves up in a world of "sense-impressions," we can no more get away from the certainty that outside of sense-impression there is something that impresses them, than the child can conquer its fear of darkness by shutting its eyes. That we have no warrant for inferring, no ground for speculating, what the nature of this noumenon may be, we should admit as freely as Professor Pearson could desire ; but to deny its existence is not merely unwarrantable, not merely groundless—it is impossible ; and this Professor Pearson admits, not only explicitly in the passages we have quoted, but implicitly again and again when he is most earnest in his denial. "It is idle," he says, "to postulate shadowy unknowables behind that real world of sense-impression in which we live. So far as they affect us and our conduct they are sense-impressions ; what they may be beyond is phantasy, not fact ; if, indeed, it be wise to assume a *beyond*, to postulate that the surface of sense-impressions which

shuts us in must of necessity shut something beyond out." "So far as *they* affect us"—here Professor Pearson assumes *their* existence. Conscious of this assumption, he proceeds to whittle *them* away; but he cannot. He cannot conceive himself "shut in" without at the same time conceiving a "beyond." An enclosure with nothing beyond the enclosure is nothing, or is infinity. There can be no shutting in without an outside; and even if he could abstractedly conceive such a possibility, he could not conceive it with respect to his own consciousness or universe of sense-impressions. He makes an appointment on one day to meet a certain man in a certain spot three days after. He then parts from his friend, and sees him no more until the time appointed. During that time he had no sense-impressions of his friend; yet he knew that his friend existed, and when they met he knew that his friend had continued to exist during the interval of his absence; and, try as he may, he cannot conceive that in that interval the friend existed only as "stored sense-impressions" in Professor Pearson's own mind. He believes with unshakable conviction that during that interval the friend existed noumenally, and this belief he can no more shake off or whittle away than he can do the same to the conviction of his own existence and of his own sense-impressions. Matter and motion, as we are accustomed to conceive them, may not exist; the ether may be but a figment of our imagination; space and time may be only modes of consciousness; but that, when we are face to face with one another, there exists something outside of our own consciousness which corresponds in some way to the sense-impressions that we experience, we cannot help being certain. Again I say that, of the nature of this noumenon, *ignoramus et ignorabimus*; but that it exists is a certainty as assured as the complementary certainty that we ourselves exist.

Professor Pearson's "Canons of Legitimate Inference" are the weakest part of his book, and it is only fair to say that in them the result of his own thought is least apparent. The first canon—that where it is impossible to apply man's reason, that is to criticise and investigate at all, there it is not only unprofitable but anti-social to believe—we may pass by as a harmless truism, merely remarking that to those who do so believe the canon is useless, for they do not recognise the limits of their powers of criticism and investigation; while, for those who do not so believe, it is needless.

The second canon is open to more destructive criticism: "We may infer what we cannot verify by direct sense-impression only when the inference is from known things to unknown things of the like nature in similar surroundings." The obvious defect in this canon is that it leaves in obscurity the difference between known and unknown. If the "unknown thing" is known to be of like nature and in similar surroundings it is not wholly unknown; and the whole gist of the validity of the canon lies in how much of the "unknown thing" is known. Of like nature? How nearly like? What is meant by nature? what by surroundings? what by similarity of surroundings? Is it always a legitimate inference that, since A. B. made a bull's-eye by the last shot, he will make another by his next? As stated, the canon is worthless for practical use.

The third canon seems to have been stated *pour rire*. "We may

infer the truth of tradition when its contents are of like character and continuous with men's present experience, and when there is reasonable ground for supposing its source to lie in persons knowing the facts and reporting what they knew." The first observation that presents itself in connection with this extraordinary canon is, why is it limited to tradition? In so far as it is valid at all, is it not valid for other and for all kinds of testimony? What exactly is meant by *like* character? what by *continuous* with men's present experience? and above all, what in the name of reason is meant by *reasonable* ground? The canon practically amounts to this, that we may believe a statement if we have reason to believe it.

The fourth canon says that, "while it is reasonable in the minor actions of life, where rapidity of decision is important, to infer on slight evidence and believe on small balances of probability, it is opposed to the true interests of society to take as a permanent standard of conduct a belief based on inadequate testimony." This canon seems to have been transferred from the pages of Mr. Martin Tupper. If it contained a definition of the adequacy of testimony it might be of value, but as it is it has a somewhat platitudinous flavour. Taking it as it stands, however, it appears that, according to Prof. Pearson, it is opposed to the true interests of society to take, as a permanent standard of conduct, a belief in a world external to consciousness, and yet this is what mankind has been doing ever since mankind has existed, and this is what mankind will continue to do as long as mankind exists; so that the true interests of society seem to have a gloomy future.

The weakness of Prof. Pearson's psychology is again exhibited in that part of the chapter on scientific law which deals with the perceptive "faculty" and the reflective "faculty." He treats the two "faculties" as radically distinct, and speculates as to possible relations between them. That psychology has long discarded the term "faculty" and the notion that it implies of the complete separation of mental processes; that the process of perception is but a simple case of reasoning, and that perception and reasoning are identical in nature, and, in so far as they differ, differ in content only; are views with which Prof. Pearson does not appear to be familiar. Yet he sharply criticises Mr. Herbert Spencer, and must therefore be familiar with the works in which these views are propounded.

Two expressions occur constantly throughout Prof. Pearson's book—"the routine of perception," and "resuming sense-impressions" or phenomena. Neither of these expressions is familiar, the meaning of neither is clear without explanation, and neither is defined or explained. It appears that by a routine of perception is meant an experience of unvarying sequence,—at least this is the meaning that seems to fit most appropriately the many occasions upon which the expression is used; but in the absence of a definition it is difficult to be sure, and this uncertainty of the meaning of a phrase that recurs on nearly every page is a serious defect in the book. By "resumption" of sense-impressions appears to be meant a summing up or brief description, but it would be much better if the meaning of these continually recurring phrases were strictly defined.

Prof. Pearson's theories of space and time, of matter and motion,

and, indeed, his theory of the universe generally, depends entirely upon the distinction that he draws between perception and conception, the latter being, in his view, something different from inference. If we allow him his premises, his conclusions are irrefragable, and in any case his theories have much to commend them, and must be taken into account in any future "resumption" of the universe. But it is evident that if there is no such clear and absolute difference between perception and conception as his theory demands, its foundations are undermined and its fabric insecure. Now, while of course there are important differences between perception and more formal reasoning, it is well established that there is no such absolute difference as Prof. Pearson assumes. By far the greater part of perception is, in fact, inference, and when this is kept in view, very much of the reasoning of the Grammar of Science is vitiated.

The chapters on Life and on Evolution are, as indeed is the rest of the book, in spite of the defects that have been pointed out, of very high value, and are still of very high value whether the theories they propound are valid or no. Their value lies in the true scientific spirit that pervades them, and in the truly scientific method that they follow. Not the least of the services which the author renders us in these chapters is his clear indication of the radical vices of Weismann's methods, and the lack of any real demonstration of the truth of his theories. At a time when these theories are swallowed whole by the majority of biologists, a searching exposure of their lack of proof was greatly needed, and will be heartily welcomed by the remnant who have not yet bowed the knee to the Baal of unsupported assertion.

In taking leave of the Grammar of Science it must be again asserted that the reader must not infer, from the insistence here laid upon its defects, that the general verdict is meant to be unfavourable. Prof. Pearson has been handicapped by a lack of psychological knowledge, which is the more to be regretted since it might so easily have been attained; but in spite of this lack he has produced a psychological work of very great importance, and one which, combining as it does original and vigorous thinking in both psychology and the more general aspects of biology, it behoves every student of insanity to study with diligence.

CHAS. MERCIER.

The Law of Inebriate Reformatories and Retreats, comprising the Inebriates Acts, 1879 to 1898. By WYATT PAINE, Barrister-at-Law. London: Sweet and Maxwell, Ltd., 1899, 8vo, pp. xxxvii, 226.

Mr. Paine has done useful work in arranging the various sections of the Inebriates Acts, and in giving notes and references together with an appendix containing the forms, rules, and regulations arising from recent legislation in regard to habitual drunkards. His work is prefaced by a slight sketch of the legal and medical aspects of inebriety. This section should be treated more thoroughly in any subsequent edition of the work, for the legal references are scanty and the medical discussion is flimsy and imperfect. The author expresses the hope

that his book will be found useful to justices of the peace and legal practitioners ; but medical men will do well to add it to their working libraries, for they are constantly consulted by the friends of habitual drunkards before justices or lawyers are called upon to intervene. This legislation has largely resulted from long-continued efforts of the medical profession, intimately brought into contact with the evils of inebriety in all its forms. There is now some tendency to forget these labours, and the law, engrossed as it is with that battered old fetish, the liberty of the subject, has not even yet come into line with medical opinion. We can only regard these Acts as tardy instalments of a legislation which must yet be completed.

We cannot congratulate Mr. Paine on his quotation from the *Medical Times and Gazette* of 1853, which gives a summary of gross changes found *post mortem* in the stomach, liver, and kidneys of a chronic alcoholic subject. It would not have been difficult for him to have ascertained the latest discoveries in the pathology of alcoholism, discoveries which elucidate nervous degeneration and consequent mental deterioration. His psychology requires to be modernized no less than his medical lore. Mr. Paine might as well have carried his legal references no further than Coke upon Littleton.

Apart from these unfortunate shortcomings, and in spite of apparent haste in preparation of details, the book will be useful to a wider circle of readers than the author ventured to hope. He shows that the earlier doctrine—that under no circumstances is drunkenness an excuse for crime—must be modified ; although he once more introduces that ancient formula about the person knowing right from wrong, while the real question is *could he help it?* Mr. Paine recognises that legislation shows a tendency to regard the criminal habitual drunkard as occupying an intermediate position between the ordinary criminal and the criminal lunatic ; and that punishment, while continuing deterrent, should be reformative rather than retributive. We abide in the hope that *all* punishment will, in time, be reformative rather than retributive.

Mr. Paine puts it very mildly when he says that the absence of any provision for enforced seclusion in the case of an unwilling drunkard is *perhaps* to be deplored. Those who have had experience in dealing with drunkards are very much more emphatic in the statement of their opinion. It is indeed an omission which is at once an injustice and a danger—far more of a danger than any interference with the sacrosanct right of a drunkard to go to perdition in his own way, too often dragging his family into the abyss after him.

We fully agree with Mr. Paine in his expression of regret that the impetuous voluntary applicant for admission into a retreat is not helped by these imperfect Acts of Parliament. The rich inebriate may, perchance, be saved, but the impoverished drunkard must choose between his hopeless struggle and the infringement of the law four times within twelve months. Truly we are great in the gentle art of compromising.

Passing from these matters of history to the Acts as arranged by Mr. Paine, we can only express our thanks that he has set them forth so that they can be readily referred to. Where there are apparent difficulties of application Mr. Paine gives explanatory comments, and, as

on page 31, submits his opinion as to the probable intention of Parliament. The relation of the Acts to Scotland and Ireland is fully dealt with, and the schedules and rules framed for the working of retreats and reformatories are given in detail—including that extraordinary regulation which provides that every officer of an inebriate reformatory shall be a total abstainer from intoxicating liquors. Why limit these restrictions to the officers? Why not enact that the Secretaries of State shall also practically show this more excellent way?

Médecine légale des Aliénés. Par R. VON KRAFFT-EBING. Édition française, traduite par le Dr. A. RÉMOND. 1^{er} Fascicule; Partie criminelle. Paris: Octave Doin, 1900, 8vo, pp. 544. Price (of the complete work) 20 fr.

The first volume of the French edition of Krafft-Ebing's *Lehrbuch der gerichtlichen Psychopathologie* deals with the relation of insanity to the criminal law.

Amongst the numerous works on this question the well-known treatise of the Viennese Professor occupies a foremost place. The clinical acumen and the mastery of lucid exposition which characterise all the author's contributions to science would of themselves fully explain this success; but it will nowise detract from our appreciation of these qualities to admit that advantages of environment have materially aided their expression in the present work. Forensic psychiatry involves the application of medical science, which is positive and of general validity, to legal institutions, which are conventional and local. As an obvious result of the nature of these factors, a reasoned method in this application is only attainable where the law, in its principles and in its procedure, largely accepts the guidance of science. In a great measure this condition is realised in Austria. The Austrian code provides that where the sanity of an accused person is called in question he shall be examined by two official experts, who shall furnish to the Court a full report on his mental capacity, specifying in case of insanity the extent to which in their opinion the diseased condition has influenced the individual's ideas, impulses, and acts. The problem is thus posed in a purely clinical form: the expert is not required to base his diagnosis on the doctrines, or to formulate it in the terms of an obsolete psychology. This enlightened attitude of the law naturally facilitates the task of the writer on legal psychopathology.

The present translation has been made from the last German edition, which, while retaining the original form of the book, embodies a large amount of new matter. Notably neurasthenia, the psychic disorders of menstruation, and the intoxications by morphia and cocaine come in for fuller treatment; and the chapter on psychic degeneracy has been largely re-written. The translator, Professor Rémond of Toulouse, has also interpolated notes on several points of detail, and has added a number of interesting illustrative cases.

The first part of the book deals with the subject in its general aspects. The author indicates that at present the criminal law rests on

the assumption of a relative freedom of the will, "responsibility" implying the existence in the individual of average motives and of average interaction of these motives. The non-acquisition of this relative freedom or its loss through mental diseases abolishes responsibility. The conception of responsibility is thus quite conventional, and its conditions are fixed by reference to the normal standards of the given social group. The application of these principles is shown in the codes of the chief European states.

The following chapters deal with the functions of the alienist expert; the general principles of diagnosis in mental disease; the dissimulation and simulation of insanity. On the last point the author agrees with the opinion that simulation of insanity is very uncommon, and he leans to the view that simulators are rarely quite sane. The capital importance for diagnostic purposes of a *complete* study of the clinical evolution of the given case is emphasised.

The remainder of the volume is devoted to the examination of the various clinical forms of mental disease in their relation to criminal acts. The classification followed—it is on the lines indicated by the author in his *Lehrbuch der Psychiatrie*—is perhaps rather minute for the special objects of the book; it leads occasionally to some repetition, and to the separation of conditions ætiologically similar. This is evident, for instance, in the case of psychic degeneracy, paranoia, and alcoholism.

The most interesting questions raised in this portion of the work refer to responsibility in "borderland" cases, discussed especially in the chapters on degeneracy, impulsive insanity, and *folie morale*. The author's conclusions are in the main in agreement with the views which Maudsley has made current in this country. In some passages, indeed, of the work, and in a few of the illustrative cases which he cites, Krafft-Ebing seems to press this doctrine rather far, assuming for the ethical and æsthetic ideas and emotions a development and a definiteness which their very relative and unstable nature hardly justifies.

Another chapter of special excellence is that dealing with criminal acts in states of pathological unconsciousness.

Beside the numerous clinical observations which are recorded *in extenso*, abundant references are furnished under each section to analogous cases in medical literature. This feature of the work adds greatly to its value, and should render it of practical utility even to those medical witnesses who, in submitting their conclusions to the superior wisdom of a British jury, have to present them in the psychological terms of the judicial tests of 1843.

It is much to be regretted that the book is disfigured by a quite un pardonable number of misprints.

W. C. SULLIVAN.

The Psychology of the Cephalic Index (Centralblatt für Anthropologie, Heft 3, 1900). AMMON, OTTO.

The alleged connection between mental characters and variations in length and breadth of the head has been vigorously proclaimed by Lapouge and other anthropo-sociologists, and still more vigorously,

perhaps with better reason, denied by Manouvrier. While, however, it is certainly in the highest degree hazardous to maintain that a brachycephalic head by its mere shape involves one set of mental characters, and a dolichocephalic head by its very triflingly different shape a totally unlike set of mental characters, it is another thing to assert that both sets of characteristics—cephalic and mental—are merely associated through bearing the marks of particular races. We know that head-shape is an extraordinarily persistent mark of race. It is not impossible, though still somewhat doubtful, that certain mental characters may cling to a race with equal persistence.

A Norwegian anthropologist, A. M. Hansen, has lately published a very remarkable little book on the long-headed and broad-headed population of his own country, and the mental qualities of each, and his results have been set forth with approval by Ammon, the distinguished German anthropologist. On account both of the importance of the subject and of its interest to British readers—since the population of our islands in the past was certainly recruited to a considerable extent from the Norwegian people—it may be worth while to state Hansen's conclusions briefly.

He regards the broad-heads as the more ancient of the two populations, descended from the people of the old stone age, who left the relics of their lives and ways in the Kjekkenmoddings; they occupied the extreme south of Norway, the only portion then inhabitable, and lived largely by fishing. When the glaciers receded grass-covered and wooded terraces began to appear inland; these were occupied by the long-headed people of the late stone age (by the Germans usually called "Aryans," in opposition to Sergi and others), a people of high culture, possessing flocks and cultivating the ground. As they approached the coast they met and subjugated the broad-heads and to some extent mixed with them, producing a crossed type. On the whole, however, the two populations have remained in much the same relations down to the present day. Now Hansen has produced two maps of Norway, each in various shades, one to show the relative prevalence of the broad-heads, the other to show the relative strength of the Conservative vote as shown by the Storthing elections in 1897, and the remarkable fact is revealed that these two maps almost exactly correspond in shade; where there are most broad-heads, there the Conservative vote is also strongest.

The western broad-heads have dark hair and eyes, the more easterly long-heads, fair hair and eyes. Hansen devotes chief attention, however, to describing the psychic characters of the two races, both as they exist now and as they have always been described in folk-tales and legends. The character of the broad-heads is for the most part unattractive. They are described in the old sagas as lacking in courage and generosity of spirit, as easily moved to falsehood and hate, always prone to be suspicious. The heroes of the sagas, on the contrary, are cheerful, open, brave, fond of fighting, careless of the future, ready for every undertaking and adventure, prone to argue and revengeful. Hansen gives a number of opinions by latter-day observers confirming these traits described in the sagas. The coast people of the west are reserved, melancholy, very religious, not fond of fighting, easily terrified, not willing to undertake labour if its use is not very obvious, in-

sincere, and unreliable; they are, however, bold sailors. The long-heads of the interior and east, on the other hand, are frank and cheerful, brave to recklessness, seldom losing their presence of mind and self-possession. They are clean, fond of adornment, and like to possess the best tools. Their freedom and love of independence is very marked, and they are keenly alive to insult. They are hospitable, but dangerous when drunk. They are not religious. The proportion of men furnished to the voluntary militia by the long-heads is three times greater than that furnished by the broad-heads, while, on the other hand, the latter furnish more than twice as much money per head to foreign missionary work as compared with the former. The broad heads, Hansen states, have a passion for equality, and are comparatively indifferent to freedom; the long-heads have a passion for freedom, and care nothing at all for equality.

It is scarcely necessary to add that mixture of races has to some extent confused these characteristics. It might perhaps be said that the character of the broad-heads is due to ancient conditions of slavery; to this Hansen replies that slaves by no means necessarily or always possess these characters. Nor are they the necessary result of the conditions in which the people have lived the west coast of Norway in the early stone age resembled Greenland now, yet the Greenlanders are a cheerful and hospitable people. Hansen regards the psychic character of the two races as very fundamental, and without asserting a direct relationship he points to the resemblance between the broad-heads and the Mongolian people of Asia. He even seeks to go deeper still, and to attempt a psycho-physical explanation of the difference between the two races, of the melancholic character of the broad-heads, the sanguine temperament of the long-heads; he thinks that the high, nervous tension of the long-head carries him over difficulties which wholly absorb the broad-head, while the storms of nervous energy which are only a pleasurable relief to the nervous tension of the long-head would be accompanied by terror and anxiety in the broad-head.

It appears that Hansen's results have been questioned, and he has consequently been induced to prepare similar maps of the whole of Scandinavia, including Denmark; the result has been that his conclusions have been confirmed.

HAVELOCK ELLIS.

A Study of Lapses (Monograph Supplement, *Psychological Review*). By H. HEATH BAWDEN, A.M. New York: Macmillan and Co. 1900. Pp. 122.

The happy thought has occurred to Mr. Bawden to study psychologically the problem arising out of a consideration of lapses (*lapsus linguae* and *lapsus calami*). The lapse is a very familiar phenomenon, and Mr. Bawden presents a vast number, some obtained by experiment, but most by observation of ordinary reading, writing, or conversation. It may suffice to refer to "the ox and the ax," "bass the pasket," the lady who wished "to go into the corch to pool," the clergyman who referred to "Jab and Dovid," and he who prayed, "O, Glod, we are

gad." Mr. Bawden does not absolutely guarantee the statement of the gentleman in church who nervously informed another that he was "occupying my pie," nor the sorrowful lament of the college don to the undergraduate who had "actually tasted two worms;" but he warrants so complex an error as "She went into the ashothecary's pop to get a cint pup." Such lapses usually arouse a smile, and are forgotten. Mr. Bawden has little difficulty in showing that they deserve the most serious study, since they not only carry us into the borderland between sanity and insanity, but also involve some of the most difficult problems in normal psychology. Being involuntary and automatic, lapses may seem as "most useful and unerring guides in the understanding of mental processes." In this monograph the author sets forth the range of the phenomena, and proposes the general lines of interpretation.

It is found that a lapse may usually be accounted for in one of three ways—(1) *lack* of sufficient attention, due to thoughtlessness, hurry, or nervousness; (2) *over-attention*; or (3) *divided* attention when two objects are both striving for the focal point in consciousness, thus, *e. g.*, producing modifications or transpositions of vowels or consonants. The first class may be regarded as belonging to the general class of fatigue phenomena, the second and third to what Stout has called conflict or competition. The mental process involved is thus by no means simple. Strictly speaking, the proximate causes of these errors are exclusively neither central nor peripheral, but partly both (the sensory and motor aspects being regarded as two ends of the same organic circuit); and even when artificially isolated in the laboratory a lapse forms a complex of processes. The specific occasions of error mentioned by the persons making them are numerous; fourteen classes are enumerated. They may, however, all be grouped according as they belong to the fatigue phenomena or to the phenomena of conflict or competition, in which latter case the functioning of the organism is altered or brought to a deadlock by reason of opposing stimulations.

Ballet has remarked on the gradual stages which intervene between functional verbal amnesia and aphasia; and Bawden points out that the query arises whether lapses, both oral and graphic, may not—some clearly and others less definitely—be due to an incipient aphasia or agraphia. He considers that we may at least say that the lapses are "due to a momentary malco-ordination in the corresponding cortical areas;" and he adds, "Certainly the frequency of errors in an individual sometimes reaches a degree and a constancy which might well be called a transitory or local aphasia or paraphasia"—in other words, a functional aphasia often due to temporary nervous exhaustion.

A large part of the study is devoted to an elaborate consideration of lapses on the basis of association, the conception of English psychologists, more especially Stout, being here followed. There is also a short section on the relation of lapses to the psychology of the ludicrous, the so-called deformity theory of the ludicrous receiving support. The author considers that if alienists continue to make as much progress as their past achievements warrant us in supposing, much light will be thrown on the phenomena of lapses, and indirectly on economy in educational methods. Although it cannot be claimed for Mr. Bawden (and he would not himself claim) that he has reached any novel conclusions,

his monograph is an interesting example of the way in which a trivial and neglected field of phenomena may be reduced to order and used to illustrate and emphasise some of the most complex and fundamental problems in psychology.

HAVELOCK ELLIS.

The Soul of Man. By Dr. PAUL CARUS. Second edition. Chicago : Open Court Pub. Co. ; London : Kegan Paul. 1900. Pp. 482, 8vo. Price 3s. 6d.

Kant and Spencer. Same author and publishers. 1899. Pp. 105, 8vo. Price 1s.

Both these books appear in the Religion of Science Library, already comprising forty-one volumes, not less than twelve of these being by the author of the present volumes, who is the editor of the series, and has also published half a dozen other books. Dr. Paul Carus is a remarkable man. He is the editor of the *Open Court*, a monthly magazine devoted to "the religion of science and the science of religion." He is also the editor of the *Monist*, a quarterly journal of philosophy and science, which competes successfully with any similar journal in existence, for Dr. Carus has succeeded in getting around him as contributors many of the most distinguished men in science, philosophy, and psychology to be found in Europe generally, as well as in America. Binet, Ribot, Hering, Weismann, Mach, Nägeli, Topinard, are but a few of the distinguished writers whom Dr. Carus has made well known in America. Moreover the books he has himself written testify to the most varied ability and erudition. He has published several laborious works on Buddhism, he has edited *Lao-tse* in Chinese, he has written a number of extremely interesting and valuable studies of the evolution of religious conceptions ; his spare moments he spends, apparently, in preparing lengthy primers and handbooks of philosophy, science, and ethics. He is a convinced monist, with a philosophy which he calls positivistic, in the sense that it is based, as he claims, on empirical facts, but it is in no sense the positivism of Comte or Spencer. Dr. Carus wishes to co-ordinate all the facts of science with metaphysical and religious dogmas into a whole which may be called objective and positive. The spirit of some mediæval schoolman seems to be re-incarnated in him, and, like an ancient *doctor universalis*, he courageously attempts to unite the visible and invisible worlds into a great knowable whole. Moreover this remarkable phenomenon manifests itself in Chicago, in the chief centre of the modern materialistic world, and seems, indeed, to flourish there exceedingly.

The Soul of Man is not the most important or the most original of Dr. Carus's works, but it is perhaps one of the most characteristic. The title itself is significant. Here we have what is mainly a fairly full and copiously illustrated popular account of the anatomy and physiology of the nervous system in men and animals, passing on, through a study of fecundation, to consideration of such complex psychological subjects as hypnotism and double personality ; and thence, by what the author feels to be no abrupt transition, to free will, death, immortality, and God. The author clearly believes that a positivist philosopher may

confidently sweep all things—"from God to foam-balls dancing down a stream," as the poet has it—into his vast net. It must be noted that the exposition of cerebral anatomy and physiology is clearly and ably done, though the author sometimes relies on authorities (like Meynert) who are now a little out of date, and ignores altogether the recent advances in cerebral histology. The specialist, to whom indeed the book is not addressed, may pass it with a smile, but still it is quite a remarkable feat by an intellectual athlete.

Kant and Spencer is a much slighter production, but it may interest those who will not be attracted to the more ambitious performance. Spencer has always shown a marked antipathy to Kant, and, as he has himself admitted, has never made himself familiar with his writings; Dr. Carus, while identifying himself neither with Kant nor with Spencer, considers that the latter has been guilty of injustice and misinterpretation towards a much greater thinker than himself. The book is a reprint of articles that appeared some years ago in the *Open Court*, and is to some extent a controversy between Dr. Carus and Mr. Spencer; the latter took, however, but a small part in the contest, and it must be admitted that both in argument and in knowledge of Kant Dr. Carus has the best of it. Apart from this controversial section the book consists of three papers. The first is on "The Ethics of Kant," and it is here argued that Kant's *ought* does not stand in opposition to the *must* of natural law. The second is a very interesting discussion of Kant's views on evolution, the author showing how radically Kant held to the idea of evolution and the mutability of species. The third paper is a criticism of "Mr. Spencer's Agnosticism" from the standpoint of the author's own very different "positivism."

The Development of Colour Perception and Colour Preference in the Child (*Archives of Ophthalmology*, vol. xxix, No. 3, 1900). HOLDEN and BOSSE.

The evolution of the colour sense has been dealt with by many experimental psychologists both in Europe and America, the most important investigation (apparently unknown to the present writers) being that of Garbini. A well-recognised difficulty in such investigations is the varying luminosity of colours; an infant when attracted by a bright colour may only see the brightness, not the colour. Holden and Bosse have made an ingenious attempt to neutralise this fallacy. This they have done by using as a background graduated sheets of grey paper, light grey at one end and dark grey at the other. On this were placed squares of coloured tissue-paper, the experimenter with eyelids half closed finding the spot where the luminosity of the coloured square equalled that of the background. The infants, when wide awake and in good humour, were then urged to pick up the coloured squares. With precocious infants of six months and average infants of seven or eight months a prompt reaction was usually obtained to red, orange, and yellow; in a few there was a sluggish and uncertain reaction to green and violet, and very seldom to blue. Between ten and twelve months there was often prompt reaction to all colours.

These experiments indicate a much earlier development of colour perception than is shown by Garbini and others ; whether this is due to imperfect elimination of luminosity or to defect in the earlier experiments is not yet clear.

To determine colour preferences coloured ribbons were used, and the order in which these were selected was noted in all cases in which evident choice was exerted. Up to twenty-four months of age the order of choice was that of the spectrum, beginning at the red end. In the years following, up to thirteen, an interesting evolution was observed. While during the first two years of life there was a marked preference for the red end of the spectrum, there comes a period of uncertainty, then a preference for the violet end of the spectrum, which is very decided at the age of eight, and is still well marked when the series ends. During the last year investigated, yellow and orange tend to be chosen last of all, while red tends to rise in favour. Had the authors continued their investigation into adult age they would have found, especially among women, a tendency to return to the earlier infantile preference for red (see, *e. g.*, summary of the earlier observations, H. Ellis, *Popular Science Monthly*, August, 1900).

This careful and important study, which was extended to over 200 children, while bringing out no very novel points, does much to give precision and cohesion to the more fragmentary results of earlier and often less competent investigators.

HAVELOCK ELLIS.

The Criminal, his Personnel and Environment: a Scientific Study.

By AUGUST DRÄHMS. New York: The Macmillan Co., 1900.
Pp. 402, 8vo.

This work can scarcely be termed a "scientific study," notwithstanding the claim made on the title-page. It is written by the resident chaplain of the San Quentin State Prison, the chief prison in California, and is a somewhat pretentious attempt to cover the whole extent of criminal anthropology and criminal sociology. But the author makes very little use of the information which he must have acquired in the exercise of his own functions, while his knowledge of the literature of his subject is mostly second-hand. He constantly misspells the names of the authorities he refers to ; he is often unable to appreciate the relative value of their opinions, and he cannot express his own opinions in clear and correct English. Fortunately his standpoint is that of an average common-sense person, and on most important questions no very serious exception can be taken to his main conclusions ; as regards the treatment of criminals, he advocates an unrestricted indeterminate sentence.

While it cannot be said that this work replaces any previous study of the criminal, or even that it brings the subject up to date, the book contains a few novel facts which may be noted. It is interesting to find that the inmates of San Quentin in all the measurements recorded according to the Bertillon system correspond very closely to the inmates of Elmira on the other side of the American continent ; the average variations are seldom over an inch, while both groups are inferior

(except in length of arm) to the Amhurst College students who are of about the same age. Classified according to class of offence, it is found at San Quentin that thieves have slightly the widest heads, "erotics" slightly the narrowest and longest heads, murderers short and moderately wide heads; so that the cephalic index of erotics is 79, of thieves 80.5, of murderers 83.5. This tendency of several offenders to be dolichocephalic harmonises curiously with the tendency noted in many parts of Europe for sexual offences to be associated with fair hair and blue eyes.

It might be expected that the author would show some freshness in dealing with the religious aspects of the criminal temperament. The only novelty in his brief discussion of this point is, however, contained in the remark that less than half per cent. of the inmates of San Quentin were real members of any Protestant church when their crimes were committed.

The book is preceded by a brief and too laudatory introduction by Professor Lombroso, and is followed by a bibliography of English criminological works which may be found useful.

Le Problème de la Mémoire-Essai de psycho-mécanique. Par le Dr. PAUL SOLLIER. Paris: Ancienne Librairie, Germer Baillière et Cie, Félix Alcan, éditeur, 1900, 218 pp. Price 3 fr. 75 c.

In this work Dr. Sollier endeavours to show the analogies which may be established between the various phenomena constituting an act of memory and certain others of a purely physical order and produced by simple transformations of forces. Reviewing the observations and speculations of former writers on the subject of memory, it appears clear that they are agreed in admitting that as a result of stimulation of the cells of the cortex determining a sensation, a perception, some permanent modification takes place which allows the reproduction of this perception at a given moment. But considerable difference of opinion exists concerning these two points: how or in what form does this imprint exist, and in what region of the brain does it take place? The view that the vibration itself produced by the initial stimulus is prolonged indefinitely—more or less enfeebled—is almost unanimously rejected nowadays; but some hold that there is a modification of the molecular condition of the cell and the creation of dynamical associations between the centres involved; others that this modification is only a tendency, a disposition to reproduce the impressions already received, on account of a functional differentiation. It is difficult to see how these hypotheses can be confirmed or upset. With regard to the second point, the seat of localisation, there are two views or opinions: either the images of memory are reproduced in the centres of perception themselves, or their seat is not in these centres but in some other region of the brain—in the aperception centre (frontal lobe) or in association centres interposed between the perceptive centres or centres of projection, the latter being the more commonly accepted view. Clinical knowledge and pathological anatomy throw light on this question, but

in its elucidation Sollier appeals especially to what he calls experimental psycho-pathology. At the outset he shows that the doctrine of partial memories arose from a confusion of terms and an erroneous interpretation of clinical facts. In analysing a complete act of memory—the mnesic act—six operations are considered: penetration or fixation, conservation, evocation, reproduction, recognition, and localisation; and these are successively studied with the conditions necessary or favourable to their performance. Thus we find that the conditions for fixation are the anatomical and physiological integrity of the cell; that the circulation and nutrition of the brain should be normal; that the intensity of fixation is not proportional to the intensity of stimulus, and that the latter must not exceed certain limits, etc. etc. In discussing conservation and evocation, much help is obtained from the study of disorders of speech: we know, for instance, that there is independence between the word and the representation of the object which it denotes. Our present knowledge tends to the assumption of the existence of a centre of ideation—a psychical centre in which the conservation and evocation of recollections take place. Moreover the observation of cases of amnesic aphasia—a subject ably handled quite recently by Prof. Pitres—leads to the conclusion that the evocation of words takes place in other centres than the motor and sensorial centres for speech. To explain certain modes of evocation of recollections, such as the evocation by determined emotional or cenæsthetic states, and also by voluntary attention and effort, the author suggests the presence of an increase of potential in the cerebral centres due to their functioning. To those who have read the author's work 'Genèse et Nature de l'Hystérie,' it would appear probable that the experimental psycho-pathology to which he refers at the beginning of the present book would be of the kind extensively illustrated there, and so it is. In discussing the reproduction of memory, and especially in the chapters on the theory of memory, reference is frequently made to experiments on hysterical subjects. Without impugning the accuracy of the observations, in view of the startling conclusions to which they seem to point, one must feel very sceptical as to these experiments. Among other deductions, Sollier advances that the brain is to be considered like any other organ, endowed with a sensibility of its own, the loss or return of which is accompanied by special reactions of a psychical kind, and by sensory reactions identical to those observed when other organs lose and recover their sensibility. Again, the return of activity in the frontal lobe, an evidence of which is shown by sensibility in the frontal region of the skull, brings about the evocation of recollections.

If we assume that the phenomena described are unmistakably objective, and that, as Sollier advances, suggestion and deception are excluded (they are provoked by "purely mechanical means, without any psychical intervention, even indirect"), we must congratulate ourselves on a signal advance in our knowledge of cerebral localisation, for thus: "If, therefore, I observe some isolated functional disorder with at the same time a patch of cranial anæsthesia, I shall be able to conclude that the function in question has its centre in the cerebral convolution subjacent to the anæsthetic patch; and I shall come to the same conclusion if, at the same time that some functional

disorder disappears, I see a patch of sensation reappear on an anæsthetic skull."

In this way Sollier concludes that memory has its seat in the pre-frontal centres, that it is here that takes place the evocation of recollections, etc.

Whatever other claims may be made in favour of this book, it does not lack originality, and it contains a fair *résumé* of numerous contributions to the subject of memory.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

ANNUAL MEETING.

The fifty-ninth annual meeting of the Medico-Psychological Association of Great Britain and Ireland was held at 11, Chandos Street, Cavendish Square, London, on July 26th and 27th, 1900. Dr. J. Beveridge Spence presided on the opening of the proceedings. The following members were present: J. B. Spence (President), Fletcher Beach (President elect), E. W. White, W. R. Dawson, R. L. Langdon-Down, J. C. Johnstone, T. S. Tuke, W. J. Mickle, A. R. Turnbull, O. T. Woods, R. H. Cole, C. Clapham, J. Chambers, H. G. Hill, D. Bower, C. K. Hitchcock, A. F. Shoyer, A. D. O'C. Finegan, C. S. Morrison, C. Caldecott, A. R. Urquhart, W. Douglas, A. N. Boycott, T. S. Sheldon, T. O. Wood, J. Stewart, C. Norman, J. A. B. Mackeown, G. A. Watson, A. W. Campbell, R. O. Graham, T. M. Moody, F. A. Elkins, J. S. Bolton, G. S. Elliot, H. Rayner, D. Rice, J. F. Briscoe, E. France, T. W. McDowall, R. C. Stewart, A. S. L. Newington, J. H. Macmillan, J. A. Oakshott, C. A. Mercier, R. R. Rutherford, L. A. Weatherly, G. E. Shuttleworth, J. Turner, R. R. Leeper, M. Craig, A. Miller, T. S. Clouston, G. F. Blandford, G. Hungerford, L. R. Oswald, R. P. Smith, W. E. Jones, F. S. Gramshaw, T. Drapes, H. T. S. Aveline, D. Blair, A. Helen A. Boyle, C. F. Beadles, A. E. Macdonald, P. W. Macdonald, W. G. Ellis, W. C. Sullivan, H. A. Benham, W. H. Kesteven, H. Stilwell, G. H. Savage, A. N. Davis, H. Johnston, J. Middlemass, G. A. Welsh, J. Warnock, H. Hayes Newington (Treasurer), Robert Jones (General Secretary), and others.

Visitors: Drs. T. Martin, Heywood Smith, E. E. Norton, C. Pirquet, F. E. Newberry, F. H. Greenaway, C. O. Laid, J. W. Barrett, B. Hollander, E. B. Forman, L.C.C., and Reed, Messrs Knipe and Lister.

Apologies for non-attendance were received from the following members: D. M. Cassidy, J. G. Soutar, M. J. Nolan, and Evan Powell.

The minutes of the previous Annual Meeting were taken as read and confirmed, and signed by the President.

The PRESIDENT.—I wish to take this opportunity of congratulating Dr. Moody on his recovery from his recent serious accident, and to express how glad we all are to see him again amongst us, and how much we regret that he has been unable to be present at our meetings as regularly as we know he would have desired.

Dr. MOODY.—I beg to thank you very much for your kind words regarding myself.

ELECTION OF OFFICERS AND COUNCIL.

<i>President</i>	FLETCHER BEACH, M.B.
<i>President Elect</i>	OSCAR T. WOODS, M.D.
<i>Ex-President</i>	J. B. SPENCE, M.D.
<i>Treasurer</i>	H. HAYES NEWINGTON, F.R.C.P.Ed.
<i>Editors of Journal</i>	{ HENRY RAYNER, M.D.
	{ A. R. URQUHART, M.D.
	{ CONOLLY NORMAN, F.R.C.P.I.
	{ DAVID BOWER, M.D.
<i>Auditors</i>	{ ERNEST W. WHITE, M.D.
<i>Divisional Secretary for—</i>	
<i>South-Eastern Division</i>	A. N. BOYCOTT, M.D.
<i>South-Western Division</i>	P. W. MACDONALD, M.D.
<i>Northern and Midland Division</i>	W. CROCHLEY CLAPHAM, M.D.
<i>Scotland</i>	A. R. TURNBULL, M.B.
<i>Ireland</i>	A. D. O'C. FINEGAN, L.R.C.P.I.
<i>General Secretary</i>	ROBERT JONES, M.D., B.S., F.R.C.S.
<i>Secretary of Educational Committee</i>	C. A. MERCIER, M.B.
<i>Registrar</i>	H. A. BENHAM, M.D.

Members of Council.

G. H. SAVAGE, M.D.	1898	R. D. HOTCHKIS, M.D.	1899
J. CARLYLE JOHNSTONE, M.D.	"	H. T. S. AVELINE, M.R.C.S.	"
A. W. CAMPBELL, M.D.	"	W. R. DAWSON, M.D.	"
*T. S. SHELDON, M.B.	"	H. GARDINER HILL, M.R.C.S.	1900
JAMES CHAMBERS, M.D.	"	ALFRED MILLER, M.B.	"
OSCAR T. WOODS, M.D.	"	C. H. BOND, M.D.	"
G. STANLEY ELLIOT, M.R.C.P.	1899	F. P. HEARDER, M.D.	"
R. PERCY SMITH, M.D.	"	J. G. HAVELock, M.D.	"
D. M. CASSIDY, M.D.	"	L. A. WEATHERLY, M.D.	"

* Dr. Sheldon, who had not attended a meeting of the Council during the year on account of ill-health, was re-elected at the Council in May, 1900.

EXAMINERS.

Examiners for the Certificate in Psychological Medicine.

England: J. KENNEDY WILL, M.B., THEO. B. HYSLOP, M.D. Scotland: JOHN KEAY, M.B., G. M. ROBERTSON, M.B. Ireland: C. E. HETHERINGTON, M.B. M. J. NOLAN, L.R.C.P.I.

Examiners for the Nursing Certificate of the Association.

R. PERCY SMITH, M.D., J. B. SPENCE, M.D., A. CAMPBELL CLARK, M.D.

ELECTION OF HONORARY MEMBERS.

Dr. URQUHART said the following gentlemen have been proposed as Honorary Members, in accordance with the rules of the Association:

G. ALDER BLUMER, M.D., appointed Assistant Physician to the Utica State Hospital, U.S.A. in 1880, succeeded Dr. J. P. Gray as Medical Superintendent in 1887, elected Medical Superintendent of the Butler Hospital for the Insane at Providence, New Jersey, in 1899. Dr. Blumer is an Englishman who took his medical degree in America, and spent some months in 1884 studying psychiatry in Europe. He has been an ordinary member of the Association since 1890. During his tenure of office in the Utica Asylum Dr. Blumer brought the industrial pursuits of the patients to a high pitch of perfection, having established knitting, spinning, weaving, shoe-making, brush-making, printing, bookbinding, and farm colonies on a business footing. For a time he was sole editor, and latterly has been joint editor of the *American Journal of Insanity*, and in addition to the ordinary duties of editorship has found time to write valuable papers on subjects relating to insanity—on the care and commitment of the insane, on employment of the insane, on music, etc.

Dr. JOHANNES BRESLER, M.D., was educated at Breslau, Munich, and Leipzig, having taken his medical degree at the University of Leipzig. Having served in

Dr. Kahlbaum's Asylum at Gorlitz, at Breslau Asylum, at Koston Asylum, after a period of military service, Dr. Bresler was appointed to the Asylum of Freiburg, in Silesia, where he remains. He is an honorary member of the Medico-Psychological Society of Paris, and is the founder and editor of the *Psychiatrischen Wochenschrift*. Dr. Bresler has made many and valuable contributions to the literature of insanity, a list of which I lay on the table. He has been a corresponding member of this Association since 1896.

Dr. ANT. RITTI, M.D., Lauréat of the Academy of Medicine of Paris, 1880, General Secretary of the Medico-Psychological Association of Paris, Editor-in-Chief of the *Annales Médico-Psychologique*, Physician to the Charenton Asylum since 1879, and Medical Inspector of the Insane in the Department of Seine since 1881. Dr. Ritti's distinguished career has been marked by many well-known and highly appreciated works, a list of which I lay on the table. He is now Secretary for the Section of Psychiatry in the International Medical Congress, and has given a courteous and pressing invitation to those of our members who may find it convenient to go to Paris at this time.

The PRESIDENT.—It is well that you should know something about the gentlemen for whom you are called upon to vote, and Dr. Urquhart has taken so much interest in the matter that I think you will agree that his statement has been quite satisfactory, and declare Drs. Blumer, Bresler, and Ritti duly elected honorary members.

ELECTION OF ORDINARY MEMBERS.

The following candidates were declared duly elected members:—Anderson, John Charles, M.D.Durham, Assistant Medical Officer, Darenth Asylum, Dartford, Kent (proposed by F. R. P. Taylor, Edwin H. Beresford, and Robert Jones); Ellis, Henry Reginald, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, County Asylum, Morpeth, Northumberland (proposed by T. W. McDowall, J. T. Calcott, and Robert Jones); Fleck, David, M.B., Ch.B., B.A.O.Ireland, Assistant Medical Officer, Metropolitan Asylum, Caterham, Surrey (proposed by G. Stanley Elliot, P. E. Campbell, and Robert Jones); Laing, Charles Frederick, M.B., C.M.Glasg., Assistant Medical Officer, County Asylum, Parkside, Macclesfield, Cheshire (proposed by T. S. Sheldon, Crochley Clapham, and Robert Jones) [proposed through Secretary of Northern and Midland Division]; Lambert, Ernest Charles, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Darenth Asylum, Dartford, Kent (proposed by F. R. P. Taylor, Edwin H. Beresford, and Robert Jones); Murphy, Jerome J., M.R.C.S.Eng., F.R.C.S.Lond., Assistant Medical Officer, Darenth Asylum, Dartford, Kent (proposed by F. R. P. Taylor, Edwin H. Beresford, and Robert Jones); Wilson, James, Patterson, M.B., Ch.B.Glasg., Assistant Medical Officer, Metropolitan Asylum, Caterham, Surrey (proposed by G. Stanley Elliot, P. E. Campbell, and Robert Jones).

The TREASURER laid the balance-sheet for 1899 before the meeting (see p. 806).

AUDITOR'S REPORT.

Dr. OUTTERSON WOOD.—I have to state that we have examined the accounts, and vouchers, and checked the items of receipt and expenditure, and have certified the same and the balance-sheet to be correct. We are pleased to be able to report an increasing roll of members, and that the finances of the Association are in a very satisfactory condition.

TREASURER'S REPORT.

The TREASURER moved the adoption of the Report, as printed on the following page, and Dr. CONOLLY NORMAN seconded the motion.

Dr. MERCIER drew attention to the fact that the total income from the sale of the JOURNAL and HANDBOOK and from the advertisements had undergone a serious diminution. He also called attention to the amount of £134 expended upon Annual, General, and Divisional Meetings. He considered that the assistance of reporters at Divisional Meetings was not necessary, and, indeed, was not allowed according to rule. He suggested that some such arrangement as that which obtained at the British Medical Association Meetings could be introduced, and concluded by moving that the Treasurer be surcharged with whatever expenses had been incurred in reporting the proceedings of Divisional Meetings. This was seconded by Dr. CONOLLY NORMAN.

1898. Dr.
£ s. d.

Expenditure.

To Journal, Printing, Publishing, Engraving, Advertising, and Postage ...	£	s.	d.
Examinations, Association Prizes, and Clerical Assistance to Registrar ...	513	7	1
Petty Disbursements, Stationery, Postages, &c. ...	67	19	10
Annual, General, and Divisional Meetings ...	48	3	7
Rent of Premises at 11, Chandos Street, care of Office, etc. ...	134	8	3
Audit and Clerical Assistance ...	51	0	0
Miscellaneous ...	6	6	0
Library ...	36	6	4
	15	0	10
Balance ...			
	873	13	10
	70	13	6
	£943	5	4

Income.

By Dividends ...	£	s.	d.
Sale of Journal ...	181	3	4
Sale of Handbook ...	30	6	0
Advertisements ...	30	17	0
Fees, Certificates of Psychological Medicine ...	233	5	4
Fees, Certificates of Proficiency in Nursing ...	21	0	0
Subscriptions ...	94	3	0
	115	3	0
	585	7	6
	£943	5	4

Cr. 1898.
£ s. d.
10 10 6
£ s. d.
10 10 6

BALANCE SHEET—31st December, 1899.

Liabilities.

Journal Account, balance of ...	£	s.	d.
Petty Disbursements Account, balance of ...	26	10	4
Examinations Account, balance of ...	10	1	0
Meetings Account, balance of ...	45	7	9
Gaskell Fund ...	4	5	0
Rent Account ...	4	5	0
Miscellaneous ...	31	0	0
	13	8	9
Balance on 1st January ...	1090	10	3
Add.—Balance of Revenue Account ...	70	13	6
Dr. Paul's Bequest ...	100	0	0
	1191	3	8

Deduct:— Decrease in value of New Zealand Stock ...	£	s.	d.
New Zealand Stock (Hack Tuke Memorial) ...	1191	3	8
Subscriptions written off ...	55	14	3
	1136	9	5
	£1141	11	7

Assets.

Lloyds Bank:—Bankers ...	£	s.	d.
New Zealand Stock: ...	246	5	3
£4 per cent. value at this date ...	£323	8	0
Hack Tuke Memorial ...	333	11	3
Victoria Stock 3 per cent. (Dr. Paul's Bequest) ...	100	0	0
	746	19	3
Sales Account, balance ...	111	8	4
Subscriptions Account, balance ...	113	18	6
Fees Account, balance ...	36	19	0
Gaskell Fund ...	0	1	0
	£1141	11	7

1898.
£ s. d.
246 5 3
335 16 9
346 7 9

T. OUTERSON WOOD, Auditor.
ERNEST A. WHITE, Acting Auditor.

E. WOODINGTON, C.A.

H. HAYES NEWINGTON, TREASURER.

Dr. OSCAR WOODS thought the question was one which might be very fairly brought forward and considered.

Dr. MACDONALD hoped that the members of the Association would be loth to do anything which would curtail the usefulness of the Divisions. He considered that this question, which was continually being brought up, of the amount expended by way of secretarial help to those who really do the fagging work of the Association, was not worthy of consideration at an annual meeting.

Dr. OUTTERSON WOOD, as one of the Auditors, pointed out that he was bound to say that the expenses of the Divisional Meetings were very moderate. He thought that the Association ought to be very thankful that there were men who were working as the Divisional Secretaries were working. They did an enormous amount of good work at a very moderate expense.

Dr. CLOUSTON said that reporters had been employed for many years by Divisional Secretaries, but if any item of expenditure seemed to be on the increase, it was quite right to have it debated. He congratulated the Treasurer and the Association on the healthy state of the finances.

The TREASURER, in reply to Dr. Mercier, said he thought a reporter was undoubtedly useful where there were minutes of the Association and debates being carried on. He maintained that such work ought to be done by the reporter. He thought that Dr. Mercier was carrying the question in the wrong direction when he referred to the Divisional Meetings, at which the reporting expenditure was, as a rule, very moderate. In the case of the Annual Meeting, when two days were devoted to scientific work, there would naturally be some expense; and here he thought with Dr. Mercier that speakers on scientific subjects might well be asked to jot down their remarks. He had tried to find out why there should be a diminution in the sales of the JOURNAL, etc., but could obtain no explanation. As to advertisements there was a most satisfactory increase, £30 17s. this year as against £19 or £20 last year. With regard to the JOURNAL, he had taken out the figures for the Editors at their request, and he found that the JOURNAL was carried on very economically considering its value.

Dr. MERCIER then withdrew his motion, and the Treasurer's report was received and adopted.

Statement of the Payments made and received by the Treasurer on account of the Gaskell Memorial Fund.

1898. Dr.		£ s. d.		1898.		Cr.	
Aug. 3.	Examiners' Fees (Dr. Percy Smith, Dr. Mercier)	4	4	0	July 21.	Balance	50 19 9
Dec. 31.	Balance	46	15	9			
		£50	19	9			£50 19 9
1899.		£ s. d.		1899.		Cr.	
Nov. 20.	Transferred to Deposit Account	93	10	11	Jan. 1.	Balance	46 15 9
						Dividends	23 7 1
		£93	10	11	July 1.	Dividends	23 7 1
					Dec. 31.	Balance	0 1 0
							£93 10 11
1900.		£ s. d.		1900.		Cr.	
Jan. 1.	Balance	0	1	0	Jan. 1.	Dividends	23 7 1
Aug. 28.	Dr. Maurice Craig (Prize)	35	0	0	July 1.	Dividends	22 19 1
Sept.	Examiners' Fees (Dr. Percy Smith, Dr. Kennedy Will)	4	4	0			
Sept.	Balance	7	1	2			
		£46	6	2			£46 6 2

COMPLIMENTARY MOTION.

The PRESIDENT, in proposing a vote of thanks to the officers of the Association said:—When I mention our friend Dr. Hayes Newington, who is, perhaps, the Association's oldest and busiest officer, I am sure that you will agree with me that a better Treasurer could not be found. The Secretary, Dr. Jones, has an enormous amount of work to do, and it is wonderful how he manages to get through it. I speak with great gratitude of Dr. Jones, for he has been indefatigable in his efforts to induce members to give demonstrations and to read papers. You will all admit that our quarterly meetings have been very successful. The Editors do much and good work for us, and I think that later on, when we arrange to give them some little assistance, you will feel that we are only doing what is right and proper in recognition of the work upon which they are engaged. The Divisional Secretaries are also doing admirable work, and it is surprising how they are bringing in new members. Every time one receives a notice of a meeting, one sees a list of new names, and that reflects great credit on the Secretaries. We all know what an onerous post the Registrar occupies, and I was not surprised to receive from him this morning a letter telling me that he was overworked. It is almost too much for a man who has to manage a large asylum. If it were not for the assistance given by some of those who are associated with us in asylums, it would not be possible to cope with the work. We owe the Registrar a deep debt of gratitude for the time and attention he has given to his duties. I propose, therefore, that the thanks of the Association be given to the officers of the Association for the work they have done during the year. The motion was carried unanimously amid great applause.

Dr. BENHAM.—On behalf of the Officers I beg to thank you for the cordial vote of thanks you have accorded to us. As the President has said, the duties entail much hard work. In my own case, unless I had been assisted by others connected with the asylum I could not possibly have carried out the Registrar's duties. No doubt some other arrangement will have to be adopted, but that will be a matter for consideration in the future.

REPORT OF THE PARLIAMENTARY COMMITTEE.

Dr. HAYES NEWINGTON read the report of the Parliamentary Committee and moved its adoption.

During the past year the Parliamentary Committee has met four times. It authorised its Chairman to seek an interview with the Parliamentary Committee of the County Councils Association. This interview took place, but had no result, the Lunacy Bill having appeared without a pension clause, and the latter association not being prepared to propose one. But in anticipation of this interview the Chairman procured valuable information from all county and borough asylums, and the Committee takes this opportunity of thanking the various superintendents for supplying it. The information was embodied in a memorandum which after discussion and approval by the Committee was printed and circulated. Thus comprehensive statistics bringing important considerations up to date are preserved ready for use on further occasion.

The Joint Committee of this and the British Medical Associations met as in former years, and besides continuing its previous criticisms was fortunate enough to obtain Dr. Farquharson's undertaking to move a pension clause on a favourable opportunity arising. The Committee are of opinion that the best thanks of this Association are due both to Dr. Farquharson and Sir John Batty Tuke for the ready way in which they proffered their best services in its interests.

The Lunacy Bill has once again come and gone, bearing on its face all the shortcomings to which objection has been raised by this Association; but it is right to acknowledge with satisfaction the reappearance of the clause permitting the treatment of incipient insanity in a less cumbersome manner than obtains now, and further, the insertion of an entirely new clause providing for the combination of counties for the purpose of founding and carrying on joint institutions for pathological research.

Your Committee has lent what aid it could to the Irish Division when it was seeking to obtain authorisation for carrying out a proposal similar to that last mentioned.

(Signed on behalf of the Committee.)

H. HAYES NEWINGTON.

Dr. MACDONALD seconded the adoption of the report and it was carried unanimously.

Dr. URQUHART intimated that he wished to retire from the Parliamentary Committee, and proposed the election of Dr. Carlyle Johnstone in his place.

Dr. HAYES NEWINGTON proposed the addition of Drs. Oscar Woods, Finegan, and Conolly Norman.

The PRESIDENT declared these motions carried, and the Parliamentary Committee now stands as follows :

PARLIAMENTARY COMMITTEE.

Fletcher Beach, H. Benham, G. F. Blandford, D. M. Cassidy, T. S. Clouston, E. M. Cooke, H. Gardiner Hill, Robert Jones, H. Rooke Ley, D. G. Thompson, E. B. Whitcombe, Ernest White, J. Wigglesworth, D. Yellowlees, A. D. O'C. Finegan, Conolly Norman, Oscar Woods, J. G. McDowall, C. Mercier, H. Hayes Newington, Evan Powell, H. Rayner, G. H. Savage, R. Percy Smith, J. B. Spence, A. H. Stocker, David Bower, C. K. Hitchcock, and J. Carlyle Johnstone.

REPORT OF THE EDUCATIONAL COMMITTEE.

Dr. MERCIER.—The Educational Committee have had a great many meetings and done a great deal of work during the past year. Amongst other matters, the Committee has had before it for a considerable time the difficult subject of the granting of its Certificate in Nursing to candidates in the asylums of the Colonies and Dependencies of the Empire, and begs to submit its report thereupon.

It was felt that if a practicable scheme could be devised by which attendants on the insane in the Colonies and Dependencies of the Empire could be afforded the opportunity of obtaining the Nursing Certificate, and thus becoming affiliated to the Association, it would be highly desirable that this should be done. The scheme of training and examination has been found in this country so beneficial alike to the insane, to the attendants themselves, and to their employers, that when application was made by members of this Association having charge of large asylums in the Colonies to extend these benefits to the attendants serving there, the Committee was anxious that the request should be granted.

It was found upon examination of the regulations, that the obstacles of distance, and of the consequent delay in communicating, would render it impracticable to apply to the Colonies the scheme in force in this country unless some elasticity were introduced into its details. The Committee therefore endeavoured to devise a plan by which, while the efficiency of the training and the stringency of the examinations should be strictly safeguarded, such elasticity might be introduced into the system as should obviate the manifest difficulties of the situation, and to this end they recommend the adoption by the Association of the following addition to the Regulations :

1. That power be given to the Council to make such modifications in the details of the examinations as may, without impairing their thoroughness or stringency, save time or increase convenience in holding them.
2. That power be given to the Council to modify in special cases the conditions under which Coadjutors are appointed.
3. That power be given to the Council to appoint, on the recommendation of the Division of the Association in any Colony or Dependency in which a Division may have at the time been formed, a Deputy Registrar, who may exercise in that Colony or Dependency such duties of the Registrar as the Council may determine.

With respect to the recognition of institutions for the purpose of the Nursing Regulations, the Committee recommend :

1. That *in England* the following institutions should be fully recognised : County asylums, borough asylums, Leavesden and Caterham Asylums, registered hospitals, Broadmoor Criminal Lunatic Asylum ; and that with respect to licensed houses, each of these institutions should, if it desires to be recognised, apply to the Council for recognition.
2. That *in Scotland* the following institutions be fully recognised : Royal asylums, district asylums ; and that institutions in the position of licensed houses should apply individually for recognition.

3. That in Ireland the following institutions be fully recognised: District asylums, St. Patrick's Asylum, the Stewart Institution, Dundrum Criminal Lunatic Asylum; and that institutions in the position of licensed houses should apply individually for recognition.

(Signed on behalf of the Committee)

CHARLES MERCIER.

Dr. MERCIER proposed that the report of the Educational Committee be adopted, and Dr. PERCY SMITH seconded the motion.

Dr. CLOUSTON said he thought that some explanation was due to the Association as to how they stood in regard to the Certificates in Psychological Medicine. At one time they had a large number of candidates, to the financial benefit of the Association, but lately candidates had greatly diminished in numbers. The reason of the falling off might be owing to the fact that the teaching of mental diseases was now compulsory on every medical student before he took his degree. He considered that the matter should now be looked at in the light of the new medical ordinance, and that they should ask themselves whether instead of having a pass examination in Psychological Medicine they should not make it an honours examination, a higher qualification in Psychiatry, which gentlemen who desired such a qualification should be encouraged to take. The experience of all colleges and universities had been that when a difficult examination was set, it had revived examinations in a wonderful degree. As an example, the Royal College of Physicians in Edinburgh had taken a new lease of life since the examinations had been made more difficult. They had followed the example of London in this matter, and he thought that the Association might look forward to a period of increased usefulness in regard to its Certificate if it were put on the footing of an honours examination.

Dr. PERCY SMITH pointed out that, although attendance at lectures and at clinical instruction in asylums was compulsory, there was not necessarily any examination in psychiatry by the examining bodies before qualification. Some never asked a single question on psychiatry in any of their papers, and there was certainly no special examination on the subject. He thought that it would be a great pity to do away with their "pass examination." He thought that one of the reasons why so few candidates entered for the ordinary pass examination for the certificate was that assistant medical officers in asylums were not sufficiently encouraged. In fact, he had heard it stated that certain superintendents had asked junior assistant medical officers what good it would be to them to go in for such an examination. He maintained that it was an exceedingly good thing for assistant medical officers to show that they had really worked on the subject. The Gaskell Prize constituted, an honours examination, but he thought if that were the only one, the candidates might be fewer than at present. If medical superintendents would encourage their assistant medical officers, more candidates would present themselves for the certificate and also for the Gaskell Prize.

Dr. CONOLLY NORMAN said that attendance at clinical lectures and instruction for three months was not a sufficient preparation for an honours examination. In Ireland examinations in this subject were held, and the papers set were very difficult and suitable for an honours examination. If the Association made the examination an honours one, they must exact more than the Licensing Bodies and require a longer curriculum than three months.

Dr. DOUGLAS suggested that the difficulty might be met by making a *pass* and an *honours* examination, and thought that the falling off in the number of candidates might be due to lack of publicity.

Dr. CLOUSTON said that he was anxious to hear the opinions of the members of the Association, and proposed that the matter should be referred to the Educational Committee for report at the next Annual Meeting. This was seconded by Dr. CONOLLY NORMAN, and the following motion was agreed to:—"That the question of the certificate given to medical men by the Medico-Psychological Association should be referred to the Educational Committee for report."

Dr. MERCIER proposed the reappointment of the Education Committee, seconded by Dr. PERCY SMITH.

Dr. URQUHART said he thought that the Educational Committee might be modified in some degree. That Committee did a great deal of work, and they

were much indebted to Dr. Mercier for his labours upon it during so many years. He considered that it was too large, and would therefore move that the names of those members who had not attended a single meeting should be deleted, of course with the exception of teachers of psychological medicine, who were *ex officio* members of the Committee. Now that the nursing examinations bulked so largely, those who took special interest in that work should be adequately represented. Dr. CARLYLE JOHNSTONE seconded the motion, which was strongly opposed by Dr. MACDONALD. The motion was lost, and Dr. CARLYLE JOHNSTONE proposed that the name of Dr. Havelock be added to the Committee. This was seconded by Dr. CLOUSTON. The Educational Committee is composed as follows:

EDUCATIONAL COMMITTEE.

T. S. Adair, G. J. Blandford, H. A. Benham, A. Campbell Clark, T. S. Clouston, A. D. O'C. Finegan, W. Graham, J. G. Havelock, T. B. Hyslop, J. Carlyle Johnstone, W. S. Kay, P. W. Macdonald, J. Maloney, W. F. Menzies, W. F. Mickle, C. A. Mercier (Secretary), G. W. Mould, H. Hayes Newington, Conolly Norman, J. Rorie, H. Rayner, W. Reid, C. Rogers, G. H. Savage, T. Claye Shaw, R. Percy Smith (Chairman), J. B. Spence, A. R. Turnbull, L. A. Weatherly, E. B. Whitcombe, Ernest White, J. R. Whitwell, T. W. McDowall, J. Wiglesworth, J. Kennedy Will, Oscar Woods, and D. Yellowlees.

REPORT OF THE COUNCIL.

The report of the Council was read by Dr. PERCY SMITH in the absence of the General Secretary.

The number of members of this Association for 1899—1900 are as follows:— Ordinary, 550; honorary, 36; corresponding, 12; total, 598.

At the Annual Meeting of last year the membership was—ordinary, 540; honorary, 38; corresponding, 12; total, 590. Whilst in 1898 the membership was—ordinary, 524; honorary, 38; corresponding, 12; total, 574.

There has been a gradual growth in the number of ordinary members of the Association during the past three years.

The Council acknowledge with thanks the bequest of £100 by the late Dr. Paul. It now appears in the accounts.

Drs. Meyer and Godding, honorary members, and Dr. R. H. Nicholson, ordinary member, have died, and five members have resigned.

Meetings.

The Annual Meeting during the past year was held in London, in July, and was most successful. The President, in his address, referred to the prevention of phthisis in asylums. This was followed by a paper read by Dr. France at the November General Meeting, at which Sir William Broadbent, Sir James Crichton Browne, and Professor Clifford Allbutt attended. A Committee to consider the question was appointed, and the following were elected members:—Drs. Cassidy, Elkins, France, Mr. Hine, Drs. Mott, Conolly Norman, Percy Smith, Spence, Weatherly, Whitwell, and Wiglesworth. The Committee has already commenced to work.

The members greatly appreciated the kind hospitality of Mrs. Langdon-Down during the Annual Meeting.

Three General Meetings were held, the one already referred to in London in November; one in February this year, through the courtesy of Dr. Kidd, at the West Chichester Asylum; and another last May in London, at which a valuable and interesting communication was made by Dr. Maudsley, and also by Dr. Koenig, one of the medical officers of the Berlin Municipal Asylum at Dalldorf. We note especially the growing tendency there has been to appreciate the value of practical work, such as microscopical and other demonstrations. The discussions have been interesting and stimulating.

Divisions.

The Divisions each held two meetings during the year.

Sixty-three new members have been elected during the year.

The prosperity of the Association much depends upon the prosperity of its different Branches, and the Council would be pleased to see increased interest in this direction in some of the Branches.

Committees.

Much work has been done by the Standing Committees, by the Educational in regard to the Nursing Examination, and the new arrangements for the admission of Colonials, and by the Parliamentary Committee in relation to lunacy bills and pensions.

The Council have to emphasize the great support received from the Chairman of the Parliamentary Committee in regard to the best interests of the Association, and the Association is under much obligation to him in his position of Treasurer. The other Committees have also done valuable work, and the Association is indebted to the officers for their continued services.

The Journal.

Dr. Rayner having reported to the last meeting of Council that additional assistance was required in the editing of the JOURNAL, it was remitted to Dr. Rayner and the Treasurer to ascertain whether aid could be got from some of the younger members of the Association, and thus obviate expenditure of funds. They ascertained that Dr. James Chambers was willing to help, and that help was accepted by the Editors temporarily, the July number of the JOURNAL having been brought out with Dr. Chambers' kind co-operation. On the same lines Dr. John R. Lord had undertaken the production of a specific part of the JOURNAL quarter by quarter.

The Council further appointed a Committee to consider the general arrangements in connection with the editing of the JOURNAL. That Committee met on the 25th of July. Present:—Dr. Rayner in the Chair, the Treasurer, and other Editors.

It was resolved to recommend to the Council that the Editors should remain as at present, that the two named members, Dr. J. Chambers and Dr. J. R. Lord, should be given the position of Assistant Editors, to act under the direction of the present Editors. That the recommendation should carry with it the insertion of the names of the Assistant Editors on the title page of the JOURNAL, although the Committee is not of opinion that they should thereby be entitled to seats on the Council. That the selection and appointment of Assistant Editors should rest with the Editors of the JOURNAL, who are annually appointed by the Association.

The Council, having considered that report, together with a statement of the JOURNAL accounts for the last five years, prepared by the Treasurer, adopted it unanimously.

The report of the Council was received and adopted.

NURSING OF INSANE IN IRISH WORKHOUSES.

The PRESIDENT.—It will be within the memory of many present that on the initiative of Dr. Finegan, the Council were instructed by the Annual Meeting to inquire into the question of the advisability of sending a letter to the Local Government Boards as to the nursing of insane patients in workhouses. The matter was discussed at the various Divisions of the Association, with the result that it was unanimously agreed that in their opinion it was advisable that some such memorandum as we have in the agenda to-day should be sent, as an expression of the opinion of this Association. It is now for this Annual Meeting to say definitely whether we shall send it or not. I propose that this Annual Meeting direct the Secretary to send a copy of the Resolution to the Local Government Boards as follows:—"It is the unanimous recommendation of the Medico-Psychological Association of Great Britain and Ireland, that in union workhouses in which insane people are detained, a properly qualified and trained mental nurse should be employed in the insane wards." This was unanimously approved, and the General Secretary has carried out the instruction.

This concluded the proceedings of the morning meeting.

AFTERNOON MEETING.

Dr. SPENCE.—The first business for the afternoon is to introduce to you the President for the ensuing year. Of all the gentlemen who have occupied the position of President of this Association, few have required less introduction than Dr. Beach. He is thoroughly well known to every member of the Association; he has served us well and faithfully for many years in the past, and I hope that in the future there are many years of useful work for him still to do. He commends himself to us by his urbanity, genial nature, and the good fellowship which he has displayed to every member of this Association. When he retired from the position of Secretary, I remember how very heartily we thanked him for his good services, and how sorry we were to lose him. We are very pleased to have him in the position of President, which is a distinguished and important office, and I am sure no one whom we could have elected would do honour to it more than our friend Dr. Beach. I have known him for a great many years, and I feel it a personal privilege that it becomes my duty at the close of the year of my presidency to introduce him as my successor, and to ask him to take the chair which I now vacate.

Dr. BLANDFORD.—Before we listen to Dr. Beach's address, I have to propose that this Association records its unanimous and grateful thanks to Dr. Spence for the excellent way in which he has performed the duties of President during the last year. I need not enumerate his virtues to you, because you all are quite as well acquainted with them as I am. You have all seen him often, because he has been so assiduous in attending the meetings of the Association during the year of his presidency. You all know how excellently he has conducted the business, and with what kindness and cordiality he has received all the members of the Association, and I feel certain that you will join with me in expressing our warm thanks to him for the way in which he has discharged his duties.

Dr. CLOUSTON.—I have the greatest pleasure in seconding the proposal of a vote of thanks to our retiring President. We all know that in Dr. Spence the Association has had an ideal President in physique, in mind, and in morals. The way in which he has conducted our meetings convinces us that he is one of the best Presidents we have ever had. I trust that we shall have a great many more like him. This motion was carried with acclamation.

Dr. SPENCE.—I am very much obliged to Dr. Blandford and Dr. Clouston for the kind remarks they have made. I suppose I feel as many men have felt at the end of their period of office, that if one had to go through it again one would do much better. I can assure you that the duties of President have been very much lightened by the assistance received from the officers of the Association, more especially from our excellent Secretary. The kindness I have shown is nothing to what I have received from the officers and members of the Association, and I regret giving up the post, not so much for the honour of it, but for the pleasure it has afforded me in bringing me in contact with my brethren in the profession.

Dr. BEACH then read his Presidential Address, and the further proceedings are given in detail in Part I of this number of the JOURNAL.

SECOND DAY.

The PRESIDENT.—Before closing this meeting I think it is only right and proper that I should propose a vote of thanks to our excellent Treasurer and our excellent Secretary. The dinner was a brilliant success, and that is entirely due to our Treasurer. We could not get a better Secretary than we have. His time and attention are devoted to getting a sufficient number of papers, and the unqualified success of this meeting in that respect is largely due to his unstinted efforts.

Dr. STEWART (Clifton).—I have much pleasure in seconding this vote of thanks. After thirty-two years' membership I have been surprised by the very conspicuous success, both as regards the character of the papers and the intense interest shown in them. I do not remember to have been at a dinner at which there was such a unanimous expression of thanks to those who have arranged it.

Dr. HAYES NEWINGTON thanked the President and Dr. Stewart for their kind remarks, but said that he should be sorry to see the dinner exalted unduly. The

real work of the meeting had fallen upon Dr. Jones, and he felt sure that everybody would be satisfied that enough had been heard of insanity within the last forty-eight hours to consider for some time to come.

Dr. Jones having also expressed his thanks, Dr. URQUHART said, I beg to propose a vote of thanks to our President for his services in the chair, and must add a hearty word of thanks to the gentlemen who have read papers. We know that Dr. Jones has had a great deal of correspondence and a very great deal of trouble, but the meeting would hardly have been a complete success without the active co-operation of those whom he has induced to oblige us on this occasion. Another point I would specially notice is that a great deal of the work has been done by younger members of the Association, and those of us who have been in attendance here for some years have every confidence in their carrying on the business and the scientific interests of our Society just as well as in the past, and, perhaps, with increasingly greater effect. There is difficulty in adequately discussing some of the papers which have been read; for instance, when we have had an opportunity of quietly perusing Dr. Edridge-Green's paper in the JOURNAL no doubt we shall be more competent to appreciate it. The authors, who have given us of their best, must be content to let what they have said fructify in our minds until we have an opportunity of expressing our ideas. We are under deep obligations to our President, and we are very glad, after all he has done in various capacities for this Association, to see him in the position he now holds.

The PRESIDENT.—I am much obliged to Dr. Urquhart for proposing a vote of thanks to myself, and for the kind manner in which you have expressed yourselves to-day. The papers have been of such interest that one's mind has been constantly occupied with thoughts which will fructify later on. I do hope that during my presidency the younger members will come to the front. We have now a large number of them who are working hard, and it is only right and proper that they should give us the result of their researches. I can assure them of a hearty welcome at this Association.

COUNCIL AND COMMITTEES.

In connection with the Annual Meeting there were meetings of the Educational, Parliamentary, Editorial, and Tuberculosis Committees. The Council met on the 26th July, the following members being present: J. B. Spence (President), Fletcher Beach (President elect), R. Percy Smith, J. Carlyle Johnstone, A. R. Turnbull, H. Hayes Newington (Treasurer), Conolly Norman, Crochley Clapham, James Chambers, T. Steele Sheldon, W. R. Dawson, G. Stanley Elliot, C. A. Mercier, Oscar T. Woods, A. R. Urquhart, H. Rayner, Harry A. Benham, David Bower, Arthur D. O'C. Finegan, A. W. Campbell, James M. Moody, P. W. Macdonald, and T. Outterson Wood.

Letters of apology were received from Drs. D. M. Cassidy and J. G. Soutar.

It was reported that the Gaskell Prize had been gained by Dr. Maurice Craig, and that the Bronze Medal had been awarded to Dr. C. C. Easterbrook for his essay on "Organotherapy."

It was resolved that the Tuberculosis Committee should have permission to replace any members by others thought suitable by the Committee; that the Committee should have power to add to its numbers to the extent of three; and that Mr. Clifford Smith be invited to assist the Committee in an advisory capacity.

The Registrar reported that 521 candidates entered for the May examination for the Nursing Certificate, 438 having been successful.

There were three candidates for the Certificate in Psychological Medicine, and all were successful.

IRISH MEETING.

The quarterly meeting of the members of the Irish Division of the Medico-Psychological Association was held at the Second Asylum for the Richmond District, Portrane, Co. Dublin, on Thursday, June 28th. The following were in attendance: Dr. Patton (in the chair), Dr. Conolly Norman, Dr. Rambaut,

Dr. J. O'C. Donelan, Dr. Henry Eustace, Dr. Leeper, Dr. Nolan, Dr. Lawless, Dr. Dawson, and Dr. Arthur Finegan (Hon. Secretary).

Letters of apology for non-attendance were read from Dr. B. Harvey, Dr. Strangman, Dr. Hetherington, Dr. O'Neill, Dr. Graham, Dr. Bernard, Dr. Revington, Dr. Fitzgerald, Dr. O'Meara.

A paper, "Notes to serve for the study of Fracture of the Ribs," by Drs. Conolly Norman and Rambaut, was read by the former.

Dr. RICHARD LEEPER read a communication entitled "Remarks on our usual Methods of Investigating Cerebral Disease, with some Suggestions for future Original Research."

Dr. CONOLLY NORMAN moved that the paper on "A Case of Sensory Aphasia," by Dr. Rambaut, be taken as read, as he and Dr. Rambaut had already occupied a good deal of the time of the meeting, and there was an interesting paper to be read by Dr. Donelan. Dr. DAWSON seconded the proposition, which was passed.

Dr. DONELAN then read his paper: "Some Notes on Portrane."

At the conclusion of the meeting the members were entertained by Dr. Donelan.

BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING, IPSWICH, 1900.

SECTION OF PSYCHOLOGY.

Reported by J. R. WHITWELL, M.B.

President: R. PERCY SMITH, M.D. Vice-Presidents: E. L. ROWE, L.R.C.P.; W. ALDREN TURNER, M.D. Honorary Secretaries: CECIL A. P. OSBOURNE, F.R.C.S.Ed.; J. R. WHITWELL, M.B.

The section was well attended, and the papers read were fully discussed.

PRESIDENT'S ADDRESS.

Dr. PERCY SMITH, in his address on the subject of the Prevention of Insanity, referred to the increase in the number of the insane (as shown by the Commissioners' Report of last year), and the continued burden thus caused to the rate-payers. Speaking of the enormous importance of hereditary defect as an element in causation, he pointed out that little or no effort was made in the human species to guard against the breeding from bad stock, and detailed glaring instances from his own experience of bad results from this cause. Alcoholic excess in the individual and its results in offspring were referred to, and attention was called to the further need for legislation for the non-criminal inebriate, and the inefficacy of the present Inebriates Act. Syphilis, both acquired and hereditary, as a potent element in the production of general paralysis he recognised as absolutely established, and supported the view that syphilis should be a notifiable disease, reviewing the beneficial effect of this action in Finland and other countries.

SEXUAL FUNCTIONS AND INSANITY.

Dr. MACNAUGHTON JONES opened a discussion on "The Bearing of Sexual Function and Disease of the Sexual Organs on Insanity and Crime."

The following were the conclusions that the speaker placed before the section:

1. Functional disorders of ovulation are frequently attended by mental aberration, and in a proportion of cases originate the mental disturbance.
2. The same remark applies to disorders of ovulation which have a pathological cause.
3. In the great majority of such cases the nervous disturbance is of the neurasthenic character, and is associated with various visceral or other neuroses. In only a small proportion does the alienation assume so grave a type as melancholia, mania, or dementia.
4. Where in an insane person ovulation and its external manifestation, the menstrual discharge, are absent or erratic, the erraticism or absence may be a consequence of the general and insane condition, and not a causal factor in its production; but under any circumstances such abnormal menstruation appears to have an aggravating effect on the insanity, and there is sufficient evidence to

strengthen the belief that when such irregularity—especially if it be due to a pathological cause—exists, it should be treated therapeutically or by operative measures.

5. The question of a gynæcological examination of an insane woman must be a matter for the discretion of the psychologist, influenced by the gynæcological view as to its expediency from the signs and symptoms present in the sexual organs. For many reasons, as a universal practice, with our present knowledge it is not warrantable.

6. Sufficient evidence is now advanced to justify the removal of the adnexa or tumours of the uterus in insane women, when there are gross lesions of the former or tumours of the latter, it being remembered that dementia has not uncommonly followed upon the development of uterine myoma. Here, again, such operation must be advised according to the psychological condition of the patient and the type of her insanity.

7. From a mass of evidence, including some of the largest experiences in Europe, Canada, and America, it does not appear that there is in healthfully-minded women, who suffer from diseases of the genitalia, any special risk of post-operative insanity. On the other hand, if there be a psychopathic predisposition, which has existed prior to and independently of the sexual disease, there is in such cases a larger percentage of post-operative mental disturbance than follows other operations. In such women the prudence of a radical operation may have to be carefully discussed. The post-operative mental effect does not appear generally to be of a serious or permanent nature.

8. It may be generally affirmed that when mental disease of a graver type follows upon sexual disorder, there has been in the woman affected an underlying and often unrecognised psychopathic predisposition; the disorder of menstruation or the disease in the genitalia completing the chain of the vicious circle needful for the final manifestation of the mental condition.

9. The relation of aberrant sexual function or a disorder of menstruation to any criminal act ought to be taken into consideration in determining the responsibility of the woman.

EPILEPSY.

Dr. PASMORE read a paper on the subject of Epilepsy, describing the usual mode of incidence of the mental symptoms. He referred especially to the cases in which periodic maniacal outbursts occur, alternating with or replacing convulsive seizures, which he termed psycho-epilepsy. He maintained that many cases of so-called recurrent mania were really to be classed under this heading, and quoted numerous instances in support of this view.

PERIPHERAL NEURITIS AND MENTAL DISEASE.

Dr. PERCY SMITH read a paper "On the Association of Peripheral Neuritis with Mental Disease," in which he pointed out the fact that the association of peripheral neuritis with a specific form of mental disease, described by Korsakoff and others as "polyneuritic psychosis," had received but little recognition in this country. He had met with peripheral neuritis in twenty cases in sixteen years out of some 3600 acute cases of mental disease which had passed under his care. Of these four were males, sixteen females; and of the four males three were alcoholic in origin, and in one the neuritis was secondary to typhoid fever, though alcohol could not be definitely included. Of the sixteen female patients eleven were certainly alcoholic, four others came into the category on closer investigation, and the remaining one was of diabetic origin. In 50 per cent. of all the cases there was a family history of both alcohol and insanity. The mental condition in the alcoholic cases agreed in the main with the groupings described by Korsakoff, but did not do so in the cases following typhoid fever and diabetes. Seven of the twenty patients recovered, two died, and the remainder were permanently damaged either physically or mentally. From his observations Dr. Percy Smith concludes that there should be considerable doubt in accepting as proven a characteristic polyneuritic psychosis apart from alcoholism, etc.

THE COLONY TREATMENT OF EPILEPSY.

W. ALDREN TURNER introduced a discussion "On the Colony Treatment of Epileptics, especially with reference to the Chalfont Home for Epileptics." He discussed the matter chiefly under the following heads:

1. *Education of epileptic children.*—These children should be educated apart from the healthy or imbeciles.

2. *The management of adult epileptics (sane).*—He said that medicinal treatment was not greatly of importance; but institution life with suitable employment, etc., was of much greater importance. In such cases the average frequency of the fits is reduced, and the physical and mental state improved.

He claims that the colony treatment affords a means of disposal of the unfortunate class referred to with benefit to themselves, and the plan may be made a financial success.

Referring to the possibility of curing epilepsy, he pointed out the necessity for care in deciding when recovery has been established.

THE PATHOLOGICAL HISTOLOGY OF ACUTE DELIRIOUS INSANITY.

Dr. JOHN TURNER (Essex) assumed three clinical varieties of Acute Delirious Insanity:—1, alcoholic; 2, septic (puerperal, etc.); 3, idiopathic (probably auto-toxic). After describing in detail the symptoms, both mental and physical, usually met with in these cases, he reviewed the literature of the subject with special reference to the experimental work of Nissl, Marinesco, and others, pointing out the inconstancy of the results.

Making use of pressure preparations and sublimate hardened sections, with toluidin blue as a staining agent, he notes the following changes:

- (1) Excess of pigmentation in giant-cells of the frontal convolution.
- (2) Certain cells stain very densely, masking the stichochrome appearance.
- (3) Occasionally a shrunken condition of the cells and crumbling of Nissl bodies.
- (4) Ready fracture of cell processes during fixation.
- (5) Excessive number of free nuclei in perivascular and pericellular spaces.
- (6) Sometimes extreme fatty degeneration of the cells of the second layer.
- (7) The liver in all the cases examined showed evidence of marked fatty degeneration of the cells.

The implication of the nerve-cells in the above way is in very scattered areas, and partial.

Many of these conditions were shown by means of the lantern.

BLOOD-PRESSURE IN MENTAL DISEASE.

Dr. CRAIG read a paper "On Blood-pressure in Mental Disease." He considered it proven that a high blood-pressure was definitely associated with melancholic conditions, and low blood-pressure with maniacal conditions. He suggested that it may be that the lowered blood-pressure was due to cholin poisoning, the result of katabolic processes. He referred to the comparison that may be made between mania, and sleep, and dreams. He suggested the correlation that appears to exist between melancholia agitata and mania, and fully endorsed the suggestion that saline infusion may be the correct treatment in many of these cases.

INSANITY IN MALE LEAD-WORKERS.

Dr. ROBERT JONES read a very detailed paper "On Insanity in Male Lead-workers." Recognising the importance of lead poisoning as a cause of mental disease, he reviewed the various methods by which lead may find its way into the body, e.g. in enamellers, file-cutters, etc., especially pointing out that workers in the crude ore, i.e. miners, are rarely affected. The predisposing effect of gout, rheumatism, and sex were fully discussed.

The researches of Lugaro on the pathology of the disease were briefly referred to; also the theory that symptoms were due to altered elimination. Whether the lesion is peripheral or central in its primary condition nothing in his experience had given him the power to decide. As regards symptomatology, he discussed fully and in great detail the various symptoms, and would classify the cases under three headings:

- (1) Toxæmic cases, which are favorable in prognosis.
- (2) Hallucinatory, in the main favorable in prognosis.
- (3) Those resembling general paralysis of the insane, frequently favorable.

THE RELATION OF THE LUNACY LAWS TO NEURO-PSYCHOLOGICAL DISEASE.

Dr. McCORMAC brought forward certain points which he considered required remedying in connection with the relation of the existing lunacy laws to neuro-psychological disease—(1) in the direction of protecting the certifying medical man against legal action taken by discharged patients, especially laying stress on the danger of the *dictum* of Mr. Justice Field (*Toogood v. Wilkes*) that the onus of proving the absence of *mala fides* lies with the defending medical man; (2) in the direction of establishing hospitals (as distinguished from asylums) "*in which special attention should be paid to the treatment of diseases of the nervous system,*" in which mental cases may be treated by restrictions without limiting the liberty of the patient. The result of this, he maintains, would be (but does not bring any evidence to show the basis of this belief) that there could be but few cases of failure, and this small percentage of failures would be dealt with as the law directs.

He agreed with most alienist physicians in urging the extreme importance of mental cases being brought under early treatment, instancing cases in which lives had been wrecked by the unfortunate tendency to keep patients at home, or give them change of scene and air, etc.

CARDIO-PSYCHICAL ASSOCIATION.

Dr. WHITWELL suggested for consideration and examination certain morbid cardiac states which appeared to have some association with mental symptoms, illustrating some of them under the following classification:

- (1) Mental associations of acute cardiac disease.
- (2) Conditions of imbecility associated with cardio-vascular hypoplasia.
- (3) Conditions of mental immaturity associated with early heart disease, congenital or acquired.
- (4) Mental variation in an abnormal direction associated with valvular disease of the heart in the adult.
- (5) Heart delirium associated with uncompensated lesions.
- (6) Mental changes associated with acute cardiac asthenia.
- (7) Mental changes associated with the cardiac asthenia and erethism of fibroid degeneration in senility.
- (8) Pathological eupathy occurring in late heart disease.

ORGANO-THERAPEUTICS IN MENTAL DISEASE.

Dr. EASTERBROOK (Morningside) read a paper founded upon an exhaustive examination of the use of various animal extracts in various forms of mental disease extending over a considerable period of time. Of 130 cases of insanity treated with thyroid extract twelve patients recovered, twenty-nine were improved, and eighty-nine remained unimproved. Those who recovered included cases of myxœdema, stupor, puerperal and lactational melancholia, and simple and climacteric melancholia. Parathyroid and thymus extracts gave negative results. Ovarin was given in thirty-six cases, with temporary improvement only in four cases, and none in the rest. The total results of organo-therapeutic treatment were not very favorable except in myxœdematous and stuporous states.

PARLIAMENTARY NEWS.

IMBECILES TRAINING INSTITUTIONS BILL.—*May 2nd.*

Mr. TOMLINSON (Preston) moved the second reading of this Bill to exempt certain institutions from rating. Five philanthropic institutions were affected.

Mr. T. W. Russell promised that they would be included with hospitals in a reference to a Select Committee. The Bill was withdrawn.

YOUTHFUL OFFENDERS BILL.—*May 21st.*

Sir M. WHITE-RIDLEY moved the second reading of this Bill to diminish imprisonment among offenders under the age of sixteen, and to extend the power of whipping. In his reply on the discussion, Sir M. White-Ridley recognised that there was a sharp division of opinion, and the debate stood adjourned by the rules of the House.

EDINBURGH DISTRICT LUNACY BOARD BILL.—*June 25th.*

This Bill was reported for third reading.

LUNACY REGULATION (IRELAND) BILL.—*June 25th.*

This Bill was read a second time. Lord ASHBOURNE said that it was to introduce useful provisions now in operation in England, and to permit of the conditional discharge of criminal lunatics.

THE ST. PANCRAS SCANDALS.—*June 26th.*

Lord RUSSELL OF KILLOWEN called attention to this matter, and asked what proceedings were to be taken.

The LORD CHANCELLOR said that his attention had been called to the case by the Lunacy Commissioners, who had sent him a draft clause for insertion in the Lunacy Bill, which had not yet passed into law. He had also received a communication from the Local Government Board, and a circular letter to Boards of Guardians was to be sent out.

June 28th.

Mr. J. Burns having made inquiries in reference to this matter, Mr. CHAPLAIN said that he had directed an immediate investigation by the Local Government Board, and a communication to be made to Metropolitan Boards of Guardians.

THE CASE OF PRIVATE WEIR.—*July 10th.*

In reply to Mr. P. O'Brien and others, Mr. WYNDHAM said that Private Weir had been invalided home from South Africa as a lunatic; his insanity not being the result of his army service no pension could be given him.

LUNACY BILL (ENGLAND).—*July 16th.*

This Bill was withdrawn.

LUNACY BOARD (SCOTLAND) SALARIES BILL.—*July 19th.*

This Bill was read a third time.

PROPOSED EXEMPTION OF HOSPITALS FROM LOCAL RATES.

Evidence was taken by the Select Committee on June 22nd and subsequent dates. A claim has been made for exemption by various institutions for the feeble-minded and epileptic.

RECENT MEDICO-LEGAL CASES.

REPORTED BY DR. MERCIER.

[The editors request that members will oblige by sending full newspaper reports of all cases of interest as published by the local press at the time of the assizes.]

Reg. v. O'Hara.

Denis O'Hara, 39, labourer, was indicted for murder of his daughter, aged six, May 21st. Prisoner had left work for about a fortnight before the murder, and during that time had been drinking. On the morning of the 21st May he started

drinking early, and up to noon had had five pints of beer. About half past four in the afternoon he took his little girl home, stood her on a chair, tied a rope round her neck, fastened her up, and took the chair away. He then went to the police station, and laying on the counter a door key, he said, "If you will take it, and go to my house, 18, George Street, you will find a child dead. I have done it. If you go there you will find her in a rocking chair wrapped up in a coat." The body was found as described. Shortly after the prisoner was placed in a cell his wife came, and he said, "That is my wife crying; I heard her mention Mary Agnes, my child's name. Mary Agnes, I loved her; she was the prettiest child in Burnley." He then described how he committed the murder, and went on, "They have wrung my heart, and I have wrung theirs. It does not matter what you do. I do not care how soon I am out of it. I gave her a halfpenny, and they made her give it back; she took it off me. They wrung my heart, and I have wrung theirs."

Evidence was given that at noon the prisoner was "half off, neither drunk nor sober." At five p.m. he was in a stupefied condition, and under the influence of drink. When he made the statement in his cell he was excited from drink. Dr. Ley, of Prestwich, deposed that he first saw the prisoner on May 28th, and that prisoner was of unsound mind at that time. He was confused, depressed and melancholy, and it was difficult to get any coherent answer out of him. He appeared to be just recovering from an attack of acute mania—delirious mania,—and in witness's judgment he would be suffering from that attack on May 21st. He thought that on May 21st he would have a very confused idea of right and wrong—be hardly capable of appreciating the nature and quality of the act he was committing. On the 28th and 29th of June he examined the prisoner at the request of the Treasury, and he thought the man was of sound mind. He learned that the man had been drinking heavily, and it had culminated in an attack of delirious mania. Dr. Edwards, of Strangeways Prison, said that he first saw the prisoner on May 26th. He was much depressed and confused, listless, and quite lost. He was not at that time of sound mind, and he should think probably of unsound mind on the 21st May. He could not say that on May 21st he was incapable of distinguishing between right and wrong. The judge said the man might be in some degree insane, and yet be quite responsible for his actions. To render him not responsible he must be suffering from mental disease which impaired his judgment. They must not consider a man mad because of the unusually shocking nature of his crime; if that was done any man who wanted to commit a murder had only to do it in a mad kind of way. Guilty, but insane.—Mr. Justice Channel.—*Manchester Guardian*, July 18th.

Another of the numerous cases in which crime is committed during drunkenness. Whether the drunkenness renders the criminal irresponsible depends upon the duration of the drinking. In this case the drinking bout had lasted only a fortnight, but the resulting insanity was sufficiently marked to exonerate the criminal.

Reg. v. Birtles.

John Birtles, 50, window cleaner, was charged with the murder of his wife. Prisoner had been an inmate of Prestwich Asylum for four years many years before. There had been frequent quarrels between him and the deceased, and the son had had to protect his mother from violence. On the 8th May, when the son came home at night, the prisoner opened the door to him, and said, "I have murdered your mother." The son went for assistance, and on his return found the door barricaded. It was forced, and the prisoner threatened the incomers with a poker, and threw hot water over one of them. The woman was found dead, with marks of very great violence. When arrested, the prisoner said he would tell the truth to the magistrate. Dr. Scott, who was called in at the time, said the prisoner seemed dazed, and in answer to a remark said, "I did it." Witness did not see any signs of drink about him. Dr. Edwards, of Strangeways Prison, said that while the prisoner had been in prison he had seen nothing wrong with his mind, nothing noticeable except excitement and garrulousness. Dr. Ley said he examined the prisoner on the 28th May, and thought him of sound mind. He had been an inmate of Prestwich Asylum from 1881-1885, and was then subject to numerous delusions and hallucinations—that he had committed some

great crime—he did not know what it was,—and that everybody was making fun of him. He was of opinion that injuries so extensive as those found on the deceased had been caused by a man in a frenzy. The judge here asked witness to define the word frenzy, which he did by saying that he meant “the effects of ungovernable passion.” The prisoner then gave evidence. He said that on May 8th he had had four pints of beer; his wife was very abusive, and said “it only wanted a bit a paper to get him back to the asylum.” She then began to kick him with her clogs, and pull his face about with her hands, and she seemed to be about to get hold of the poker and tongs, which she had used before to strike him, when all of a sudden a feeling came across him which he could not resist, and he got hold of the crowbar and hit her with it. It was dusk at the time, and although he kept striking about him with a crowbar, he did not know he was hitting his wife. When he found out that this was the case, he fell down and shouted out, “Oh my! oh, dear, what have I done?” Cross-examined: the crowbar was in the coal-hole. He could not say why he did not give this account at the inquest. The judge pointed out that the prisoner never mentioned the provocation until that day; but even admitting the provocation, if he went out of the room for the crowbar, then it was murder, and not manslaughter. It was difficult to see what there was in the evidence to reduce the case to manslaughter, and still less to make the prisoner not responsible for his actions. Guilty, but recommended to mercy.—Manchester Assizes, Mr. Justice Channell.—*Manchester Guardian*, July 18th.

Justice seems to have been fairly met in this case. The jury could bring no other verdict on the evidence, but took the previous insanity of the prisoner into account in their recommendation to mercy. The sentence of death was subsequently commuted on the same ground.

Reg. v. Holt.

Gertrude Holt, 25, knitter, was indicted for the murder of her new-born child. Prisoner was confined on a Sunday, and when first seen by a doctor on the following Tuesday, pointed, in answer to a question, to the top of a wardrobe, where the body was found covered with wounds, inflicted apparently by scissors. The defence was one of insanity, but no particulars are given. The judge said he could see nothing in this case that could lead to a verdict of manslaughter; as to irresponsibility, that there had been no evidence of insanity in the ordinary sense. The existence of no fewer than seventy-seven wounds on the body indicated in all probability that at the time she caused them the prisoner was in a condition of frenzy, and if the jury thought she was in such a condition they might come to the conclusion that she had not any sound judgment and knowledge of what she was doing, and they would return a special verdict to that effect. Guilty, but insane.—Manchester Assizes, Mr. Justice Channell.—*Manchester Guardian*, July 17th.

This case is remarkable when taken in relation to the previous one. It will be observed that the learned judge himself had no hesitation in this case in using the term “frenzy” without defining to the jury its meaning, and that the existence of frenzy was sufficient exoneraton of the prisoner. But in the case of the man on the following day the word possessed no such virtue, and the prisoner was convicted in spite of his frenzy; so that extreme violence used by the man upon his wife was no indication of insanity, but the extreme violence used by the girl upon her child pointed clearly to insanity in her. It seems clear that either the man should have been found insane, or the girl should have been found guilty of murder. The latter was a good looking young woman; she was dejected; she cried and trembled in the dock; and the jury would have been more or less than men if they had convicted her. Had the jury been one of women the verdict might have been different. The man seems to have been an uninteresting person, and in his case dry law took its course. But it is hard he should not have had the benefit of his “frenzy.”

Reg. v. Grosvenor.

Alfred Grosvenor, 27, French polisher, was indicted for wounding Alfred Grosvenor the younger. The prisoner cut his son's throat slightly, and then his own severely. When the child's outcries summoned the landlord, the prisoner said, “I have done it myself. It is all through trouble; my wife has left me.

How is the boy? If he is done I will do it again." When he was discharged from hospital he said, "I knew nothing about it until it was done." In defence the prisoner said "he did not know how he came to do it. His daughter died, and the intense grief which he felt at her death caused him to fly to drink. He was under the influence of drink when he cut his son's throat." Guilty of unlawful wounding, and recommended to mercy. The judge said that he agreed with the recommendation to mercy. He thought that what the prisoner did was partly because of affliction in his family, and was not wholly traceable to his having taken to drink, though, no doubt, that had something to do with it. He should inflict no punishment, but bind the prisoner over in his own recognizances in £10, to come up for judgment if called upon.—Mr. Justice Ridley.—*Times*, June 29th.

With the verdict and sentence we cannot fail to agree, but it is noticeable that the prisoner on his discharge from the hospital said that he knew nothing about it until it was done, although at the time of the act he explained why he did it. It is a very a common device of criminals to pretend that they know nothing of what they were doing when their crime was committed, and such a statement should always be received with great caution.

Reg. v. Smith.

Thomas Smith was arraigned for the murder of the Rev. J. W. Hudson. Prisoner had asked deceased to intercede for him with his landlord; he had done so, but unsuccessfully. Prisoner asked him to intercede again, and he was told he had better go by himself; he then pulled out a revolver and shot deceased, who died shortly afterwards. It was allowed to be proved that the mother of the prisoner had several attacks of insanity during her married life, that the prisoner during the last year had suffered from insomnia, that he had been addicted to drink, and that for a long time he had been in the habit of firing off a gun and a revolver pretty much at random, and often threatening people. Dr. O'Neill, of the Limerick Asylum, stated that he examined the prisoner shortly after the murder, and formed the opinion that the man was perfectly sane, and knew what he was doing; he could discover no trace of mental infirmity. Dr. Gibson, the prison surgeon, gave evidence to the same effect. The judge told the jury that they were really thrown back on the state of the man's mind for the past year and a half. It was not enough to say the man had been bordering on delirium tremens, because he may have got over it, and it would be for the jury to say whether that condition was carried down to the very evening of the crime. Guilty, but insane.—Limerick Assizes, Mr. Justice Kenny.—*Dublin Express*, July 9th.

The prisoner appears to have been sane enough to have been trusted with the use of firearms for years before the murder, although it was known that he was a crank and a drunkard; and a murder was the natural result. The favourable verdict was evidently very largely due to the merciful liberality of the judge in not merely allowing evidence to be given of the state of the prisoner's mind many months before the crime, but in directing the attention of the jury to this point. The conduct of the police in allowing the prisoner the use of firearms was strongly and justly commented on by his lordship.

Dowling v. Dod.

Plaintiff, a professional nurse, sued defendant for libel. The libel was contained in a certificate addressed to the relieving officer for Paddington. Defendant pleaded justification. It appeared from the evidence that while the defendant was in the house of Dr. Farrer the plaintiff came in and had an altercation with the latter, in which she struck him, knocked a lamp over, and was at last put out of the house. Dr. Farrer and defendant upon this made inquiries among her friends; in the result the libel was written. The plaintiff admitted that she had written abusive letters to a lady with whom she had lived, complaining the lady had taken possession of her mind, had read her thoughts, and had thrown her down in the street by means of a "thought-body" when she was a long way off. Dr. Farrer deposed to the violence of the plaintiff during the interview in the house. For the defence it was first submitted that the document was privileged

under Section 13 of the Lunacy Act, 1890, which provides that every constable, relieving officer, and overseer, who has knowledge that a person within his district or parish who is not a pauper, and not wandering at large, is deemed to be a lunatic, and not under proper care and control, shall give information thereof to a justice; and counsel contended that defendant was protected under that section if he acted *bond fide*. He also contended that the occasion was privileged on the ground that at common law any one of the public, if they saw a person who was *furious* had the right to set the law in motion to get the prisoner put under restraint. On the other hand, it was argued that Section 13 protected constables, relieving officers, and overseers only, and not members of the public. It was admitted that Section 13 might protect a member of the public if he acted with reasonable care, and in good faith; but in this case he submitted that the defendant had acted recklessly and wantonly. Mr. Justice Darling ruled that if the relieving officer had expressed the opinion that the plaintiff was insane the statement would have been privileged. It was impossible to suppose that the relieving officer was intended to act only in cases which came under his own observation. The policy of the Act required that information should be supplied to him by members of the public who had seen the behaviour of supposed lunatics. He was therefore of opinion that the defendant acted on a privileged occasion. But he was also of opinion that there was evidence of malice. The judge left to the jury the questions, first, whether the statements in the documents were true; second, whether the defendant acted *bond fide* and without malice, third whether he acted in good faith, and with reasonable care. The document stated that the plaintiff had hallucinations. In support of that statement letters had been read in which plaintiff had accused Miss Ashby of being in league with the devil. The jury had seen her, and could judge for themselves. If she was not a witch the defendant would be justified in saying that the plaintiff suffered from hallucination. Having thus given the jury a plain lead in favour of the defendant the judge then went on to put the case as strongly as possible the other way. He raked up the old trials of witches referred to by Sir Matthew Hale, and told the jury how witchcraft was recognised by the laws of England, believed in by members of Parliament, judges, and scientific men (save the mark), and finally succeeded in inducing the jury to find a verdict for the plaintiff, with £100 damages. It is difficult to believe that Mr. Justice Darling in thus addressing the jury was speaking seriously, but, as a matter of fact, when the jury found for the plaintiff he refused a stay of execution. The jury went further than the judge however. The judge told them that the plaintiff's letter accusing Miss Ashby of being in league with the devil was tantamount to saying that Miss Ashby was a witch, and the question for them was whether this statement was an indication of insanity. But the jury said it was untrue that the plaintiff said she was bewitched. They further said that it was untrue that if the plaintiff in her present state of mind acted as a dispenser she would be a danger to the community.—Q. B. D., June 18th, 19th, and 20th.—*Times* following days.

The real reason for damages, etc., seems to have been that the jury considered that whether the plaintiff was sane or insane it was not the defendant's business to act in the matter. He did not know her, and he was not in the room at the time of her attack upon Dr. Farrer, and in acting in friendship towards the latter he was acting officiously, and interfering in a matter that did not concern him.

Moreover, the letter to the relieving officer was written incautiously, without reticence, and with insufficient appreciation of the force of the words used—a very common fault in certificates of lunacy. It stated that the plaintiff had sent several threatening letters to various people, but letters to only one person were produced. It stated that some of the people to whom the letters were sent went in terror of their lives, but this was not proved even of the one recipient. It stated that Mr. Dods had interviewed several people, who all agreed as to the plaintiff's insanity, but more than one of the people whom he interviewed gave evidence, and said that they had seen no evidence of insanity in the plaintiff. Under these circumstances the verdict for the plaintiff on these points was unavoidable; but there seems no ground whatever for the finding that the defendant's statement was untrue when he said that to the best of his knowledge and ability the plaintiff was of unsound mind, and it is scarcely likely that, if the

jury really took this view, they would have limited the damages to £100. This particular finding seems to have had its origin in the resentment that juries are apt to exhibit towards any medical man who certifies that a person is insane.

Soper v. Gibson and Young.

This was an action brought by Mr. William Soper, a coachman, against Dr. J. Hill Gibson and Dr. W. M. Young, medical practitioners, in partnership at Maida Vale, to recover damages for professional negligence and false imprisonment.

Mr. Moyses and Mr. Sidney Clark appeared for the plaintiff; Mr. Jelf, Q.C., and Mr. Lambert Bond for the defendants.

The plaintiff's case was that on January 8th, 1900, he consulted the defendant, Dr. Gibson, being medical officer of a club of which the plaintiff is a member. He was, he said, suffering from some ailment of a transitory character or was run down or worried, and he alleged that the defendants negligently pronounced him to be insane and a lunatic requiring to be put under restraint, and signed an order or caused him, on or about January 14th, 1900, to be removed as a lunatic to Paddington Workhouse Infirmary for three days.

The defence was that the plaintiff was in fact insane and dangerous at the time, or that the defendants had reasonable cause to believe that he was, and had acted *bond fide* and without malice or negligence.

His Lordship, in summing up to the jury, said that, even if the plaintiff showed that he was sane and not dangerous, that was not enough. He had to show that the defendants, acting on the knowledge and information they possessed, did not act reasonably. The plaintiff's wife had made certain statements to them. Were they not entitled to consider them? On all that the defendants saw and heard from the plaintiff's wife, were they negligent in thinking that the plaintiff should be put under treatment?

The jury returned a verdict for the defendants, and his Lordship gave judgment for them accordingly, with costs—Mr. Justice Phillimore and a Common Jury.—*Times*, June 20th.

Style v. Owen and Another.

The learned judge gave judgment this morning in this case, which was heard before his lordship last term. The action was brought by the plaintiff, Mr. Robert George Style, a surgeon residing in Cambridge Road, Bethnal Green, to recover damages from the defendants, Dr. William Owen, of Shore Road, Hackney, and J. R. Marriott, the relieving officer of the Hackney Union, for imprisoning the plaintiff's wife, and depriving him of her society. The defendant, Dr. Owen, denied that he had detained or imprisoned the plaintiff's wife. The other defendant, Marriott, said that whatever he did in the matter was in accordance with his duty as relieving officer.

The circumstances of the case were of an extraordinary character. The plaintiff and the defendant were medical gentlemen who resided and practised in the same district, and who had been on terms of friendship for many years. The plaintiff's wife was mentally afflicted, and had been confined in an asylum. She had, however, recovered and returned home, but in May last her malady reappeared, and took the form of violent animosity to her husband. On the night of May 12th she ran away from her home to the house of a neighbour, Dr. Fairbrother. She was brought back to her husband's house, and the next night she again ran away from her home about 11 p.m., and was traced to the house of the defendant, Dr. Owen. Dr. Fairbrother was sent to his house to induce Mrs. Style to return home, but, according to plaintiff's case, Dr. Owen refused to allow her to go. The following day Dr. Owen sent Mrs. Style to the Hackney Union—not as being insane, but as being a destitute person. When Mr. Style went to ask for his wife at Dr. Owen's house, he received information to this effect from Dr. Owen. Mr. Style at the time was intending to remove his wife to a private lunatic asylum. He was extremely indignant with Dr. Owen, and, having gone to the Hackney Workhouse, he found his wife there, and had her removed to the Bethnal House Home. The relieving officer had signed the admission order for Mrs. Style to the workhouse, and the case against him was that he did not examine into the circumstances of Mrs. Style's case, and make the necessary inquiries with regard to her which it was

his duty to do before receiving her at the union. The defendant, Dr. Owen, said that Mrs. Style went to the workhouse at her own suggestion and of her own free will. She absolutely declined to return to her own home, and in his opinion she was not insane. He and his daughters carefully tended her while she was in his house, and her husband never came to fetch his wife till the third day after she had run away. The hearing of the case was originally commenced before his lordship and a jury on March 9th, but, in consequence of the illness of Dr. Owen, one of the defendants, the matter was adjourned, and the hearing was resumed before his lordship only on March 31st, when Mr. Reed, Q.C., said that the record as against the second defendant, J. R. Marriott, would be withdrawn, since the plaintiff no longer imputed blame to him in the matter.

A great number of witnesses were called on behalf of the defendant to prove that Mrs. Style went of her own free will to the union, having declined to remain with her husband any longer; that she was sent into the infirmary because she would have better treatment in that department; and that she could have applied for a discharge at any moment if she had cared to do so, and would not have been obliged to give notice of her intention of doing so.

Mr. Dickens, on behalf of Dr. Owen, submitted that there was no imprisonment of the plaintiff's wife by him. The only part he took in the matter was to send to the relieving officer and ask him to come to the house, and the relieving officer took his instructions from Mrs. Style.

Mr. Justice Ridley, in giving judgment this morning, after reviewing in detail all the circumstances of the case, said that, though it was difficult to say what the motives of Dr. Owen were in doing what he did, he had come to the conclusion that, although mistaken in the course he had taken, Dr. Owen did act from motives of humanity to the plaintiff's wife. There would therefore be judgment for the defendant, but without costs.—High Court of Justice, Mr. Justice Ridley.—*Times*, May 1st.

In the Goods of Emma Alderson Shaw, presumed Deceased.

This was an application for leave to swear the death of Mrs. Shaw in the following circumstances.

Mr. Willock said that Mrs. Shaw, whose maiden name was Wistar, was married to Mr. John Shaw on April 23rd, 1889, and there had been issue two children, born in 1890 and 1894. After the birth of each child Mrs. Shaw had a serious illness and suffered from hysteria, and in consequence of her state of health she went to Wiesbaden in November, 1897. She was on perfectly friendly terms with her husband, as appeared from the correspondence, and returned to England in June, 1898. On August 19th of that year she was staying at an hotel in Kensington, her husband being at the time at their home in Derbyshire. On August 20th she sent her husband an affectionate letter, dated August 19th, which clearly showed her intention to commit suicide, and contained the following expressions:—"I crave for death, for the death I have so longed for, so craved with passionate hope of peace. If it is not peace, a sleep and a forgetting. How interesting it will be! I do not need to say that the bugbear of Hades and the gridiron does not fright me. If there is a God at all, I refuse, like Lord Sherbrooke, to believe He is infinitely worse than I am myself. One would not torture poor souls, would one? . . . I shall leave nothing compromising about me, nothing in the way of luggage, etc. on the boat, and to slip very quietly over the side in the dead of a moonless night ought to be easy and safe. It seems to me the most refined way—there cannot be an inquest, unless the gulls hold one! Oh, 'the healing of the sea' that will soon heal all my misery. . . . I have wired to my solicitor to destroy my will in his charge. I do hope that he will do so, and that all will fall to you to keep for the children." Mr. Shaw at once hastened to London and discovered that on the day in question Mrs. Shaw had telegraphed to her solicitor to destroy her will, but that gentleman had not done so. She had also written to one of the children telling them to buy a doll, and had driven from Kensington to a hospital in Fitzroy Square with the object of consulting one of the resident medical men. He was not, however, at home, and after making inquiries as to where she could dine, she drove to Charing Cross Station, where every trace of her had been lost. Advertisements had been inserted in the *Times* and other newspapers, and inquiries had been made at Dover, Calais, Folkestone, Boulogne

and on the Continent, as well as in the United States and New Zealand—but without result. The lady was possessed of a banking account, but the last cheque which had been cashed was on August 19th, 1898.

Mr. Justice Gorell Barnes, after perusing the affidavits in support of the motion, gave leave to swear the death on or since August 19th, 1898.—Mr. Justice Gorell Barnes.

Shields v. Shields and another.

This was an action by John Shields against the trustees under a settlement of his father, deceased, Mr. Shields, senior. The testator had made during his lifetime a settlement of his estate, and modified the same by will. The pursuer was entitled to a fifth of his father's property, but in the will it was provided that the defenders were "to manage the same for him in such way as they think best, and so long as they shall deem advisable, absolute discretion being hereby conferred upon them, both as regards management and the length of time to retain his share." The reason for this unusual provision was that the pursuer had been for some years a patient in Gartnavel Asylum. He was, however, discharged in 1895, and it appeared that he had now recovered. Lord Low held that the testator intended to give to the trustees power to manage the estate of the pursuer so long only as he remained in a condition of mental incapacity, and that there was nothing to show that pursuer was not to have the full use of his share if, as had occurred, he should be restored to health. He therefore gave judgment or, in Scots terms, gave decree of declarator, in favour of the pursuer. Another instance of how in law words may mean the opposite of what they appear to mean.

ASYLUMS NEWS.

NURSES' HOME, GARTLOCH.

A separate building, to accommodate the nurses and servants, has recently been opened. It is of red sandstone, on the same architectural lines as the main building, and while structurally distinct, is very accessible from both asylum and hospital. It accommodates seventy in all, and is in three stories, being roughly divided into six sections, each of which has public rooms and bedrooms, with bath-room, lavatories, and scullery. On the ground floor, in addition, are visitors' and home sisters' rooms, with a library and kitchen, from the latter of which small lifts run to the sculleries on the upper floors. Box and bicycle rooms are placed in the basement. The two sections on the top flat are for nurses and servants, the quarters of the latter being reached by a separate staircase, and those of the former being arranged to insure quiet during the day. The lighting is electric, and the heating by low pressure hot water, the steam being brought from the main boilers. The total cost of the building furnished is about £14,000.

NEW DEPARTMENT, CHARING CROSS HOSPITAL.

Charing Cross Hospital has followed the example of St Thomas's and some provincial hospitals where there have been for a long time out-patient departments for mental disorders, and a similar department has been instituted there, under the charge of Dr. Percy Smith, the late Resident Physician to Bethlem Hospital. Although the out-patient treatment of mental cases has limitations, yet there is at present very little opportunity for patients of the poorer classes and their relatives to obtain advice in the early stages of any mental disorder, while from the point of view of the student there are few opportunities for clinical teaching on such cases as may be at present met with at general hospitals. In fact they are as a rule dismissed as being something quite apart from ordinary disease, and often considered hardly worth investigation. Such departments supply a real want at general hospitals, and we hope to see others follow suit.

THE INTERNATIONAL SOCIETY OF THE PSYCHICAL INSTITUTE, PARIS.

A number of distinguished men have made a proposal to found a Society for scientific experimental study of psychical phenomena. The objects of the Association are:—(1) The installation of laboratories equipped with suitable apparatus (biometers, magnetometers, spectroscopes, registering instruments, photographic apparatus, etc.); (2) the finding and payment of "subjects"; (3) the creation of a periodical which shall publish accounts of the experiments made in the laboratories, and their results, and the writings of collaborators interested in psychical studies. The General Secretary of the new Institute is Dr. Emile Legrand, 14, Rue d'Amsterdam, Paris.

Full information can be obtained from Mr. O. Murray, The Nook, Ormande Road, Branksome Park, Bournemouth.

We notice among the names of those who have already intimated their support, Dr. Pierre Janet, Professor Baldwin, Professor Lodge, Professor Stout, Professor Charles Richet, and many others.

THE ASYLUM WORKERS' ASSOCIATION.

We regret that, owing to the pressure on our space, we cannot enter into details as to the gratifying success which has attended the Asylum Workers' Association during the past year. We hope to give some account of the proceedings of the Annual Meeting in our next number.

INSANITY IN THE CITY OF LONDON.

There recently appeared in the lay press the statement that the City possessed "an unenviable notoriety so far as its statistics of lunacy are concerned." The returns made by the Medical Officer of Health for the City were referred to as then justifying the conclusion "that one in every twenty-five persons actually resident in the City, from a legal point of view, is at the present time an inmate of a workhouse, or an infirmary, or a lunatic asylum." As this statement may be misleading, we think it well to give the facts regarding the relative proportion of insane to total population in the City.

There are 350 insane patients belonging to the City Union and Corporation, and the resident population (night) of the City is about 35,000—thus giving the proportion as 1 in 100. The day population in the City is nearly a million.

HEREDITY AND INEBRIETY.

The Society for the Study of Inebriety has appointed a Committee of medical men to inquire into the relation of heredity to the production of inebriety. The President is Dr. Wynn Westcott, Coroner for North-East London, and the Committee includes the names of Mr. Victor Horsley, Professor Sims Woodhead, Drs. Archdall Reid, Heywood Smith, and Harry Campbell, with Dr. Thomas Morton as Secretary. Much progress has already been made with the investigation, and the medical profession is now asked to supply evidence on the following subject:—"The Committee are fully satisfied that drunken parents tend to have children who become drunkards; but they earnestly desire to obtain evidence bearing upon the question whether a parent who himself inherits no special tendency to inebriety can, as the result of mere intemperate habits, entail upon his children a potential inebriety." Communications will be gratefully received by the President or Secretary, and may be addressed to 396, Camden Road, London, N.

PLASMON.

This preparation has now been tried in several asylums, and we hear that good results have been gained by its use. It is, essentially, the separated casein of milk, and is presented as a dry powder which forms a gelatinous mass with water. Professor Virchow has made experiments showing that plasmon retains powerful nourishing qualities, while it remains practically tasteless and colourless. From independent chemical analysis it is a substance of distinct value, and we hope to present our readers with some account of the beneficial results of administering it to the insane.

CORRESPONDENCE.

From Dr. BEVERIDGE SPENCE.

In reply to your question, in eight of my new dormitories—accommodating about 160 persons—I have electric push buttons placed and marked "To communicate with the night attendant push this button," and the bell connected with the push is placed at the station where the night attendant or nurse sits when not walking about, and this station is so situated that a bell ringing at night must be heard by the night attendant or nurse at any point of his or her round. I may say that although I have had these pushes provided in some of the dormitories for about six years I have never heard that they have been used—or abused.

BURNWOOD ASYLUM.

August 31st, 1900.

From Dr. MOODY.

Having been struck by the isolation of patients between the hours 8—10.30 p.m. in dormitories which are only visited periodically by the night attendants, I brought the matter under the notice of the Committee at the end of 1895, and obtained sanction for the provision of an electric alarm.

In every dormitory where there is no stationary night attendant a push button is provided. This, when used, rings a bell in the entrance hall and indicates in which ward attention is required. The bed nearest the button is occupied by the most sensible patient in the dormitory, who not only gives an alarm when necessary, but prevents the bell being rung without reason.

The alarm has on several occasions been of service in cases of sudden illness or disturbances, and has quite justified the outlay involved.

After 10.30 p.m. the attendants' rooms, which adjoin dormitories and which have windows in the division walls, are occupied, and the electric alarm not being required is disconnected for the remainder of the night.

LONDON COUNTY ASYLUM, CANEHILL;

September 15th, 1900.

From Dr. CECIL F. BEADLES,

There is a general opinion amongst the Jewish community that insanity is abnormally prevalent in the race. This idea seems to have been derived from Prussian statistics. But is this so for Jews in this country?

With a view of obtaining an answer to this interesting, and I venture to think important, question, I have sought information at certain asylums as to the number of Jewish inmates therein, on the two dates December 31st, 1898, and June 30th, 1900. The former date is chosen as one on which a comparison may be made with the non-Jewish insane of the country; the latter as the number of Jewish insane existing at the present time.

Knowing that the Jews in this country, are almost entirely located in a few of the larger towns, it seemed useless to ask these questions of many of the provincial asylums. But as it is possible that some institutions where Jewish patients are received have been overlooked, I shall be glad if the Superintendents of these will communicate with me on the subject, to enable me to obtain as complete returns as possible.

Perhaps I may be allowed this opportunity to thank all who have assisted me in this inquiry.

COPY OF CIRCULAR LETTER.

Will you kindly give me your assistance in an attempt to find out the amount of insanity that exists amongst the Jewish population of this country?

As no figures appear to exist, the only available means is to obtain a return of the number of Jewish patients, received into each asylum for the insane, throughout the Kingdom.

I trust you will help me in this matter by returning the annexed form after filling in the figures asked.

(1) The number of patients in the — Asylum on June 30th, 1900.

	Total Insane.	Jewish Insane.
Pauper.	Private.	Pauper. Private.

Males
Females

(2) As there are only comparative figures obtainable at present for the year 1898, both as regards the estimated Jewish population of England, and the amount of insanity in the country, I should be glad, if it is possible, to have the number of Hebrews present in the Asylum on December 31st, 1898.

Pauper. Private.

Jews
Jewesses

COLNEY HATCH ASYLUM,
September 4th, 1900.

OBITUARY.

WILLIAM HENRY LOWE, F.R.S.

Dr. W. H. Lowe, F.R.S., died at Wimbledon on the 26th August, in his 86th year. He was educated at the University of Edinburgh, at which he graduated in 1840. In that year he was admitted to the membership of the Royal College of Physicians, Edinburgh, having previously taken the membership of the Royal College of Surgeons of England. Dr. Lowe held several professional appointments in Edinburgh, among others those of President of the Royal Medical Society, and President of the Royal Botanic Society. He was elected a Fellow of the Royal College of Physicians of Edinburgh in 1846, and President in 1873. At the meeting of the British Medical Association in Edinburgh in 1875, he gave the opening address in the section of Psychology, over which he presided. Dr. Lowe was for many years associated with the late Dr. John Smith in the management of Saughton Hall Private Asylum, near Edinburgh, residing at Balgreen, the garden and grounds of which show permanent evidences of his skill and taste as a botanist. He was also a keen entomologist and amassed a large and interesting collection of the Lepidoptera of the district. In 1875 he settled at Wimbledon Park. He was the author of 'Jaundice from Non-elimination, together with remarks on the Pathological Condition and Chemical Nature of the Bile.' Dr. Lowe was twice married, and is survived by a widow and family.

LANDON CARTER GRAY, M.D.

Dr. Landon Carter Gray, who died in the May of this year, was born at New York in 1850. Soon after he graduated he devoted special attention to neurology and psychiatry, and at a comparatively early age he attained a leading position in his profession. He was elected President of the American Neurological Association, of the New York Neurological Society, and of several other learned societies. For a number of years he was Chairman of the Executive Committee of the Congress of American Physicians and Surgeons. He was the author of a treatise on mental and nervous diseases and of many valuable contributions to medical literature. Dr. Gray took a deep interest in the study of medical jurisprudence and, as a medico-legal expert, he is said to have been described by a distinguished judge as the very model of what a medical witness ought to be.

NOTICES BY THE LIBRARIAN.

Received per Dr. Urquhart—1. Table to illustrate Dr. Conford's paper published in the *JOURNAL* for April, 1900. 2. Photographs to illustrate "Acromegaly," by Dr. Blair, paper published in the *JOURNAL* for April, 1899. Face and hands of a case of acromegaly, face and hands of a case of myxœdema, normal hand, and hand affected by rheumatoid arthritis, which may be illustrative of Marié's pulmonary hypertrophic osteo-arthropathy; also a skiagraph of acromegalic hand. 3. *Mental Affections of Children*, by W. W. Ireland, M.D.

NOTICES BY THE REGISTRAR.

The following gentlemen were successful at the examination for the Certificate in Psychological Medicine, held on July 19th, 1900:

Examined at *the Royal Asylum, Aberdeen*.—Alexander William Overbeck Wright.

Examined at *the Royal Asylum, Edinburgh*.—Walter S. Patton, J. Fraser Orr.

The following is a list of the questions which appeared on the paper:

1. What forms of insanity may occur in old age, and what is the prognosis in each? What conditions would make you recommend removal to an asylum in a case of senile dementia? 2. Define an obsession, and classify and describe the chief varieties of obsessions. 3. What are the causes of refusal of food by insane patients? When does this symptom unfavorably affect the prognosis? 4. Describe a case of acute delirious mania, giving symptoms, treatment, and post-mortem appearances, and stating how you would distinguish between it and a case of mania *a potu*. 5. What is the pathology of *hæmatoma auris*, what treatment would you recommend, and what is the prognosis? 6. Discuss generally the criteria of insanity.

The Gaskell Prize has been awarded to Dr. Maurice Craig, Assistant Physician, Bethlem Hospital, London; and the Bronze Medal has been awarded to Dr. Charles C. Easterbrook, Assistant Physician, Royal Asylum, Morningside, Edinburgh.

The next examination for the Certificate of Proficiency in Nursing will be held on Monday, November 5th, 1900, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association, not later than Monday, October 8th, as that will be the last day upon which, under the rules, applications for the examination can be received.

The New Regulations (given in detail in the October numbers of the *JOURNAL* for last year and this year) will be in force at this examination. For full particulars respecting the various examinations of the Association apply to the Registrar, Dr. Benham, City Asylum, Fishponds, Bristol.

The following candidates have passed the Special Examination for the Nursing Certificate, held in South Africa:

Valkenburg Asylum.—Males: William Fowler Booth, Robert Smith, John Cochrane. Females: Bridget O'Reilly, May Littlejohn.

Grahamstown Asylum.—Female: Ellen Bickell.

Fort Beaufort Asylum.—Female: Alice Hayward.

There will be no Examination for the Medico-Psychological Professional Certificate in December.

ERRATUM.

Page 620. Omitted *Royal Asylum, Edinburgh*.—Female: Emily Cartlidge.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

General Meeting.—The next General Meeting will be held in the rooms of the Association, 11, Chandos Street, London, W., on Wednesday, 21st November, 1900. Papers will be read by Sir Dyce Duckworth, Dr. G. H. Savage, and Dr. Lewis Jones.

South-Western Division.—The Autumn Meeting will be held at Broadmoor Asylum on Tuesday, 30th October, 1900. Papers will be read by Dr. Brayn, Dr. Alfred Turner, and Dr. John Baker.

Northern Division.—The Autumn Meeting will be held at Gosforth Asylum, Newcastle, on Wednesday, 3rd October, 1900.

South-Eastern Division.—The Autumn Meeting will be held at Ticehurst, on Wednesday, 10th October, 1900. The Honorary Secretary will be glad to hear from any member who wishes to read a paper at the Spring Meeting to be held in April, 1901, and to receive the names of candidates for election to the membership of the Association.

Scottish Division.—The next meeting will be held in Edinburgh, on Friday, 23rd November, 1900.

Irish Division.—The next meeting will probably be held at the Royal College of Physicians, Dublin, early in April, 1901.

APPOINTMENTS.

Dr. J. F. Flashman, M.D., appointed Pathologist in the Lunacy Department, New South Wales.

Mr. R. A. Fox, M.B., appointed Junior Medical Officer in the Lunacy Department, New South Wales.

Mr. Wheeler Haines, B.Sc.Lond., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., appointed Senior Medical Officer at the North Riding Asylum, Clifton, York.

Mr. David Hunter, M.A., M.B., B.C.Cantab., L.S.A.Lond., appointed Medical Superintendent of the new West Ham Borough Asylum at Chadwell Heath.

Mr. A. M. Rattray, M.B., C.M.Edin., appointed Senior Assistant Medical Officer to the Newcastle City Asylum, Gosforth, *vice* Mr. D. Hunter, M.B., B.C.Cantab., resigned.

Mr. Archibald Stevenson, M.B.Glasgow, appointed Junior Assistant Medical Officer to Hawkhead Asylum, Crookston.

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