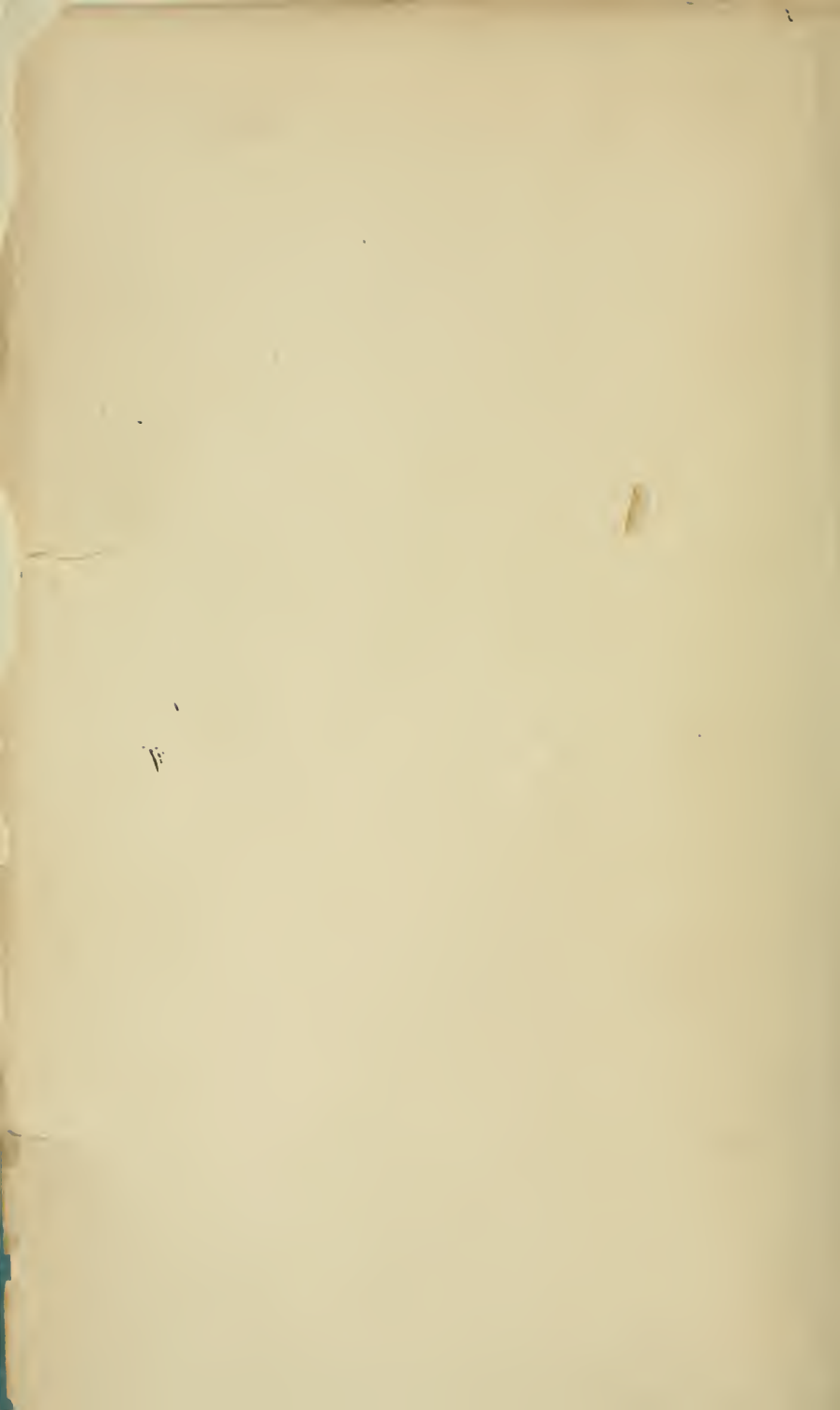


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EDITED BY

HENRY MAUDSLEY, M.D.,

AND

JOHN SIBBALD, M.D.

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“Nos vero intellectum longius a rebus non abstrahimus quam ut rerum imagines et radii (ut in sensu fit) coire possint.”

FRANCIS BACON, *Proleg. Instaurat. Mag.*

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"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 terms, 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."—*J. C. Bucknill, M.D., F.R.S.*

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VOL. XIX.

PART 1.—ORIGINAL ARTICLES.

The Local Distribution of Insanity and its Varieties in England and Wales, by T. S. CLOUSTON, M.D., Medical Superintendent of the Cumberland and Westmorland Asylum, Carlisle.

The way in which some diseases seem to confine themselves to particular localities and classes of persons, and the reasons for this have always been favourite studies in medicine; and year by year such questions attract more and more attention. The reason of this is obvious. Those problems have some of the definiteness of pure physical science about them: their study throws a direct light on the nature of disease, while their solution tends to its immediate prevention. Hence the prominence which they have assumed in the new branch of preventive medicine. There is scarcely any word which means so much in this science as the localisation of disease, in its active and in its passive phase. To know why a disease breaks out in a certain place, and to be able to keep it from spreading further may be said to be the two first aims of public medicine. The first thing to be done is, of course, definitely to connect the disease with its habitat. This can be done far more readily in the case of some diseases than in that of others, but there is no disease that is not more or less localised as to places or the class of persons whom it attacks. The weak points of man's constitution are so many, and the trials to which it is subjected vary so widely with locality, climate, food, work, and circumstances, that this must be so. The infinitely numerous seeds of disease and dissolution are of many species; and while each seed only germinates as it finds fit soil, each species also requires suitable conditions. This is as true in regard to the brain, and the departures from the normal performance of its higher functions, as in regard to every other organ of the body,

though as yet but little attention has been directed to this fact. The wide series of diseases which are at present called Insanity prevail more in some places than in others, attack some classes of persons in preference to others, are hurried into actual development, or retarded where latent tendencies to them are in existence, by certain things which have a local prevalence, and they evidently assume one form rather than another through local influences. The extent to which this is the case is as surprising as it is certain. When one comes to look carefully into the reports of lunatic asylums in different parts of the country it is found that there are forms of brain disease (or varieties of insanity as they are called) present in abundance in one place which have almost no existence in another. Diseases of the brain which kill more than a third of all the patients in the asylums of some of our counties do but kill 5 per cent. of them in others. But I shall not anticipate the numerical proof of what I have been stating. This investigation must be very largely conducted on the numerical method, and fortunately the distribution of insanity and its varieties can be more thoroughly made out in this way than that of almost any other disease. When it attacks in a decided form any person in the classes which constitute nineteen-twentieths of the inhabitants of this country its treatment is so difficult and costly that if it is of long duration it almost necessarily must be done at the public expense. This implies that it is publicly recorded in the official documents of the Commissioners in Lunacy and the Poor Law Board. In this way a fairly trustworthy account can be got of the number of persons in every county and district of England and Scotland who are suffering from this disease in any one year. It is true that these numbers include also the persons who are chargeable to public funds on account of idiocy or marked imbecility, dating from birth, and the numbers of the latter cannot be distinguished in these documents from those who labour under insanity. But as congenital brain defect and acquired brain disease certainly have the closest connection hereditarily and in their essential nature, this does not seriously affect an investigation into the local occurrence of insanity founded on the numbers recorded in the official documents I have referred to. The numbers of the insane who are paid for out of their own funds or by their relations, and who appear in those documents as private patients, are left out of the account, because those numbers are comparatively small, and it is

impossible to fix correctly the local occurrence of this class of insanity, it being determined in these official records more by the presence or absence of the institutions for its treatment than anything else. This omission affects slightly the scientific accuracy of the results obtained, but does not affect their practical value and medical interest.

In the still more interesting but more difficult investigation of the local distribution of the different varieties of insanity, in other words the various diseases which are included under that name, the only reliable data are the facts recorded in the county and district asylum reports. Unfortunately, these are not all drawn up on one plan, no absolutely uniform nomenclature or classification is adopted, and they have not all as yet adopted the forms of statistical tables recommended by the Medico-Psychological Society, so that this part of the enquiry cannot be made so exhaustive or complete as the other. A sufficient number of uniform facts can, however, be got from the reports of asylums, scattered over the various parts of the country, on which to base fairly reliable generalisations. I shall endeavour to throw the numbers and facts into tabular forms as much as possible for the sake of reference.

The actual number of the pauper insane in each county and district I have taken as they stood on the 1st of January, 1871, because that is the record of lunatics nearest to the census of the 3rd of April of that year. The "Preliminary Report of the Census of 1871," issued by the Registrar-General, has been used. I have given in Table 1* (see next page), amongst other information, the proportion of lunatics for every 1000 of the population in every county in England and Wales. The rate for the whole of England and Wales is there seen to be 2·2 per 1000, but the departures from this rate are very striking indeed. The minimum of 1·3 (Durham) is only about three-fifths of the average, and little more than one-third of the maximum of 3·6 at which the county of Berkshire stands. It is an astonishing fact medically, that any non-infectious disease should be nearly three times as common in Berkshire as in Durham; while it is equally remarkable and interesting socially and economically. Durham would have 2,473 madmen and idiots instead of 893 if it had the same number in proportion to its

* A table of this kind is given in p. 14 of the 25th Report of the Commissioners in Lunacy, but on account of the numbers of the population of the various counties being put down probably from the Registrar's estimate instead of from the census returns (not then issued) the proportion of lunatics per 1000 is entirely incorrect.

TABLE I.

COUNTIES.	Population. 1871.	Lunatics. 1871.	Lunatics per 1000 of Popu- lation.	Per centage of increase of Population 1861—1871.	Paupers per 1000 of Popula- tion.
England and Wales.	22,704,108	50,637	2·2	13·1	47·8
Anglesey	50,919	91	1·8	—6·8	66·4
Bedford	146,256	377	2·6	8·1	72
Berks	196,445	713	3·6	11·5	73·1
Brecon	59,904	147	2·5	—3	54·9
Bucks	175,870	441	2·5	4·7	64·3
Cambridge	186,363	446	2·4	6	73·5
Cardigan	73,488	158	2·1	1·7	92
Carmarthen.....	116,944	309	2·7	4·6	51·1
Carnarvon	106,122	261	2·4	10·9	75·3
Chester.....	561,131	959	1·7	11	29·3
Cornwall	362,098	567	1·6	—2·3	50·7
Cumberland.....	220,245	463	2·1	7·3	30·9
Denbigh	104,266	147	1·4	3·4	62·5
Derby	380,538	597	1·6	12·2	24·5
Devon	600,814	1,438	2·4	2·8	53·6
Dorset	195,544	489	2·5	3·6	76·3
Durham	685,045	893	1·3	34·7	36·7
Essex	466,427	1,017	2·2	15·2	67·5
Flint	76,245	202	2·8	9·3	37·6
Glamorgan	396,010	685	1·7	24·6	50
Gloucester	534,320	1,492	2·8	10	52
Hereford	125,364	414	3·3	1·3	53
Herts	192,725	516	2·7	11·2	68·6
Hunt	63,672	134	2·1	—1	52
Kent	847,507	1,864	2·2	15·5	52
Lancashire	2,818,904	5,538	2	16	32·1
Leicester	268,764	805	3	13·2	47·4
Lincoln	496,163	867	2	5·8	50·1
Merioneth	74,369	108	2·3	21·6	78
Middlesex	2,538,882	7,312	2·9	15·1	51·6
Monmouth	195,391	547	2·7	11·9	58·8
Montgomery	67,789	197	2·9	1·3	73·5
Norfolk	438,511	1,135	2·6	·9	70·8
Northampton	243,896	622	2·5	7·1	63·5
Northumberland	386,959	773	2	12·8	43·8
Nottingham	319,956	786	2·5	8·9	44·8
Oxford	177,956	556	3·1	4·1	68·7
Pembroke	91,936	256	2·8	—4·5	61·7
Radnor	25,428	45	1·8	0	89·3
Rutland	22,070	51	2·3	1	60·8
Salop.....	248,064	695	2·8	2·9	43·5
Somerset	463,412	1,272	2·7	4·2	71·9
Southampton	543,837	1,312	2·4	12·9	58·3
Stafford	857,333	1,264	1·5	14·8	38
Suffolk	348,479	853	2·4	3·4	70·7
Surrey	1,090,270	2,590	2·4	31·2	51·6
Sussex	417,407	1,060	2·5	14·8	61·1
Warwick	633,962	1,486	2·3	12·8	35·8
Westmorland	65,005	131	2	6·9	32·8
Wilts	257,202	806	3·1	3·2	77·2
Worcester	338,848	1,088	3·2	12·2	41·1
York (East Riding)	313,301	585	1·9	10·6	30·7
York (North Riding)	291,589	436	1·5	18·9	28·1
York (West Riding)	1,831,223	2,641	1·5	21·5	31·1

population as Berkshire, and would pay £47,000 instead of £17,000 for their maintenance. Other things being equal, the race in Durham should be immensely better in health and vigour and morals through not having those 1500 extra lunatics, the children they would have begotten, and the tainted families in which they would have occurred.

For the explanation of this extraordinary difference in the production of lunacy in the various parts of England, it is evident that many things will have to be taken into consideration. The lunacy rate will have to be very carefully compared with the rate of occurrence of many other things in order to exhaust all the possibilities of causation, and reliable conclusions can only be come to by weighing carefully the medical and social meaning of the figures.

1. I shall first compare the proportion of lunacy with the rate of increase of the population in the various counties during the ten years from 1861 to 1871, and to throw still more light on the question, make the same comparison in regard to the larger areas constituting the registration divisions. The rate of increase of a population is a general fact of the most important kind, which shows the vigour of race, the social habits, the health, the presence of large towns, and, above all in England, the prosperity of a county. And the exact increase that ought to have taken place from the excess of births over deaths being known, it also shows the amount of emigration out of, or the immigration of a foreign element into any district. Both of these things are most important facts to be known, for those who leave a county naturally leave their insane relatives behind them, and they commonly belong to one of two classes. Either they are the best and most pushing of their class going to better themselves, or they are the worst and least pushing who go to the large towns to sink into pauperism and social misery. Some expect that counties to which such immigration takes place will find their natural level in regard to their number of lunatics in time, and the counties from which it has taken place would scarcely be expected to decrease in population and increase in lunacy for ever; this part of the question I shall test accurately by figures, and by a comparison of the growth of population and of that of lunacy respectively in the various counties.

2. The next element of social statistics that seems to bear on the question, is the Pauperism of the counties and their Wealth. The former I shall easily compare, by showing

side by side the rate of lunacy and that of pauperism to the population in each county and district, and the latter in an imperfect way by showing the taxable wealth per person of the population. (See Tables I and II.) By this means the theory that our lunacy is largely the result of the same influences which have caused our pauperism can be tested, and the general relationship between the two, when looked at on a large scale, made out. The rate of wages of the working population, and their circumstances is another element that will be taken into account under this heading.

3. The influence of the amount and kind of Food and Drink, especially intoxicating drink, on the production of insanity, will next come under consideration.

4. Most diseases having more or less relation to the prevalent Occupations of a people, I shall next examine into the connection between the amount of insanity in the counties and districts, and the prevalent occupations of the inhabitants. I cannot pretend to do this quite fully, but I shall take all the reliable facts that can be got for the elucidation of this extremely interesting branch of the enquiry. The habits of the people come most naturally along with their occupations in their relation to this question. Nothing, certainly, can well be more important than to ascertain whether the husbandman or the cotton-spinner, the miner, or the wool-worker, is most subject to this disease.

5. Closely connected with this last is the next part of this question I shall investigate, viz., the influence of living in Cities or in the Country in the production of lunacy, and the crowded or scattered state of the population, as shown by the number to each square mile.

6. The very important but not very definite facts ascertainable in regard to the effect of Intermarriages among small communities for many generations, may help to throw some light on the question, and will be taken into account, so far as the facts can be got.

7. The Geographical Position of the various counties and districts, in its relation to the amount of insanity in them, will form the next head of enquiry. The difference between the South and the North of England, between the hilly and plain districts, between those bordering on the sea and those inland, if there is any difference between any of these, would seem necessary to any complete investigation.

8. So far as it can be done, I shall also take the element of Race into the investigation, and see whether the descend-

thousand of the population in each of them, as compared with their decennial increase, at the same time taking account of how this increase is made up; to what extent in the natural way from the excess of the births over the deaths during the ten years, and to what extent from the immigration of other persons who were born elsewhere. Those facts are shown in Table III. In the 5th column the decennial rate of increase is shown as actually ascertained from the census, and in the 6th column how much that increase is either above or below the "natural increase," or the excess of the births over the deaths. In the divisions where there were found to be more people at the end of the ten years than had been born there, the per centage of this excess over the natural increase is shown by a *plus* sign; in those where there were fewer persons, the per centage of this diminution is shown by a *minus* sign. All the divisions with a high *plus* per centage, therefore, had a large immigration into them of new stock from other places; all those with a high *minus* per centage lost through emigration a large number of the persons born in them during the ten years.

Beginning with the London Division we find that there the rate of lunacy is very high, 2·8, being the highest of all in fact, while the decennial rate of increase is also very high (16), though not so high as the South Eastern, York, and Northern Divisions. This increase of the population was due in a larger degree to the immigration of persons not born in the division than in the case of any other part of England, being 35 per cent. above it, or one immigrant for every two births. This fact, taken in conjunction with the very high lunacy rate, undoubtedly shows that the immigrants into London are for some reason quite as much subject to insanity, or more so, than those born there. The second or South Eastern Division, comprising the extra metropolitan parts of Surrey and Kent, Sussex, Hants, and Berks, shows a high lunacy rate (2·5), with also a high rate of decennial increase (17), and a large excess of increase (22 per cent.) over the births in the division. The third, or South Midland division, which includes the extra-metropolitan part of Middlesex, Herts, Bucks, Oxford, Northampton, Hants, Beds, and Cambridge shows a high lunacy rate (2·4), with an increase of population rather below the average (11·3), and also slightly below (18 per cent.) the number accounted for by the births. The fourth, or Eastern Division, comprising Essex, Suffolk, and Norfolk, has a high lunacy rate (2·5) with a decennial increase (6·6), only half the average of England, and about half the number of persons (48 per cent.) who

TABLE III.

Registration Divisions.	Population.	Lunatics.	Lunatics per 1000 of Population.	Increase of Population 1861—71 Per cent.	Percentage Real Increase over or under Natural Increase.	Paupers per 1000 of Population.	Persons per square mile.
1. LONDON— Metropolitan Middlesex, Surrey, and Kent.	3,251,804	9094	2·8	16	+35	47	26,682
2. SOUTH EASTERN Extra-Metropolitan Surrey and Kent, Sussex, Hants, and Berks.	2,166,217	5428	2·5	17	+22	53	341
3. SOUTH MIDLAND Extra-Metropolitan Middlesex, Herts, Bucks, Oxford, Northampton, Hunts, Beds, and Cambridge.	1,442,567	3421	2·4	11	—18	63	288
4. EASTERN— Essex, Suffolk, Norfolk.	1,218,257	3005	2·5	6·5	—48	71	243
5. SOUTH WESTERN Wilts, Dorset, Devon, Cornwall, and Somerset.	1,879,898	4572	2·4	2·5	—80	66	241
6. WEST MIDLAND Gloucester, Hereford, Salop, Stafford, Worcester, and Warwick.	2,720,003	6439	2·4	11	—26	44	442
7. NORTH MIDLAND Leicester, Rutland, Lincoln, Notts, and Derby.	1,406,823	3106	2·2	9	—35	44	354
8. NORTH WESTERN Cheshire and Lancashire.	3,382,590	6497	2	15	+24	32	1,082
9. YORK— Yorkshire.	2,395,299	3662	1·5	19	+33	33	419
10. NORTHERN— Durham, Northumberland, Cumberland, and Westmorland.	1,414,066	2260	1·6	23	+32	40	259
11. WELSH— Monmouth and Wales.	1,426,584	3153	2·2	9·5	—29	64	178

formed the excess of births over the deaths had gone away. Coming to the South Western Division, which comprises Wilts, Dorset, Devon, Cornwall, and Somerset, we find still a high lunacy rate (2·4), a very small decennial increase (2·4), and 80 per cent. of the natural increase gone away. The West Midland Division, comprising Gloucester, Hereford, Salop, Stafford, Worcester, and Warwick, shows a lunacy rate above the average (2·4), an increase of population slightly below the average, and 26 per cent. of diminution of the excess of births. The North Midland Division (Leicester, Rutland, Lincoln, Notts, and Derby) is the first where we find the average lunacy rate (2·2). It has an increase of population below the average (9), and has lost 35 per cent. of its natural increase by emigration. The next three divisions, North Western (Cheshire and Lancashire), York (Yorkshire), and the Northern (Durham, Northumberland, Cumberland, and Westmorland) all show the same characteristics, viz., a lunacy rate much under the average (2, 1·5, and 1·6 respectively), an increase of population over the average (15, 19, and 23), and a large gain by immigration over the natural increase (24, 33, and 32 per cent.) The last division, the Welsh (Monmouth and Wales), has the average lunacy rate (2·2), an increase of population below the average (9·7), and a loss of its natural increase to the extent of 29 per cent.

These divisions being large, unequal in size, and many of them embracing counties and districts entirely diverse in regard to the occupations and circumstances and increase of the population, and arranged on no special plan, except contiguity and convenience of grouping, an examination of their lunacy rate and its relation to the increase of population is, in many respects, unsatisfactory. Its chief value lies in correcting the local idiosyncrasies of small counties by its larger grouping, and in the real similarity of a large number of the counties included in many of them. Certainly the London, South Midland, Eastern, South Western, North Western, York, and, to some extent, the Northern and Welsh divisions, have each distinctive and specific natural features, and, taking those divisions, their lunacy rate, their increase of population, and the extent to which this latter is accounted for by the excess of births over deaths, have definite relations. In the London Division there are causes which make the first exceed the ratio of the two others, and make them all to be above the average. In all the other divisions named the lunacy rate stands in inverse ratio to the two others, being high where they are low, and low where they are high.

Indeed this rule applies, more or less, in them all, except in the case of the metropolis and the adjacent counties.

The close connection between a rapidly increasing population and a small number of the insane being thus established in regard to by far the greater part of England, the next important point to be investigated is whether the increase of lunacy in any way corresponds with the decennial increase of the population in the various counties of England. This is a point which is by no means capable of such a satisfactory investigation as the preceding. The increase of the population in each county is a definite fact capable of absolute proof, explain it how we may; while the increase of lunacy in any county is a fact influenced variously by many circumstances. The presence of lunatic asylums and how long these have been in existence, their accessibility, the size of the unions, and the state of law, all these, as we shall see, influence it in the most material way. And in regard to the mere definition by the union medical officers of what constitutes an insane or imbecile person, and their enumeration, therefore, in their returns, we have a source of fallacy in comparing one county with another. A harmless simpleton might well wander about a country district and receive relief as an ordinary pauper who, in a more frequented locality, would certainly be put down among the list of lunatics.

Keeping these things in mind, we may now examine the facts as we find them recorded. In the year 1861 there were 35,709 pauper lunatics in England and Wales known to the Commissioners in Lunacy, and in the year 1871 there were 50,637, or a decennial increase of 41 per cent., and this increase has, on the whole, been a steady one from year to year. This is just about three times the increase of the population in that time, which we have seen was 13 per cent. Of course no one believes that lunacy has really increased during that time to that extent; but it might naturally be supposed that in the counties which have been increasing rapidly in population for a long time by immigration, if the tendency to the production of insanity was very much the same everywhere, the lunacy would be increasing in a greater ratio than in the rest of the country. It might be thought that in those places the newly arrived population would be all healthy at first, but in time would become subject to insanity as to other diseases. If this were so the numbers of insane in those counties would certainly show a far greater rate of increase than in those with no immigration. We shall see if this is the case.

I have not been able to procure correct returns of the actual number of the insane in each county in 1861, and very reliable returns are not to be got until the beginning of 1869. I have therefore taken the numbers of the insane in most of the counties at that time, and then at the beginning of 1872,* and have calculated the yearly increase at that rate. In some respects it is unsatisfactory to have so few years, and in others not so, for unquestionably of late the actual numbers of the insane and imbecile are better returned to the Poor Law Board and Commissioners, there being less obvious irregularity between the percentage different counties in that respect lately. The yearly increase of lunacy in all England for the last three years has been 3·6. I have shown the results in the 4th column of Table II. From that it can be seen that while the majority of the English counties that stood in the first class with low lunacy rates and a rapidly increasing population, are also found to have a rate of increase of lunacy above the average, yet this is not nearly in proportion to the rate of increase of the population. Durham, Stafford, Yorkshire, Lancashire, Surrey, Sussex, and Essex are yearly increasing in their number of lunatics to an extent considerably above the average, but on the other hand so are Beds, Herts, Hants, Salop, Leicester, Devon, Somerset, Oxford, and Berks. Durham increases at nearly thrice the average rate of England generally, while its lunacy only increases about a half more. Yorkshire and Lancashire increase in lunacy at about the same proportional rate as in population. The population of Glamorgan grows at twice the average rate, while its lunatics increase at only the average rate. A large number of the agricultural counties certainly show low rates of increase of both population and lunacy, such as Lincoln, Cambridge, Dorset, Northampton, Nottingham, Norfolk, Gloucester, and Wilts. Taking the counties of England throughout, there is no doubt that the rate of increase of lunacy corresponds in some slight degree to that of population, but the exceptions are so very numerous and striking that this cannot be laid down as a rule. The apparently enormous increase of lunacy in the metropolitan counties in the last three years is well known to have greatly resulted from the opening of the new asylums for imbeciles at Caterham and Leavesden.

Of the group of nine counties in the first class, with little lunacy and a fast-increasing population, in Table II., the rate

* In the case of the Metropolitan Counties, and certain others which had some of their lunatics scattered in asylums elsewhere, I cannot get quite accurate returns from the 1st January, 1869.

of increase of lunacy is above the average in five and below it in four. Of the 14 counties in the second or average class, in which it could be ascertained, seven were increasing above the average, seven below it; and of the 16 in the third, or high lunacy counties, in which it could be ascertained, eight were producing fresh lunacy every year above the average rate and eight below it. This shows how little the yearly increase of lunacy follows the yearly increase of the population in every district. The general average of the rate of increase for each class of counties taken together show 4·4 per cent. a-year as compared with 1·7 for the general population in the first class, 3·8 as compared with 1·3 in the second class, and 3 as compared with ·9 in the third class. (See Table II.)

2. *The Local Distribution of Insanity, in relation to the Pauperism and Wealth of the Counties of England and Wales.*

Pauperism.—In the beginning of the year 1871 there were 1,085,661 paupers in England and Wales, which was at the rate of 47·8 for each 1000 of the population. Still counting Glamorgan separate from the rest of Wales, we find that there were 15 of the 44 counties under this average (Table II.), while the other 29 are above it. We saw, in regard to the lunacy rate, there were 18 counties below the average and 26 above it; and when we examine the two lists a still stronger relationship than this close approximation of the numbers is found to exist; for 11 of the 15 with a low pauperism stand also in the list with a lunacy rate below the average. (See Table IV.) And these 11 counties contain a population of nine millions.

TABLE IV.

	No. of Counties.	Of which Pauperism was		Of which Taxable Property was	
		under Average	over Average in	over Average per Person in	under Average per Person in
<i>First Class.</i> Lunacy under average.	9	7	2	1	8
<i>Second Class.</i> Lunacy average.	16	5	11	5	11
<i>Third Class.</i> Lunacy above average.	19	3	16	5	14
Totals.	44	15	29	11	33

Taking the three classes of counties (Table II.) as our basis, and examining them in regard to their proportion of pauperism, this is the result:—Of the 9 below average in regard to lunacy, 7 are below average in regard to pauperism. Of the 16 average in regard to the former, 5 were over average and 11 under in regard to the latter; and of the 19 above average in regard to the former 16 are above average in regard to the latter. These results are shown in Table IV. The very closest approximation, therefore, may be said to exist between the local distribution of the pauper lunacy and the ordinary pauperism of the country, looking at the counties generally; and if we proceed to examine the list still more minutely with reference to each county, we shall still find that this parallelism shows itself in a remarkable manner. Strange as it may appear, the one being a disease incidental to all human beings, and the other a mere result of social and economic causes, the range above and below the average of the rate of pauperism is almost exactly the same as that of the lunacy rate, in both cases going up about 63 per cent. above it, and falling to 41 per cent. below it in different counties. The one ranges from 47·8 per 1,000 (the average) up to 77·2 (Wilts), and down to 28·1 (York, North Riding) per 1,000, the other from 2·2 (the average) up to 3·6 and down to 1·3.

The great exceptions to the general rule in regard to the connection between the lunacy rate and the increase of population, which we saw to exist in the metropolitan and rural Welsh and certain other counties, do not exist in regard to the rate of pauperism; and the existence of a few individual exceptions, such as Essex, Cambridge, and Suffolk, which have comparatively low lunacy rates and high rates of pauperism, on the one hand, and Leicester, Worcester, and Salop, which are high in lunacy and about average in pauperism, does not invalidate a rule so generally applicable throughout England. Where a fact such as the unequal distribution of lunacy is dependent on many causes, and has relations to many natural and social phenomena in a diversified country like England, it never can run quite parallel to anything else.

The general correspondence of lunacy and pauperism appears in the registration divisions of England (Table III), as well as in the counties, and they follow each other closely, or not, in precisely the degree to which each division represents a homogeneous group of counties; the Metropolis

as usual forming an exception to all rules in regard to its lunacy rate. All the divisions which are above the average in regard to lunacy are also above the average in respect to pauperism, with the exceptions of the Metropolitan and West Midland.

Wealth.—When we come to examine the wealth of the various counties of England in relation to the pauper lunacy of those counties, we are met at the outset with a radical difficulty in the utterly unequal distribution of that wealth among different classes of the population. If we take all the taxable property as assessed under schedules A, B, and D, and calculate its amount per person of the population in the various counties, we see at once how little this represents the wealth that is generally distributed among the people. The richest counties in England show the least amount per head of the people, while some of the poorest show the greatest amount. The average for all England and Wales for the year 1870 was £13 15s. per head, and when we find Yorkshire, Durham, Glamorgan, Chester, Kent, and Surrey below this average, while Somerset, Wilts, Huntingdon, and Rutland are far above it (Table II), we see that this is an incorrect test of the wealth of the people. Of the nine counties at the head of the list, whose united population is increasing so enormously, only one shows a rate of taxable wealth above the average.

But when we come to apply the test of what we know to be the real wealth, or rather the ordinary rate of wages paid to the labouring classes in the various counties of England to the rate of lunacy of such counties, we see at once how close is the relationship. In all the Northern Counties the rate of wages is good, and in them all, whether agricultural or manufacturing, the rate of lunacy is low. The Eastern Counties of Lincoln and Essex, where wages are good are also low, while the Southern and Midland Counties of Dorset, Somerset, Wilts, Gloucester, Worcester, Oxford, Hereford, and Berks, where the wages are very low, produce far above the average amount of lunacy. Taking for comparison two parts of the same county differently situated, in regard to wages, the poor man's wealth, viz., rural Gloucestershire and Bristol, we find that while rural Gloucestershire with its labourers, too poor even to go where they could get double wages, except through Canon Girdlestone's charity, produces insanity at the rate of 3·3 per 1000 of its population, rich Bristol has only a rate of 1·7 per 1000, or about

one half as much. To show that this is not owing to mere employment, or the influence of town life, let us look at Newcastle as compared with rural Northumberland. There we know the agricultural labourers are better off and more comfortable, and get better wages than their class in any part of England. Newcastle had a population of 128,160 at the census of 1871 with 274 lunatics at that time, or at the rate of 2·2 per 1000. The rest of Northumberland had a population of 258,799 with 472 lunatics, or only at the rate of 1·9 per 1000. As might naturally have been expected the country shows itself more healthy than the town as regards even the production of insanity, other things being equal, and no doubt the chief of all those other things are good wages received by the labouring population, and all that they imply.

So far these investigations clearly show that, with certain exceptions, where the population of a county rapidly increases, its lunatics are few and do not increase so fast in proportion as the people, the reverse of this being generally true also; that lunacy goes hand in hand with pauperism all over the country, and that the presence of uniformly diffused wealth among a people certainly seems to lower the rate of production of mental disease.

(To be continued.)

Notes on Epilepsy, and its Pathological Consequences. By J. CRICHTON BROWNE, M.D. Edin., F.R.S.E., Medical Director West Riding Asylum, and Lecturer on Mental Diseases to the Leeds School of Medicine.

Although a certain number of those who are subject to epilepsy may pass through life without displaying any sensible diminution in mental capacity or power, it is nevertheless true that in a vast majority of the sufferers from this disease the mind is rapidly and seriously damaged by the recurrence of the seizures which are characteristic of it. Epilepsy, indeed, is one of the most prolific causes of insanity in this country, and fills our lunatic asylums with patients of a dangerous and intractable class. It would not, perhaps, be going too far to say that it invariably exerts a prejudicial influence on the minds of those who are afflicted by it, and that the statements which have been made to the contrary have arisen out of imperfect observation. Unfortunately, we have as yet no

test types by which to gauge the scope and accuracy of the 'mind's eye,' and hence serious impairment in its range and precision of action may readily exist without detection. Apprehension may be dimmed, judgment confused, and memory shortened, while no suspicion of mental failure has occurred to the patient or his friends. Then, again, modifications of disposition and temper are apt to be attributed to outward circumstances rather than inward derangements, so that when essentially morbid in origin they may fail to be recognised as such. Hence it is, I think, that epilepsy has often been credited with a blamelessness to which it has no just pretension. Its evil effects have not been found out, or have been traced to some other source, and it has been concluded that epilepsy may co-exist throughout life with perfect intellectual and moral integrity. Nay, some authors have gone further than this, and have written of epilepsy as if it were a thing to be desired, and, like the goitre of the Roman ladies, added a new charm to its victims. Falret says that epileptics sometimes evince real intellectual activity, and a rapid circulation of ideas, which corresponds to a certain degree of cerebral excitement. A roll of eminent epileptics has been drawn up, including the names of Cæsar, Mahomet, Napoleon, and Molière, and a connection has even been suggested between fits and genius. Dr. Morel has referred to a marvellous quickness of conception and imaginative intensity as distinctive of the epileptic condition in some persons. Surely, however, such qualities are not to be regarded as the fruits of epilepsy, but rather as characteristic growths of that kind of soil in which the pernicious plant is most likely to take root and flourish. Surely the fact—if it is one—that some great men have suffered from epilepsy in peculiar forms does not establish any causal relation between epilepsy and greatness, for how much greater might they not have been but for epileptic limitations? And surely the wild whirl of epileptic excitement is not to be confounded with the well-ordered evolutions of genuine intellectual activity. The experience of those who have seen most of epilepsy, will, I believe, confirm the assertion that no good thing can come out of it, and that it entails a blight and a blemish upon the mind of everyone who is affected by it. It robs the brain of its cunning; it strips the mind of its ornaments, of its garments of delicacy and gracefulness, and reduces it to savage rudeness and unrestrained movement. And then it wraps round it its own strong web of disease, fold after fold,

layer after layer, more and more confining it, and becoming at last its inevitable cerement. Esquirol has ably summed up the effects of epilepsy on a man's physical and psychological nature. He has shown that it shortens life, deranges nutrition, that it degrades the mental faculties, and that it undermines rectitude of character, and disposes to suicide, violence, falsehood, venery, and onanism.

It is not my purpose here to enumerate or analyse those mental infirmities which are induced by epilepsy, nor even to establish their invariable occurrence. My aim is only to describe and illustrate a certain number of the coarser and more obvious changes in the appearance and structure of the brain which result from epilepsy, and upon which some of these mental infirmities are unquestionably dependent. Having accumulated accurate reports of the post-mortem examinations of sixty epileptic patients of my own, who have died in the West Riding Asylum during the last seven years, it occurred to me that it might be useful to place on record a few of these, which best exemplify the changes in the brain and its coverings which correspond with certain advanced stages of the disease, and certain modes in which it terminates. Only changes corresponding with advanced stages can, of course, thus be demonstrated, as those mental complications which are held to justify the deprivation of liberty are not usually developed until epilepsy has held possession of the nervous system for many years, and as life is often far protracted after seclusion in an asylum has become necessary. Even those late and obvious modifications, however, in the structure or relations of the cerebrum and its meninges, which are found in the advanced stages of epilepsy, and in the pathological theatre of a lunatic hospital, are important in themselves, and reflect valuable light upon earlier and less conspicuous alterations, out of which they have themselves arisen. With the clue, which lies ready at hand in these coarse organic changes, we may proceed backwards to finer and less perceptible changes connected with earlier stages in epileptic degeneration, and from these, again, we may cautiously recede to those delicate and subtle changes which lie beyond our present means of exploration, and which are cotemporaneous with what may be termed the functional epoch in the history of the disorder.

It is customary and convenient to divide the phenomena of epilepsy into two classes—those manifested during the paroxysm, and those manifested during the interparoxysmal

period, and a minute examination of both of these is necessary to a comprehension of the disease. In enquiring, however, into the manner in which epilepsy operates upon the brain, deranges its action, and deteriorates its texture, it is only requisite to refer to the paroxysmal phenomena which are expressive of the essence of the malady. The inter-paroxysmal symptoms are merely significant of some consequences of the seizure, and do not betoken any active process of a damaging nature. It is in the different steps of the attack that the explanation of the pathological consequences of epilepsy as displayed in the brain must be sought. Now, taking these steps as three in number, we can recognise in each of them sources of danger to the cerebrum and its functions. We can, indeed, detect in them the precise methods by which epilepsy disorders and deteriorates the ideational centres. In the first step in which that heightened excitability of the medulla oblongata, in which the disorder essentially consists, is awakened, we have spasm of the vessels of the brain, with temporary deprivation of blood, and a general commotion of the nervous elements very inimical to their healthy activity. In the second step, in which clonic convulsions occur, we have venous congestion and pressure on the brain, due to spasm of the muscles of the neck, and fixture of the muscles of respiration, and we may have the breaking up of the structure of the brain by a multitude of minute, or a few large clots. In the third step, in which coma remains, we have poisoning of the brain by imperfectly aerated blood.

Now, in these morbid conditions of the brain corresponding with the steps or stages of the epileptic attack, are contained the origins of all the pathological alterations in the cerebral hemispheres found in connection with epilepsy. However subsequently modified or qualified by accidental conditions, these pathological metamorphoses have evidently their starting point in one or other of the immediate effects of the attack upon the cerebrum, and thus in the attack itself. As a rule, too, these pathological metamorphoses are singularly uniform, and thus betray their community of origin. In looking over the descriptions of the morbid changes which have been seen in the brains of chronic epileptics who have laboured under mental aberration, no one can fail to be struck by the constancy with which certain changes recur. Foville, the most distinguished cerebral anatomist of his day, who drew his experience from the Asylum at Charenton, des-

cribed a general hardening of the medullary matter extending throughout the whole encephalon, extraordinary dilatation of the blood vessels, and a rosy colour of the grey matter of the convolutions as being always found in the epileptic brains which he examined. Bouchet Cazauvieilh, Morgagni, and Parchappe have given similar descriptions, and in recording the results of our researches in this asylum I have been compelled to use language almost identical with that of Foville. Putting aside these appearances in the brain, which are unquestionably attributable to the mode of death or to intercurrent conditions, we arrive at this conclusion: that hypertrophy and induration are the characteristic brain changes in epileptic insanity. These will not be found in every case; in very recent, and in very far advanced cases they need not be looked for; but still in a large majority of cases they will be unmistakably present. In very recent cases they are not found, because they have not been fully established. In very far advanced cases they are not found, at least not in a marked degree, because ulterior changes springing out of them have obliterated them. In very recent cases the serious failure of brain power, which is sometimes seen, is to be traced not to the hypertrophy and induration of the organ, to which the same kind of failure, a little further on in the disease, is ascribable, but to a molecular perturbation analagous to what happens in concussion. The brain is suddenly thrown out of gear by the spasm in the contractile fibres of the vessels, and has not time to recover itself before it is again deranged by a recurrence of the spasm. That this is so is indicated by the fact that deep dementia has been observed to follow a series of attacks of *petit mal*, in which no clonic convulsions nor cerebral congestions occurred, but merely momentary unconsciousness with pallor of the face. Persistent mental weakness, however, does not follow *petit mal*. I have never seen a case of genuine continuous epileptic dementia which was not dependent upon the *haut mal* and the changes which the *haut mal* brings about, chiefly through pressure upon the cerebral tissue and cerebral hyperæmia. It is a popular observation that pressure and hyperæmia lead to hypertrophy. The excitation of pressure induces too copious a flow of blood, and increased growth and bulk ensue, and this is particularly apt to happen when the pressure is interrupted in character and only occurs from time to time. The first effect of the interrupted pressure which is applied to the brain in epilepsy appears to be a genuine hypertrophy and

augmentation in volume. But hypertrophy is generally partial, and even when it affects whole organs it is manifested principally in certain textures, and so the hypertrophy of the brain in epilepsy is manifested chiefly in the connective tissue. A kind of fibroid substitution slowly but surely goes on in those parts which are periodically subjected to congestion and induration, as well as an augmentation in volume ensue. The hair becomes coarse and the skin of the head and face hard and thick, and it is a noteworthy and well known fact that wounds of the head and face heal in epileptics by the first intention; that is to say, without any inflammatory process a formation of granulation tissue takes place, and this splits up into fibrils and forms adhesions. Then the skull becomes thickened also, and when it is removed the brain expands as if relieved from compression, and feels unusually dense and hard when touched. The specific gravity both of its grey and white matter is greater than in any other class of lunatics—and the absolute weight of the brain is also decidedly higher. The convolutions are flattened, and the sulci are mere lines, and do not gape nor contain fluid. The membranes show no signs of inflammatory disturbance. When the brain is cut into it is tough and firm, the grey matter being dark and the medullary white and glistening. The ventricles are of small size. Around the pons Varolii and medulla oblongata, and especially on the floor of the fourth ventricle, redness and vascular dilatation are visible, and the vessels when measured are found considerably distended, owing both to increase in their sectional area and thickening of their walls. These are the usual appearances in the brains of persons who have laboured under epileptic insanity, but they are subject, of course, to numerous variations. Thus a spotted, blotchy, marbled appearance of the medullary substance may be seen when an attack, or group of attacks, has immediately preceded death, and some atrophy or wasting, with opacity of the arachnoid, may be remarked when the disease has been long protracted and has passed into epileptic stupor. This latter condition of the brain is referable to impaired nutrition, owing to the thickening of the vessels, or to gradual contraction of the hypertrophied fibrous tissue, and puckering of the brain, if it may so be termed.

The gummy or glutinous growth in the pituitary body, which was asserted by Wenzel to be the cause of epilepsy, has never been met with in this asylum. Changes in the pineal gland have, however, been noted in several instances.

Epileptic Idiocy.

In considering the pathological effects of epilepsy in arresting or distorting brain growth and mental evolution, it is desirable to draw a distinction between epileptic idiots and idiot epileptics. With the latter, in whom the fits come on subsequent to evidences of congenital mental limitation, and in whom they are indeed but secondary and consecutive manifestations of an innate vice of the central nervous system which travels downwards, we have here nothing to do. In them epilepsy is itself a pathological consequence, and not the starting point in a morbid series. Only with the former, in whom the epilepsy is responsible for the mental failure, in whom the brain is crippled and stunted by and through the fits, need we now concern ourselves. And this class of epileptic idiots, beings in whom idiocy is due to and dependent upon epilepsy, is not so numerous as might be supposed. The number of cases of original privation of mental power, with defective cerebral development, due to epilepsy, which come under observation is comparatively small. The fact is, that the convulsions which are so common in infancy and early childhood are immediately fatal in a large proportion of instances, either by spasmodic closure of the glottis, or by congestion, or hæmorrhage, or exhaustion. They eventuate in death, and not in idiocy, and thus the feeblest and least viable brains are removed. It is computed that 73·3 per cent of all the deaths from diseases of the nervous system that take place in the first year of life must be attributed to convulsions. And then when convulsions do not kill at once, a certain tolerance of them seems to be established for a time, except under special circumstances—these special circumstances being the occurrence of an extravasation of blood in the head, short of a fatal amount, but sufficient to form a centre of degenerative changes, or the inheritance of a strong predisposition to neurotic disorders. Under these conditions idiocy may be anticipated for an epileptic infant or child who has survived the first dangers of the seizures, but apart from them, I am inclined to think that not idiocy, but dementia is the rock a-head. For a time the faculties go on developing in spite of the epilepsy. True, they may be in some degree stripped of their fair proportion, but they are not dwarfed and crippled to such an extent as to justify the imputation of idiocy or imbecility. The child may be backward and wayward and peculiar, but it grows

in bodily and mental stature, and becomes a rational and intelligent being. So long as the brain is growing rapidly, so long as the mind is unfolding, so long as the recuperative powers of youth are in their acme of energy, so long as the cranial walls are comparatively yielding, the baneful effects of epilepsy are not powerfully exerted. It is after puberty, when growth becomes slower, and when the skull is consolidated, that epilepsy becomes obviously disastrous, and entails the decay of the new-blown faculties. Fatuity or obscuration and loss of newly-acquired powers descends upon its victims. In many cases that have come under my observation this deferred effect of epilepsy in damaging mental faculties has been well exemplified. Four such cases are, indeed, quoted in this paper. In them epilepsy, though established in infancy, did not cause idiocy, but brought on dementia subsequent to the period of puberty.

In a certain number of instances, however, epilepsy in infancy is responsible for idiocy. As we have before hinted, when a clot has been formed in or upon the brain, or where a special proclivity to nervous diseases has been inherited, idiocy is not unlikely to follow in the train of epilepsy. And sometimes, too, without the intervention of a clot or hereditary predisposition, idiocy is still thus induced. Repeated seizures, with their disturbance of function and oppressive congestions, interfere with cerebral nutrition and development, and stunt and abolish the intellect. In doing this they operate very much as they do in inducing dementia. The prolonged determination of blood to the brain which they occasion lights up a spurious activity, and hypertrophy with condensation and hardening succeeds. Thus epileptic idiots are not micro-cephalic. As a rule they have large heads, and brains of fair weight. Although very low in the scale of intelligence, they may have brains of more than average bulk, and only when epilepsy has still further enfeebled a hereditarily weak brain, will diminution in dimension and weight be met with. Of course the derangement at an early period of life of the regulating influence of the supreme nervous centres in epileptic idiocy, and the profound interference with the organic functions which such a state of matters implies, will necessarily introduce additional pathological consequences beyond those produced by epilepsy in the adult. Amongst these additional consequences, however, the same morbid appearances which are seen in the epileptic dement are to be seen in the epileptic idiot. The convolutions are flattened

and in close apposition. The brain substance is firm, and the medullary substance white and glistening. Epileptic idiots sometimes die in the status epilepticus. Most of them sooner or later suffer from tubercular disease of the lungs.

1.—Ellen J——, admitted 8th June, 1864; died 4th July, 1870; age at death, 18; no occupation; single; from Goole. The mother of this girl was epileptic, and died in the West Riding Asylum. She herself began to have fits soon after birth, and her mental faculties were never developed. She never learnt to speak, nor to walk without assistance. She was always dirty in her habits, and throughout her life suffered from frequent fits. She died of phthisis pulmonalis.

Examination 32 hours after death. The body is considerably emaciated, the right arm and leg being considerably more wasted than the limbs of the other side. The skull is generally and considerably thickened, but the membranes are not thickened nor adherent. The whole brain weighs 34ozs. The convolutions are plump and in close apposition, and the brain substance is exceedingly firm. The skull, after the removal of the scalp, measures 13 inches in circumference, immediately above the superciliary ridges; 11 inches from ear to ear; and $10\frac{1}{2}$ inches from the root of the nose to the occipital spine. The arachnoid and pia mater, though not apparently much thickened, are generally adherent to the surface of the convolutions, and are stripped off with difficulty. They do not vary in thickness, as is commonly the case; but are as thick over the occipital as over the parietal lobes. The convolutions of the two hemispheres are simple in arrangement, and singularly symmetrical.

Both lungs are generally infiltrated with tubercle in large cheesy masses, and in small grey particles, in every stage of softening.

2.—Jonathan K——, admitted 12th July, 1868; died 9th June, 1870; age at death, 31; no occupation; single; Huddersfield. This patient had fits from birth, and could never be taught anything like other children. He was six years old before he learnt to walk, and then only in an unsteady, shambling fashion. He could never speak, but cried aloud, when irritated, in a most ferocious tone. He was dirty and degraded in his habits, and suffered from fits almost daily. He died of diarrhoea.

Examination 24 hours after death. The body is much emaciated and deformed, owing to spinal curvature, the back being rounded, the sternum pushed forwards, and the ribs crowded together and twisted. The general appearance of the body and countenance is indicative of a very low type of organization. The deformed and contracted thorax is doubled down upon the abdomen, so that the last rib rests on the crest of the ileum. The abdomen has a deep constriction across its middle, in a line with the umbilicus. The arms are long and the hands large. The knees also are of unusual size and remarkably clumsy outline. The forehead is low, and shelves rapidly backwards, and the

eyebrows are strikingly large and prominent. The opening of the eyelids is of great length, and the breadth of the face, measured across the cheek bones, is enormous. The nose is small and flat, and the mouth large, the lips being thick, swollen looking, and everted. Large, strong, incisors project on to the lower lip. The hair is coarse, of dark colour, and thinly scattered over chin and cheeks. The skull is of great thickness, the bones being soft and of a bluish tinge. It is unsymmetrical, projecting posteriorly to the left side. The frontal sinuses are of great size, measuring one inch across, in an antero-posterior direction. The sinus of the right side is filled with a mucopurulent fluid, and has a thick fibrous lining membrane. The skull, after the reflection of the scalp, measures 22 inches in its greatest circumference; 12 inches from ear to ear; and $11\frac{1}{2}$ inches from the root of the nose to the occipital spine. The dura mater is adherent to the frontal bone. There is no thickening of the arachnoid, and the pia mater is thin, and strips easily. The convolutions of the frontal lobe are flattened, those of the parietal lobe are slightly wasted. The brain substance is firm, the medullary matter white and glistening. The whole brain weighs 50ozs.

Death during or immediately after a Fit.

Death during an epileptic fit, or immediately after it, is an exceedingly rare occurrence, and is, in my opinion, invariably due to the rupture of a vessel within the cranium. Even the most violent fits do not cause exhaustion sufficient to pass into fatal syncope, and even the most prolonged fixture of the respiratory muscles, stops short of complete asphyxia, unless, indeed, some auxiliary circumstance, such as partial stoppage of the mouth and nostrils, or the presence of a foreign substance in the pharynx or larynx, should aggravate its intensity. But the rupture of minute vessels during a seizure does occasionally take place in those parts which are subjected to most vascular distension, and would probably be a more common accompaniment of a fit but for the thickening and strengthening of the walls of those vessels liable to dilatation, which occur in epilepsy. The whole of the vessels of the head and face, and especially those of large calibre, undergo a conservative hypertrophy, and are exempt from weakening degenerations. I have never seen a trace of atheroma in the intracranial vessels of a genuine epileptic, not even when old age had been attained. In cases, however, in which the fits are rapidly established, and are of the gravest description, or in which the spasmodic contraction of the cervical muscles, impeding the return of blood from the head, is unusually sustained, there may be failure of even a thickened vessel with

extravasation of blood. Such an extravasation taking place in or upon the cerebrum at a moment when it is supremely exhausted, would be likely to have an effect altogether disproportioned to its amount, and might readily interrupt absolutely the cerebral functions. It might kill either by shock or compression.

Trousseau, following Van Sweiten, has pointed out that after a severe fit minute red spots, resembling flea-bites, permanent under pressure, and having all the characters of extravasations, may be found scattered over the skin of the face, chest, and throat. I have frequently had occasion to notice these spots, and have satisfied myself that, after an attack of the status epilepticus, they are almost always present. Sometimes, however, they are so minute as not to be readily recognised by the unaided eye, but under these circumstances a pocket glass insures their detection. It is to their presence, in large numbers, and when minute in size, that the singular lividity of the face, changing gradually through dusky yellow tints to the ordinary dingy pallor of the countenance of the chronic epileptic, so often seen after the status, is mainly due. Now it is reasonable to infer that these spots are not confined to the cutaneous surface, but that similar punctiform apoplexies affect the deeper parts which are subjected to equal, or even greater congestive turgescence during a fit. Several facts justify this inference. Similar petechiæ as well as ecchymosed blotches of a larger size, I have repeatedly seen in the sub-mucous cellular tissues of the mouth, after a series of fits. The existence of such miliary hæmorrhages in the brain and its membranes would adequately explain many of the mental symptoms observed subsequent to a severe fit or congeries of fits. It would account for the coma protracted beyond what is usually characteristic of the fit itself; the bewilderment and headache which remain after the coma, and the slow clearing off of these as contraction and absorption advance. But such miliary hæmorrhages have actually been seen in the brain and its coverings. I have notes of a case in which they seemed to occupy the diploic structure of the skull in immense abundance, and Calmeil observed like puncta on the surface of the convolutions. Van der Kolk encountered small sanguineous apoplexies in the substance of the pons Varolii in epilepsy. Then larger hæmorrhages are occasionally seen in or upon the brains of epileptics, and are probably common causes of paralysis, occurring in the course of epi-

lepsy. When death happens then in or close upon a fit, it seems not unlikely that it may be dependent upon such a hæmorrhage. It was so in the two following cases. The formation of a clot during the status epilepticus is illustrated by the case of Margaret G—, No. 8, while the changes which such a clot when not at once mortal afterwards undergoes, are illustrated by the case of Sophia M—, No. 22. I have quite recently found two small but unmistakable arachnoid cysts on the brain of an epileptic imbecile.

3.—James V. S. —, admitted 20th January, 1869, died 6th September, 1871; age at death 26; labourer; single; Ecclesall Bierlow. He experienced his first fit when two years old, two of his brothers being at that time epileptic also. He continued epileptic all his life. His mind became impaired after puberty. He became slow in thought and action, and sometimes fancied that he had an animal in his inside. He died suddenly after a fit, never recovering consciousness. Examination 34 hours after death. There is copious subcutaneous hypostasis on the dependent parts of the body, and slight rigor-mortis in the lower limbs. The face is somewhat livid, as are also the hands and ears and the tongue, under which there rests a firm quid of tobacco. The skull cap is normal, but the sinuses are filled with dark fluid blood, and the dura mater is generally congested. The pia mater is thick and dense, greatly injected, and on its surface, under the arachnoid, there are over the right hemisphere three distinct patches of extravasated blood. The largest and most marked of these is diffused over the frontal lobe. The substance of the brain is of more than ordinary firmness. The puncta vasulosa are very numerous, and the grey matter is of average depth. The cerebellum is congested, and its grey matter is of a strikingly dark colour. The pons Varolii is also much congested. The whole brain weighs 46ozs. The cerebellum, pons Varolii and medulla oblongata weigh $5\frac{1}{2}$ ozs.

All the cavities of the heart contain fluid blood, and the liver and kidneys are intensely congested.

4.—Samuel W. —, admitted 10th February, 1871, died 14th November, 1872; age at death 27; mill-hand; single; Bradford. He began to have fits when 19 years of age, and suffered from them ever afterwards. Mental infirmity speedily supervened, and then came outbursts of fierce excitement, with reckless violence. The convulsions were always unusually severe. He died suddenly, immediately after a fit. Examination 30 hours after death. Cadaveric rigidity is present in both arms and legs, and all dependent parts are deeply livid. The skull is of average thickness. The dura mater is not adherent, but is slightly thickened. On reflecting it a small thin film of red fluid blood is found lying over the occipital lobe on the left side, immediately beneath the arachnoid. It rests on the pia mater, and has evidently proceeded from the rupture of one of its minute

vessels. Its greatest diameter is an inch-and-a-half, and it is not a line in thickness. There is no trace of thickening or cloudiness of the arachnoid nor wasting of the convolutum. The latter are in very close apposition, and have, indeed, the appearance as if they had been compressed and flattened. The pia mater strips easily. Both grey and white matter are unusually firm and hard. The former is of good depth, but has everywhere a dark, somewhat purple colour. The hardness of the brain substance everywhere is quite remarkable. Puncta sanguineæ are not numerous, and there is only a small quantity of fluid in the ventricles, which are of small dimensions. The vessels around the pons Varolii, and on the floor of the fourth ventricle, are dilated and engorged. The whole brain weighs $52\frac{1}{2}$ ozs. The cerebellum, pons Varolii and medulla oblongata weigh $6\frac{1}{2}$ ozs.

The heart's cavities contain dark fluid blood, but no clots. Both lungs and the pyramids of both kidneys are dark coloured and congested.

Death from Exhaustion after Epileptic Mania.

Death from exhaustion after epileptic mania is by no means a frequent casualty, as, notwithstanding the extreme violence which is generally characteristic of this form of excitement, it tells less upon bodily strength than acute mania, because it is of shorter duration. The full force, however, of its pernicious effects, when left uncontrolled, has not perhaps been felt in this asylum in recent years, as it is always checked and modified by the administration of ergot, or the hypodermic injection of ergotine. Only in two cases have I seen epileptic mania end in death from exhaustion. In one of these, the patient, a young woman, was in an exceedingly delicate state of health, and was believed to labour under some visceral disease, a diagnosis which could not, however, be tested, as no *post mortem* examination could be secured. She died from prostration and fainting, just as calmness seemed to be returning after four days of ungoverned rage. In the other case, the patient, a middle-aged woman, was just recovering from pneumonia, and was much debilitated when the attack of excitement which destroyed her came on. I am inclined to believe that in all cases of death from exhaustion after epileptic mania, it will be found that strength has been reduced by some other disorder, beyond and independent of the epileptic condition.

The active hyperæmia, which coincides with epileptic mania, probably contributes materially to the hypertrophy and induration of the brain in chronic epileptic lunatics. Every recurring maniacal paroxysm leaves distinct vestiges

behind it in fresh lines of mental disintegration. Every explosion of excitement shakes and shatters the mind. In time it steadies and settles down again, but still it is permanently weakened, and as similar explosions again and again follow, it is finally overthrown, and reduced to a heap of ruins.

5.—Jane S——, admitted 1st January, 1870; died 5th October, 1872; age at death, 28; housewife; married; Leeds. She was first attacked by fits at the age of puberty, and continued to suffer from them always afterwards. As she advanced in life her intelligence failed, and then paroxysms of frantic excitement occurred. She passed through one period of status epilepticus. In the autumn of 1872 she was weakened by an attack of pneumonia. On October 5th she died suddenly, after a paroxysm of violent excitement, no fit having occurred, apparently from exhaustion and syncope.

Examination 62 hours after death. Rigor mortis is present in the legs, but not in the arms. The skin of the neck, shoulders, and upper part of the chest is of a livid hue. The skull is symmetrical, and of average thickness and hardness. There is some fluid blood in the sinuses. The arachnoid is not at all thickened, nor is there any atheroma of vessels. The pia mater is normal, and strips freely. The brain substance is firm and hard. The convolutions are very close together, the sulci being almost obliterated. The grey matter is darker than usual, and has, in fact, a dull reddish tinge. The cineritious and the medullary substance are both singularly hard and firm, and the latter has also a very white glistening appearance. The *gumata sanguineæ* are numerous, and the choroids and *velum interpositum* are decidedly congested. There is no fluid in the ventricles, but the walls of the third have a curious red colour, and the vessels on the floor of the fourth are markedly dilated. The whole brain weighs 46ozs. The cerebellum, pons Varolii, and medulla oblongata weigh $5\frac{1}{2}$ ozs. The cardiac cavities all contain dark fluid blood. The lungs, liver, and kidneys are congested, and both ovaries are converted into cysts.

Death in the Status Epilepticus.

The status epilepticus consists in a series of fits following one another with such rapidity that the coma due to one has not passed off before the convulsive stage of the next has been established. It is a prolonged coma and asphyxia, varied by distinct convulsive seizures, and often by convulsive twitchings of the muscles between the seizures. It is characterised by an intensification of the symptoms which are ordinarily present in an attack of *haut mal*. The unconsciousness is profound; the duskiess and lividity of the sur-

face are particularly evident, and the muscular movements, at its outset at least, are extremely violent. The temperature of the body is elevated, the pulse is quick, but compressible, a profuse perspiration bathes the skin, the pupils are dilated and inactive, and reflex excitability is much diminished. As the attack proceeds, and the activity of the medulla oblongata becomes diminished, the breathing grows more laboured and stertorous, and the functions of the sensorial centres are more completely suspended. The condition terminates either in a tardy restoration to consciousness—the fits becoming less frequent—or in death. A considerable number of epileptics die in the status—indeed, in this asylum, it is perhaps the most common mode of death in epileptics. A terrible succession of fits prevents the adequate aeration of the blood, paralyses the nervous centres, and weakens the heart, and ends in a final cessation of all the vital functions. I have known as many as one hundred distinct fits occur during the status in the course of twenty-four hours, and have repeatedly counted ten and twelve fits in one hour. As might be expected, the status is only met with in long-standing cases of epilepsy.

The brains of those who have died during the status present generally in a marked manner the hypertrophy and induration which have been referred to as characteristic of epileptic insanity, besides the evidences of an enormous accumulation of blood in the venous system. The gorged sinuses, discoloured tissues, and numerous puncta sanguineæ prove that a congestion has preceded death, the severity of which is sometimes also indicated by subcutaneous or submucous extravasations or by intracranial clots. Apart from these clots and ecchymoses, and the hypertrophy and induration of the cerebral substance, the whole aspect of the brain of a patient who has died during the status, and also of all the organs of the body, powerfully recall to mind the appearances seen in cases of death from asphyxia. As will be gathered from the next section of this paper, it is impossible to point out any distinctive differences between the *post mortem* appearances in epileptics who have been accidentally suffocated and those in epileptics who have died in the status. Important practical results cannot fail to be deduced from the fact, of the accuracy of which I have convinced myself by a careful investigation, that death in the status, as well as some of the phenomena of that condition, are due to asphyxia and not to coma.

6.—Mary N——, admitted 10th February, 1871; died 26th December, 1871; age at death, 34; single; needlewoman; Leeds. She was healthy until 19 years of age, and was then suddenly attacked by epileptic fits, for which no cause could be assigned save her sedentary habits. To these fits she continued subject during the remainder of her life. They occurred at first at wide intervals, but afterwards became more frequent. Progressive mental decay set in along with them, and increased as they did, until she became exceedingly childish and silly. She was never excited, but often irritable and quarrelsome. She had a large number of fits in rapid succession for six days before her death, and was quite unconscious for four days.

Examination 43 hours after death. The skin is generally of a swarthy colour, and is particularly so about the head and shoulders. The skull is slightly thickened posteriorly, and bulges a little to the left side behind. The bones composing it are all of a bluish tinge. There is no adhesion of the dura mater, but all the sinuses are filled with dark fluid blood. The brain entirely fills the cranial cavity, and indeed seems to swell out when the skull cap is removed. There is no thickening of the arachnoid nor pia mater. The gyri are plump, well formed, and in close contact with each other. The superficial veins are engorged, and there is a good deal of congestion about the pons Varolii and medulla oblongata. The puncta sanguinea are numerous. The central ganglia are of a deep red tint, as is also the medullary matter of the hemispheres. The pons Varolii and medulla oblongata are also redder than usual. There is no atheroma of the intra-cranial vessels, but their walls seem to be somewhat thickened, as they are very tenacious, and can be torn out of their sheaths. The floor of the fourth ventricle is smooth and normal. The brain generally is of firm consistence, and weighs 48ozs.

There are firm organised coagula in all the cardiac cavities, and both lungs are congested.

7.—John M——, admitted 23rd January, 1864; died 27th January, 1868; age at death, 26; labourer; single. Epileptic for many years. No cause known. Generally demented, but subject to attacks of furious maniacal excitement. Died in the status convulsivus, after five days of incessant fits.

Examination 49 hours after death. Rigor mortis is well marked, and the body is well nourished. The skin of the scalp is enormously thickened and hardened, so as to be of almost semi-cartilaginous consistence. It is adherent to the skull, requiring the use of the knife and much force to separate it. This thickening is most marked posteriorly. The skull is also thickened, and quite unsymmetrical, being largest on the right side. The occipital bone is half an inch thick at its upper margin, and, like all the other bones composing the skull, is of a bluish colour. The dura mater is somewhat adherent to the skull, and all the sinuses are filled with dark fluid blood. The arachnoid is unchanged, but the pia mater is thickened. The grey matter of the

convolutions has a dark greyish purple appearance, and puncta sanguinea are very numerous in the medullary substance. The whole brain is congested, and contains a large amount of fluid blood. There is no fluid in the ventricles, but the choroid plexuses are congested, and the corpora striata and optic thalami when sliced are darker than usual. The walls of the third ventricle and the grey commissure are of a deep red colour. The pineal gland, which is of the size of a bean, is converted into a cyst with glairy gelatinous contents. The vessels over the pons Varolii and medulla oblongata look dilated and tortuous, and are engorged with blood. The substance of these parts, like that of the brain, is remarkably firm. The whole brain weighs 52ozs. The cerebellum, pons Varolii, and medulla oblongata weigh $6\frac{1}{2}$ ozs.

The heart weighs 10ozs. All its cavities are filled with dark fluid blood. The lungs are normal, but the liver, kidneys, and supra-renal capsules are all much congested.

8.—Margaret G—, admitted 17th January, 1872; died 3rd December, 1872; age at death, 27; single; charwoman; Holbeck. She became epileptic after an injury to the head in girlhood, and for six years previous to her admission here had been an inmate of a workhouse, where she had one fit periodically every month. Her mind was gradually enfeebled, and latterly she was visited by paroxysms of excitement, in which she tore her clothing, and assaulted anyone who spoke to her. Placed under atropine treatment in the asylum, she had only one very brief and trifling attack of excitement, on February 23rd, 1872, and appeared to improve steadily, until November 25th, when she had a very severe fit, followed in a few hours by a rapid succession of seizures with no recovery of consciousness. For eight days thereafter she remained unconscious, and had 50 fits in the 24 hours, on an average. She died in the status epilepticus, on December 3rd.

Examination 50 hours after death. There are several minute spots of sub-cuticular ecchymoses scattered over the abdomen. Rigor mortis is present in the upper and in the lower limbs. During the removal of the brain a strong and distinctive odour of chloroform is observed in the brain and its membranes. [No chloroform in any shape had been administered during life.] The skull is small, narrow and rather thicker than usual, but fairly symmetrical. The sinuses are filled with dark fluid blood, and all the vessels of the pia mater are intensely engorged. The arachnoid is not thickened, and the pia mater strips freely. At one or two points in the sulci, between the convolutions, there are minute but obvious extravasations of blood. There is no atheroma of vessels. The puncta sanguinea are very numerous, and the brain altogether seems to contain a large amount of blood. The grey matter of the convolutions is of ordinary depth. There is a small quantity of clear fluid in the lateral ventricles, and the choroids are swollen and injected. At the outer margin of the middle of the

left optic thalamus there is a small cavity about the size of a pea, evidently due to a clot of recent origin. It has very irregular walls, and broken down granular contents of pulpy consistence, and reddish colour. The pia mater, over the pons Varolii and medulla oblongata, is greatly congested, and the grey matter of the cerebellum is of a red colour. The whole brain weighs 44ozs., and the cerebellum, pons Varolii, and medulla oblongata weigh 7ozs. The left ventricle of the heart is firmly contracted. Both auricles contain decolorized clots.

9.—Michael G —, admitted 1st April, 1869; died 15th February, 1870; age at death 29; barber; single; Leeds. Epileptic for 13 years. Fits brought on by onanism, always preceded by giddiness, and followed by headache; weak-minded, but amiable, and well disposed. Died after an attack of excitement, a series of fits extending over ten days, and three days complete status epilepticus.

Examination 12 hours after death. The skull is of a pyramidal shape, and is much and generally thickened, most so, however, anteriorly, and on the right side. The bones entering into its constitution are all of a bluish tinge. All the sinuses and superficial veins are loaded with dark fluid blood. There is a slight degree of opacity of the arachnoid in the immediate neighbourhood of the median fissure. When the upper part of the skull and dura mater were removed the brain expanded and overlapped the cut edge of the skull, as if it had been compressed. The convolutions are plump, and sulci are scarcely discernible. The outer layers of the grey matter are of a bluish colour, and the deeper layers are of a rosy pink hue. The white matter is of tenacious, doughy consistence, and is studded with numerous puncta sanguinea. No fluid is discovered in the ventricles, but the choroid plexuses are found much congested. The optic thalami of opposite sides are firmly united to each other over a considerable surface in the middle of the third ventricle and in the position of the grey commissure. The vessels over the pons Varolii and medulla oblongata are distended with blood, and the floor of the fourth ventricle is of a pinkish colour. The whole brain weighs 42½ ozs. The cerebellum, pons Varolii, and medulla oblongata weigh 5½ ozs.

The heart weighs 10½ ozs., and contains dark clots in all its cavities. The pyramids of both kidneys are congested and dark coloured.

10.—Henry S —, admitted 15th March, 1861; died 15th Nov., 1867; age at death, 30; labourer; single; Sheffield. He suffered from epileptic fits for many years prior to his admission to the asylum. He became stupid, and then excited, and was dangerous to all who approached him. He died, after a series of fits, almost continuous for three days, in the complete status epilepticus. Small doses of spiritus chloriformyli with sumbul had been administered to him during the status.

Examination 23 hours after death. No cadaveric rigidity. Skin of face, head, and neck, purplish and blotchy. The skull is of average

thickness, slightly adherent to the dura mater on the right side, and very unsymmetrical, its right side being more capacious than its left. The grooves for the meningeal vessels are large and deep on the right side. On opening the dura mater an unmistakeable odour of chloroform is perceived. The sinuses and superficial veins are all engorged with blood, and the bones of the skull are of a bluish colour, apparently because they are also fully charged with venous blood. The cortical substance is unusually firm and elastic to the touch, and the medullary matter is also preternaturally hard and dense. On slicing the brain, the puncta sanguinea are found to be exceedingly numerous, while the smell of chloroform becomes stronger. The medullary matter of the frontal lobes is of a purplish tinge, but is not at all softened. The velum interpositum and choroid plexuses are much congested, and large engorged vessels are seen ramifying on the ventricular walls. The teniae semicirculares are thicker than normal, and stand out prominently. The cerebellum, pons Varolii, and medulla oblongata are all of a pinkish purple colour. Weight of whole brain, 48ozs. ; cerebellum, pons Varolii, and medulla oblongata, 6ozs.

11.—Jane J——, admitted 29th July, 1866 ; died 2nd May, 1868 ; age at death, 18. She was a healthy girl until 14 years of age, when epileptic fits first came on. To these she continued subject till her death. Under their influence her memory rapidly failed, and attacks of excitement were developed. The fits occurred with great frequency, and most often came on immediately after dinner. She died, after being in the status epilepticus for several days, quite unconscious, and with incessant fits.

Examination 54 hours after death. No rigor mortis is detectable. The skull is thickened anteriorly, is unsymmetrical, and is stained of a deep blue colour. The dura mater is slightly thickened, and the sinuses are engorged. The arachnoid is slightly opaque, and all the superficial vessels are distended with blood. The brain substance is very hard. The grey matter is dark in colour, and is found on section to be marked with bright red streaks perpendicular to the surface of the brain. The white matter is variegated with numerous reddish and bluish specks. There is no wasting of the convolutions nor ganglia, and there is no fluid in the ventricles. The fornix, however, is soft and diffuent, and the vessels of the choroid and velum interpositum are enlarged, and filled with dark blood. The pineal gland is hypertrophied, and the walls of the third ventricle are of a deep pink colour. The corpora quadrigemina are hypertrophied and softened. Some patches of lymph are seen scattered over the upper surface of the cerebellum, situated between the arachnoid and pia mater. The vessels over the cerebellum, pons Varolii, and medulla oblongata are all of large size, and blood-filled. The whole brain weighs 44ozs. The cerebellum, pons Varolii, and medulla oblongata weigh $5\frac{1}{2}$ ozs. The right lung, the liver, and the kidneys, are a good deal congested.

Death from Accidental Suffocation in or after a Fit.

A curious tendency to a prone decubitus exists in chronic epileptics, and this tendency sometimes ends in their being suffocated during a fit, by turning completely on to their faces, and burying their mouths and nostrils in their pillows or mattresses. Of fifty epileptics in the West Riding Asylum who are subjected to special night supervision, forty lie habitually half turned on to their faces, and ten are apt to turn over during a fit. I never knew a general paralytic suffocated during an epileptiform seizure, for with them the decubitus is dorsal; but among epileptics an accident of that kind is very liable to occur. Epilepsy is itself a partial suffocation, and very little is required to complete asphyxia during a fit. Those epileptics who are suffocated by turning on to their faces have always suffered from the malady for a long time, and of an aggravated type; recent cases of epilepsy rarely terminate in this way. Then it is to be remembered that the high temperature of the body during a fit, and the quickened circulation, will tend to aggravate the effects of asphyxia, and to hurry them on into death. As it is only in thoroughly matured cases of epilepsy that accidental suffocation in or after a fit takes place, the characteristic morbid changes of epilepsy are always found in the brains of patients dying in this way. Superadded to these, however, is the venous engorgement which ensues on imperfect oxygenation of the blood, and this is witnessed in the other viscera as well as in the brain. As has been before mentioned, the appearances observed in the body of an epileptic suffocated in a fit can scarcely be distinguished from those observed in the body of another epileptic who has died in the status. It has seemed to me that in epileptics suffocated the congestion of the pyramids of the kidney is always much more intense—giving them, indeed, a deep black colour—than it is in other epileptics dying after a chain of convulsions.

After suffocation, as after the status, a bluish colour of the bones of the skull, loading of the sinuses with dark blood, injection with dark blood of the dura mater, pia mater, cerebral substance, choroid plexuses, and velum interpositum, are almost constantly present. Dilatation, too, of the vessels upon and around the pons Varolii and medulla oblongata, and on the floor of the fourth ventricle, is never absent. Decided distension of vessels, with a peculiar surrounding redness or darkness of colour in the nerve substance may be noticed in

the course of the roots of the hypoglossal, vagus and spinal accessory nerves.

12.—Jane H——, admitted 28th December, 1866; died 19th August, 1868; age at death, 23; field-hand; single; Goole. She became epileptic when 14 years old, and ever after continued so. As she attained maturity, incoherence of thought, and occasional attacks of excitement occurred. The fits came in groups, and were mixed up with hysterical symptoms. She was found with her face pressed down into the bed-clothes, the state of the body and bed clearly indicating that she had been suffocated in a fit.

Examination 37 hours after death. Rigor mortis present. The skull is of average thickness, and symmetrical, but very dark coloured. The dura mater is slightly thickened, and of a dark blue colour posteriorly, from injection with blood. The arachnoid and pia mater are not at all thickened, but the latter is much injected, and of a bright red colour. The grey matter is of a dark colour, and its deeper layers of a bright red tint. The medullary matter is rosy throughout, and the puncta sanguineæ are very numerous. The minute vessels are torn out of their sheaths, and are seen lying on the surface of sections of the brain in mossy shreds. The grey matter of the corpora striata and optic thalami is darker than usual, and somewhat pinkish. There is no fluid in the ventricles, but the choroid plexuses and velum interpositum are dark coloured and congested. The arachnoid is thickened over the pons Varolii on each side of the basilar artery. The vessels over the pons Varolii and medulla oblongata are much dilated, and amongst them there are several minute specks, as if extravasations of blood. The pons and medulla, when stripped of their membranes, have a reddish colour externally, and this is not removed by a powerful stream of water. They both present dark, pink patches on section. The restiform bodies of the medulla oblongata are especially congested, and of a darker colour than the rest. The whole brain weighs 46ozs.; the cerebellum, pons, and medulla 6ozs.

Dark-coloured fluid blood occupies all the chambers of the heart. The lungs are slightly congested, and the kidneys intensely so, their pyramids being almost black.

13.—John M——, admitted 27th January, 1862; died 5th April, 1869; age at death, 38; married; weaver; Mirfield. He had suffered from fits for many years, but no information could be obtained as to how they were originally induced. He gradually became demented, at times violent, the fits, as a rule, recurring every month, and being always accompanied by fierce excitement. He was found dead, lying with his face deeply buried in the pillow, froth and blood saturating that portion on which his mouth rested, and his hands being firmly clenched. He had evidently been suffocated during or immediately after a fit.

Examination 16 hours after death. The skull is very unsym-

metrical, bulging anteriorly towards the left, and laterally towards the right side. The bones of the skull are of a dark colour, and are thickened anteriorly in the frontal, and posteriorly in the occipital region. The sinuses are all filled with dark blood; there is no trace of thickening of the arachnoid, but the vessels of the pia mater are all distended, giving the surface of the brain a deeply congested aspect. The pia mater does not strip freely; it is slightly and generally adherent. The convolutions are plump, and in close apposition; the sulci are deep, but do not gape; the grey matter is normal in depth and colour. Its deeper layers are paler than the more superficial ones. *Puncta sanguinea* are very numerous; there is no fluid in the ventricles, and the ganglia are plump and natural. The choroid plexuses and the *velum interpositum* are much congested, and the pineal gland is of very large size. The fornix is somewhat softened; there is marked congestion on the surface of the cerebellum, pons Varolii, and medulla oblongata; the vessels of those parts look dilated, and certainly in no other region of the encephalon is there so much congestion. The whole brain weighs 50ozs. The cerebellum, pons Varolii, and medulla oblongata weigh 8ozs. The right side of the heart is full of dark fluid blood; the left side is empty. The lungs, liver, and kidneys are all congested to a great extent.

14.—John H—, admitted, 2nd February, 1871; died 7th October, 1871; age at death, 37; delver; single; Bradford. He became epileptic when sixteen weeks old, and was subject to fits ever afterwards. At first his mental development was not interfered with. In boyhood, however, he became heavy and lethargic and irritable, and when he reached man's estate he suffered from attacks of violent mental excitement, in which he was most dangerous to all who approached him. He was found suffocated, having turned on his pillow in a fit.

Examination 55 hours after death. Rigor mortis is universally present, and there is considerable hypostatic congestion of dependent parts. The fingers and toes are livid. The skull-cap is normal. The sinuses are full of dark fluid blood. The arachnoid is slightly milky over the frontal and parietal lobes on both sides, and this condition terminates abruptly at the parieto occipital fissure. The convolutions are not at all wasted, and the brain is plump and firm. The whole brain is, indeed, unusually hard and solid. The pia mater strips freely. The fornix is soft and pulpy. The choroid is congested, and the intra-ventricular veins all look as if dilated. There is a decided blueness of the floor of the fourth ventricle, and some dilatation of the vessels which ramify on it. There is congestion around the pons Varolii. The whole brain weighs 54ozs.

The lungs are congested and cedematous, and studded with tubercle, and the kidneys are congested.

15.—Joseph G—, admitted 8th June, 1871; died 24th October, 1872; age at death, 29; labourer; single; Dewsbury. He first had

fits when two years old, and was then teething. At that time the fits only troubled him for a few months, and thereafter he was free from them until he was 14 years old, when, without any known cause, they suddenly recurred with great violence. During the remainder of his life he suffered from them at short intervals. His mind became exceedingly weak, and paroxysms of intense and dangerous excitement accompanied the fits. In the midst of such a paroxysm he was found dead, with his face deeply buried in his epileptic pillow. The wet state of the bed and the disordered bedding, the firm flexure of his thumbs across the palms of the hand, and the presence of froth and blood about his mouth, proved that he had been suffocated in or immediately after a fit. When he was found, which must have been about an hour after death, there was great lividity of his face, and not of the belly or dependent parts, but of the back nates and back of the thighs.

Examination 20 hours after death. The body is stout, and presents over its whole surface numerous purple blotches. Cadaveric rigidity is present. The skull is of average thickness and density, but is not symmetrical, bulging posteriorly to the left side. The bones entering into the constitution are pinkish in colour. The sinuses are all engorged with dark blood, as are also the superficial veins. There is no thickening of the dura mater or arachnoid, and the pia mater is freely separable from the gyri, which are in no degree wasted, but which are indeed plump and closely packed. The brain substance, grey and white, is decidedly abnormally firm and hard. It cuts toughly. The grey matter has rather a reddish tinge. The choroids and velum interpositum are dark coloured and congested. No fluid escaped. The vessels on the floor of the fourth ventricle and around the pons Varolii and medulla oblongata are dilated. The whole brain weighs 49½ ozs. The cerebellum, pons Varolii, and medulla oblongata weigh 6 ozs.

The lungs and kidneys are congested.

Epileptic Stupor.

When epilepsy has not been cut short by the status or accidental suffocation or any intercurrent malady, its natural tendency is to terminate in a condition of abject mental fatuity and bodily prostration, which may be designated epileptic stupor, and which steadily lapses towards death. In this condition consciousness is only partially preserved, and great and persistent muscular weakness prevails. A state of degradation is reached only comparable with the lowest kind of idiocy. On examining the brains of patients who have passed into this stupor, and have died in it, marked differences are noticed between the appearances which they present and those which are seen in the brains of epileptics who have

died before sinking into it. Traces of the former induration may be still discernible, the substance of the brain being tough and leathery, but hypertrophy has given place to a certain degree of atrophy. The fibroid tissue, formerly swollen and hypertrophied, has undergone contraction. The proper nervous elements, so long subjected to compression, have wasted; the thickened and distended vessels have failed to minister fully to nutrition, and so even softening may have set in. A special temperament or diathesis may help to the incursion of this epileptic stupor and atrophy, as also may repeated attacks of the status epilepticus or apoplectic clots exercising pressure. The atrophy is evidenced by some opacity of the arachnoid, diminished size of the gyri, and enlargement of the sulci, which also contain some compensatory serous fluid, a quantity of which also generally occupies the enlarged ventricles. The atrophy of epilepsy is moderate in degree. It rarely approaches that of old age, chronic alcoholism, or simple brain wasting.

16.—Benjamin F —, admitted 7th June, 1867; died 8th January, 1872; age at death 44; packer; married; Leeds. He began to have fits when 37 years old. At first these fits involved merely momentary palor and bewilderment, but even while they maintained this character his memory lost its accuracy, his disposition was changed, and he became silly, irrational, and irascible. Soon after his admission to the Asylum regular convulsions were developed, and these continued to recur from time to time, till the close of life. His wits were brightened for a brief season under treatment, but were soon again clouded more heavily than ever. He lost all recollection of the past, and could not correctly apprehend the present. He grew thin and feeble, slow in all his movements, and then tottering and uncertain. Soon he was totally incoherent and helpless, could not move without help, and was dirty in his habits. After months of stupor he sank and died.

Examination 50 hours after death. Rigor mortis present. Considerable saggulation of dependent parts. The skull is symmetrical and of average thickness, but of a bluish tinge. The parietal is adherent to the visceral layer of the arachnoid, in the vicinity of the median fissure. The arachnoid is white, and opaque over the frontal and parietal lobes, and over the annectant gyri. Here the opacity terminates, not spreading over the occipital lobes. Downwards, however, the opacity extends on to the temporo-sphenoidal lobes, where it is markedly visible, and also on to the orbital lobule. Over the cerebellum it is again seen. On the right side, beneath the arachnoid, and occupying the posterior halves of the middle and inferior frontal gyri, is a deep depression about the size of a walnut, filled with serum,

and with a brownish stained bottom formed of pia mater and subjacent grey matter. This cavity looks as if it had resulted from the absorption of a superficial clot. On the left side the remains of a more recent, but still old clot are seen on the surface of the middle temporo-sphenoidal gyrus, being about the size of half a filbert. The convolutions are somewhat wasted, and the brain substance is tough; 2ozs. of fluid flow away. There is no atheroma of vessels.

17.—Isaac K —, admitted 1st January, 1867; died 21st December, 1869; age at death 24; labourer; single; Clifford-cum-Boston. When 16 years of age, being then a healthy and intelligent lad, his left foot was caught in a thrashing machine and was badly cut and crushed. Immediately after this injury he had his first epileptic fit, which was followed by many other fits at irregular intervals. His mind was speedily involved. He grew dull and lethargic, except when excited, and then he used to fancy that he had reptiles in his inside, and that he had been stung all over by wasps. Tortured by these fancies he attempted suicide. When received into the Asylum he was quite fatuous and very feeble, staggering when he walked, and dribbling from his mouth when he attempted to speak. The fatuity increased upon him until he was utterly helpless and mindless. He died after a prolonged period of stupor.

Examination 10 hours after death. The body is much emaciated, and its surface exceedingly pale and anæmic. There is the mark of a cut across the left heel, and the left foot is deformed. The skull bulges a little at the middle of the right parietal bone, and posteriorly on the left side. There is slight wasting of the convolutions, and the grey matter is very pale, its division into layers being unusually perceptible, and the deeper layers being paler than the more superficial. Two ounces of fluid escaped while the brain was being removed. The vessels on the floor of the fourth ventricle are singularly dilated. The whole brain weighs 44ozs. The cerebellum, pons Varolii, and medulla oblongata weigh 6ozs.

There is cheesy tubercle in both lungs, and at the apex of the right there is a cavity.

18.—Sarah W —, admitted 30th October, 1869; died March 7th, 1871; age at death 35. She was first attacked by fits when 19 years of age, and was then suffering from menstrual irregularity. Her intellect did not become impaired until she was 29 years of age, then, however, it rapidly failed, and she grew stupid and intractable. Delusions, having reference to religious matters, troubled her for a time, and, when about 32 years of age, she sunk into deep dementia. She could not recognise her nearest relations, nor frame an intelligible sentence. She lost control over her muscles, which were rigid when at rest, and jerky when in motion. She became emaciated and inattentive to the calls of nature, and more and more oblivious to all that was going on around her. She died after a period of coma.

Examination 65 hours after death. The body is much wasted. There are a few livid blotches on the upper part of the chest and arms, but no rigor mortis, nor hypostatic congestion. The scalp and skull are of normal thickness, and the latter is quite symmetrical. The arachnoid is raised from the surface of the convolutions by a large amount of serous fluid, so that the brain has a gelatinous appearance. The sinuses are occupied by dark blood and clots, and the inter-convolitional veins are also full of blood. The arachnoid presents numerous white milky patches, especially over the enlarged and water-logged sulci. The convolutions of the frontal and parietal lobes are much wasted and rounded off. The superficial half of the grey matter is pale, but the deeper half is of a pinkish colour. The medullary substance is of a dirty greyish-white colour, and presents on section numerous coarse vascular points, shreds of vessels, apparently thickened, and little orifices, out of which vessels have been torn. The grey matter, both where pale and pink, is also studded with similar vascular points and filaments. The ventricles contain clear fluid, of which about 3ozs. in all escaped during the removal of the brain, and the choroid plexuses and velum interpositum are injected. The corpora striata are of a darker tinge than is usual to them, but this does not extend to the optic thalami, at least in the same degree. The vessels on the surface of the pons Varolii look dilated, and there are numerous enlarged vessels on the floor of the fourth ventricle, which is of an uncommonly dark colour. The whole brain weighs 50ozs. The cerebellum, pons Varolii, and medulla oblongata weigh 7ozs.

There are a few nodules of tubercle at the apex of each lung.

19.—Penelope J——, admitted 13th September, 1867; died 18th March, 1868; age at death, 51; married; housewife; Goole. She was first attacked by epileptic fits when two years old, and continued to suffer from them all her life. Never strong minded, she became demented at middle age, and then suffered from occasional attacks of wild, reckless excitement. They ultimately ceased to trouble her, and during the last years of her life she was profoundly demented, and quite helpless; having lost all muscular power, she could not sit in her easy-chair unsupported. She understood nothing that was said to her, and never spoke, but sometimes shouted out an inarticulate cry.

Examination 30 hours after death. Body emaciated. Cadaveric rigidity well marked. The skull is thickened, unsymmetrical, eroded by channels for the meningeal vessels, and of a general bluish tinge. There is general opacity of the arachnoid, and 4ozs. of blood-stained serum escape from under it. The convolutions are considerably wasted, and the sulci are hollowed out into tortuous cavities containing serous fluid. The ventricles are large, and filled with fluid. The medullary substance is pale and glistening. The vessels on the surface of the pons Varolii and medulla oblongata are distended, and these parts, as well as the cervical portion of the spinal cord, have a dirty-brown colour, when looked at externally, as if from pigmentary deposit.

The thoracic and abdominal viscera are healthy, but of small size, as if somewhat atrophoid, except the liver, which weighs 54ozs., and is pale, soft, and decidedly fatty, and the stomach, which is of large size.

20.—Isabella H——, admitted 22nd February, 1871; died 19th May, 1872; age at death, 47; married; housewife; Leeds. When 42 years of age she began to experience attacks of vertigo with momentary loss of consciousness. These, after continuing three years, were converted into regular epileptic fits; immediately after the establishment of which mental weakness displayed itself. Then came depression of spirits with suicidal attempts, then restless excitement, lastly profound fatuity. For the last year of life she took no notice of what was going on around her, could understand nothing that was said to her, and could not form a sentence. Although having few fits she could not stand or walk, but rolled about helplessly, her muscles being very tremulous and feeble. She passed into a state of profound stupor before death.

Examination 42 hours after death. Body fairly nourished. The skull, which is of normal density, is slightly thicker than it ought to be in front. It is symmetrical, but its bones are of a bluish tinge, and present deep wide channels for the meningeal arteries. There is a small rounded nodule or exostosis of bone projecting from the left temporal bone, causing a shallow depression in the superior temporo-phenoidal gyrus of that side. The dura mater is not adherent. The arachnoid, which is slightly thickened, is floated up by large quantities of clear subjacent fluid, more than three ounces of which flowed away during the removal of the brain. All the superficial veins are filled with dark blood, especially posteriorly. The gyri of the frontal and parietal lobes are much wasted, those of the frontal lobe most so. The pia mater strips with facility. There is no atheroma of vessels. The grey matter is rather dark coloured, and the white matter has a purplish mottled appearance. The ventricles are full of fluid, and the floor of the fourth is of a dark purple colour. *Puncta sanguineæ* are numerous, and the ganglia at the base of the brain have all a darker colour than is usually seen in them. The whole brain weighs 42ozs. The cerebellum, pons Varolii, and medulla oblongata $5\frac{1}{2}$ ozs.

21.—Hannah G.——, admitted 14th September, 1864; died Jan. 26th, 1871; age at death, 34. She was said to have had epileptic fits all her life. These, however, became much more severe after she attained womanhood, and induced mental deterioration, with occasional excitement. Ultimately she passed into a state of profound dementia, and in that state continued for three years before her death. Fits occurred during the night, but never by day. She could not speak so that anyone could understand her, nor could she comprehend what was said to her. She could not walk, but staggered or sprawled about, and at last was confined to an easy-chair, in which she slowly and clumsily rolled to and fro. Her muscles were rigid. Divergent stra-

bismus appeared; the pupils became unequal; the breathing semi-stertorous; death was expedited by an abscess of the gall-bladder.

Examination 60 hours after death. The body is slightly emaciated. Rigor mortis is absent. The skull is very thin at the vertex, and along the sutures, and slightly unsymmetrical, bulging on the right side. There is very slight thickening of the arachnoid over the parietal gyri. The pia mater strips readily; the convolutions are wasted and lie very much apart, and the gyri large and gaping. The cineritious substance is thin, and the medullary is blotchy, and contains a good deal of blood, puncta sanguineæ being plentiful. The brain substance is preternaturally firm, and cuts somewhat crisply. The ventricles, which are of normal size, contain a small quantity of fluid, and the fornix is soft and pulpy. The choroid plexuses are dark and congested. The whole brain weighs 43ozs. The cerebellum, pons Varolii, and medulla oblongata, weigh $4\frac{1}{2}$ ozs.

22.—Sophia M——, admitted 7th June, 1853; died 13th July, 1872; age at death 47; domestic servant; single; Halifax. From early infancy she suffered from epileptic fits, but she grew up and was educated like other children; no weakness of mind being perceived in her until after her fifteenth year, when peculiarities of temper and obtuseness of intellect displayed themselves. These rapidly proceeded into dementia, broken in upon by excitement now and then. She passed through several periods of distinct status epilepticus, and after these sunk gradually into a condition of stupor, or mental and muscular helplessness. She died in the status epilepticus after two days of unconsciousness and several fits.

Examination 38 hours after death. There is considerable lividity of the face and all dependent parts. The skull-cap is symmetrical, but very thick and soft, and of a deep blue colour. There is little or no thickening or opacity of the arachnoid, but beneath it over the orbital lobule on each side, there is a dark-brown stain, and a little granular debris in the meshes of the pia mater, clearly the vestiges of former clots. The discolouration is most marked on the orbital portions of the marginal gyri, but extends over the internal and external orbital gyri. It is largest and deepest on the right side. Beneath it the cineritious substance of the gyri implicated is found stained brown and softened. The pia mater strips freely. The convolutions are plump, but the substance of the brain is generally softened. The puncta sanguineæ are numerous. The veins on the floor of the fourth ventricle are numerous, distended and tortuous. The whole brain weighs 43ozs. The cerebellum, pons Varolii, and medulla oblongata, weigh 6ozs.

The heart contains only fluid blood. The lungs are emphysematous. The liver and the pyramids of the kidneys are somewhat congested.

The Madmen of the Greek Theatre. By J. R. GASQUET, M.B.

(Continued from page 482 vol. xviii.)

NO. 4. PENTHEUS AND THE BACCHÆ.

The tale of Pentheus had long been familiar to the Greeks, and had been already handled by Æschylus, when Euripides was led to undertake it. Towards the end of his life he resided at the court of Archelaus of Macedon, and was evidently greatly impressed by the fresh scenery and customs which came before him; like a true poet, he was inspired by these to choose a theme in which he might best represent his newly gained experience, and produce one of the most striking and beautiful of his plays, in which both the subject itself and his mode of treating it are to my purpose.

It describes an attempt made by a King of Thebes to check the worship of Dionysus (Bacchus) in his dominions, and the fate which it drew down on him.

Such legends, which are to be found in Homer, as well as in later Greek writers, no doubt have an historical basis, and testify to forcible resistance against the demoralizing effects upon women of orgies introduced from the East. So far, I go entirely with Mr. Gladstone in his excellent account of the Dionusos of Homer,* but I doubt if there are grounds for following his belief that the novel features connected with this god are merely the use of wine by women, and the excitement thus occasioned. We know, indeed, from other sources than those relied upon by him, that the mysterious power of certain intoxicating drinks had long before led the Indian Vedas to extol the Soma-juice as their chief sacrament, and had ended at last in the deification of Homa among the Parsees;† and this would account for the most prominent feature of Dionusos-worship as derived from India; but it offers no explanation of its occasional and epidemic character. It is more probable that, as the Asiatic Bacchus was primarily “simply the God of excitement or enthusiasm, whether physical, mental, or religious,”‡ so the Bacchanalia were festivals in which, under the influence of wine, dancing

* “Studies on Homer,” vol. ii., p. 265, sqq. *Juventus Mundi*, cap. 8, sec. 16.

† Döllinger. “Gentile and Jew,” vol. i., p. 400.

‡ Paley. Introduction to Bacchæ. Horace, *Carm.* ii., 19, iii., 25.

and other potent causes of excitement, women were wrought into a state of enthusiasm which was considered religious. That this should frequently pass on into positive madness, all who have read the accounts of the flagellants in the middle ages, or of camp-meetings and revivals in modern times, will readily suppose; but unless we remember that to religious excitement were added in Pagan times all the varied stimulants of licensed vice, we can hardly believe that the Bacchanalia implied, for many hundred years, a recurrence, at stated intervals, of epidemics of insanity among such as joined in them. The evidence for this is abundant; to take merely such authors as come first to hand, the philosophers of Greece * speak casually of the madness of the Bacchanalia as a matter of course; many centuries later Roman historians do the same,† the Christian apologists tax the heathen with permitting it, and the defenders of polytheism admit the imputation.‡ Considered from this point of view, the Dionysiac festivals have a close relation to my subject. They are most prominent instances of the way in which Paganism, by giving a religious character to the lowest instincts of our nature, both laid the foundations of a madness and produced outbursts of frenzy which were more foul and frequent than we, who live in a world tempered by Christianity, can well conceive. The true history of these epidemics of religious madness in the ancient world has yet to be written; I may not dwell on it now any longer, but I cannot refrain from quoting a fragment from the most vivid and faithful description in our language of some such procession.

“ There you might see the devilish emblems of idolatry borne aloft by wretches from the great Punic Temple, while frantic forms, ragged and famished, wasted and shameless, leapt and pranced around them. There, too, was a choir of Bacchanals ready at a moment with songs as noisy as they were unutterable. And there, moreover, was a band of fanatics, devotees of Cybele, or of the Syrian Goddess, if, indeed, the two rites were distinct. They were bedizened

* Plato, *Phædrus*, *Leges*, ii. Aristotle, viii. *Pol.* 6.

† Hispalas' speech, in Livy's account of the suppression of the Bacchanalia in Rome, is well worth notice; so, too, Tacitus' casual remark, “*Bacchæ sacrificantes vel insanientes*” (xi., *Ann.*, 31).

‡ Especially remarkable are the words of St. Clement of Alexandria (*Cohort: ad Gentes*, cap. 2). *Διώνυσον μαιώλην ὀργιάζουσι Βάκχοι ὀμοφαγία τὴν ἑερομανίαν ἄγοντες.* See, too, St. Augustine, *Civ. Dei*, vi. 9, vii. 21, xviii. 14.

with ribbons and rags of various colours, and smeared over with paint; they had long hair like women, and turbans on their heads; they pushed their way to the head of the procession, being quite worthy of the post of honour, and, seizing the baker's ass, put their goddess on the back of it. Some of them were playing the fife, others clashing cymbals; others danced, others yelled, others rolled their heads, and others flogged themselves."*

It was with some such frenzy as this, the play tells us, King Pentheus had to deal, and in resisting it he met his death. He had succeeded to the throne of his grandfather, Cadmus, who was still living, and, through him, was of kin to Bacchus, whose mother, Semele, was a daughter of Cadmus. His character comes out well in the play as that of a quick, imperious, decided man, accustomed to absolute rule, and determined to preserve public order in his dominions. Bacchus came from Eastern lands, and visited Thebes to take vengeance upon the sisters of his mother Semele, because they had slandered her, and denied his own divine origin. One of these sisters, Agave, was the mother of Pentheus, and she, with all the women of the race of Cadmus, had been driven forth by a madness sent from the God, and impelled to join the Bacchic orgies on Mount Cithæron; for Pentheus himself a heavier punishment has been prepared, should he persist in disregarding the divine power. Teiresias, the blind old prophet, and the aged Cadmus himself, are going out hand in hand, crowned with ivy, and thyrsi in their hands, to join the Bacchanals on the mountain, when they meet the King, who has been much disturbed at finding the women have left their homes and have gone forth to join in these sham orgies to the new-fangled god Dionysus, which, he thinks, are a mere pretext for excesses of all kinds. He has first determined that his mother and her sisters, as the chief offenders, shall be most severely punished; and he is even more troubled at what he considers the folly of these two venerable old men. They endeavour to persuade him to join them, but their arguments only serve the purpose of showing that he is confirmed in his impiety, for he gives orders for the destruction of the augural seat of Teiresias, and for the seizure of Bacchus himself, who, as the author of all the mischief, is to be stoned to death. With sad forebodings of the fate that is in store for the house of Cadmus, the two

* J. H. Newman's *Callista*, chap. 17.

old men go off with stumbling, feeble steps, to join the sacred band.*

Presently Dionysus is brought bound before Pentheus, who proceeds to examine him after the manner of a police magistrate interrogating a criminal, giving occasion to one of those passages of verbal fence and retort in which Euripides delights. He is remanded for further enquiry, but substitutes a bull for himself, and performs various wonders to delude his persecutor. A messenger now arrives from Mount Cithæron to tell Pentheus what he has seen, and, in one of the most picturesque descriptions in the whole range of classical poetry, he relates how, as he reached, with his cattle, the summit of the mountain at sun-rise, he saw three parties of women, under the leadership of Agave and her two sisters, wearied and asleep, leaning against the branches of the firs, or resting on the oak-leaves which strewed the ground. The lowing of the kine aroused Agave and her companions, and we are told how they rose from their sleep, let their hair flow over their shoulders, girded up their deer-skin garments, and wreathed around them snakes that licked their faces. The earth yielded them water, wine, and milk at their desire, and all was peaceful, until the herdsmen sought to seize Agave, and bring her to Pentheus, when she turned upon them with her followers, tore their cattle limb from limb, and fairly put them to rout. The king is told these things, as so many proofs of the power of the new divinity, whom he is conjured to receive into his city; but he is roused to more decisive action by them, and orders his whole army to prepare for an immediate attack upon the Bacchæ. Dionysus makes a last attempt to check him; but, finding him obstinate, proposes that he shall go to reconnoitre the state of things, and induces him to disguise himself as a woman. As soon as Pentheus has entered the palace, the god tells the chorus that "the man has now fallen into the net, and will go to the Bacchæ, where he shall suffer death;" and, apostrophizing himself, he says, "Disturb his reason, casting on him an easy madness" (*ἐλαφρὰ λύσσα*), so that he may put on the women's garments needed for the success of the plot. In a few moments Pentheus comes out from the house, dressed as a woman, and with a thyrsus in his hand; his mind is already troubled, as his first words are that he seems to see two suns and two

* The beginning of Teiresias' reply; *μέμνησας ἤδη, καὶ πρὶν ἐξέστης φρονῶν*. "You are mad now, and before you were out of your mind," is curious, as being so closely similar to our English phrase.

Thebes, and that Bacchus himself appears to be changed into a bull. After a short dialogue, which gives occasion for an ample display of that "irony" in which an Athenian audience delighted, the two depart to look for Bacchæ; and the chorus chant a strophe, in which they call on the "swift dogs of madness" to go to the mountains, and rouse the daughters of Cadmus to fury against the impious spy.

After a time, a slave appears, who had followed his master on his expedition, and informs them that Pentheus has been slain.

The Bacchæ had been found reposing in a shady valley, and the King desired to climb to a height to observe them. Dionysus, accordingly, with superhuman strength, bent down a silver fir, in the topmost branches of which the King took his seat. No sooner had it risen up again, than the god pointed out to his votaries their derider; they attacked him, and, uprooting the tree, brought him violently to the ground. Then

"His mother first begins the sacrifice,
And rushes on him, while his mitra he
Casts off, that she may know him and not slay.
His wretched mother's knees in fast embrace
He holds, and says, 'I, Pentheus, am thy son,
Whom erst in Echion's house thou didst bring forth.
Have pity on me, and slay not thy son
For these my trespasses.' But she,
Foaming with rage, and rolling her wild eyes,*
Knew naught, nor spared her son, for she
By Bacchus was possessed."

Agave and her sisters tear the wretched Pentheus limb from limb, and she fixes his head on a thyrsus, believing it to be that of a young lion. She is presently seen approaching "with rolling eyes," by the chorus; she still holds aloft her son's gory head, as the glorious spoil of a successful combat. She calls for her father, and for her son Pentheus, that he may nail to the cornice the head she has taken.†

The aged Cadmus is now seen with attendants, bearing the mangled remains of his grandson; his daughter advances to meet him, boasting of her deed, and still calling for her son.

* Η δ' ἀφρόν ἐξέϊσα, καὶ διαστρόφους κόρας ἐλισσούσ'. Euripides noted this symptom before, it will be remembered, in *Orestes*.

† Paley quotes a passage from Dr. Wordsworth's "Athens and Attica," which is to my purpose. "The marble lion-head antefixa, which still terminate the northern angles of the western pediments of the Parthenon, indicate that Euripides has not neglected, in the delineation of her character, one of the most natural and pathetic elements of madness, viz., its partial sanity and sense of propriety."

Cadmus attempts to recall her to her senses, and the following dialogue ensues :—

- “C. First look up into the air.
 A. I have done so. Why do you ask it?
 C. Is it the same, or does it seem to you to have changed?
 A. It is brighter and clearer than before.*
 C. Is this wandering still in your mind?
 A. I do not understand that word; but I am somehow becoming conscious, and have changed from my late condition.
 C. Can you then hear me, and answer clearly?
 A. I have forgotten what I said before, father.
 C. Into what house did you come with nuptial songs?
 A. You married me to Echion, sprung (as they say) from the dragon’s teeth.
 C. What son, then, was born to your husband?
 A. Pentheus, from the union between me and his father.
 C. Whose head now do you hold in your arms?
 A. A lion’s, as the huntresses told me.
 C. Look at it now carefully; it is an easy task.
 A. Alas! what do I see? What am I carrying in my hands?
 C. Look at it, and study it more carefully.
 A. Wretched me! I see the greatest sorrow.
 C. Does it seem to you like a lion’s head?
 A. No, I am holding the head of Pentheus.
 C. Which had been bewailed before you recognized it.
 A. Who slew him? How came it in my hands?
 C. Sad truth, at what an unfit time thou’rt come!†
 A. Speak; how my beating heart fears what is to come.
 C. You and your sisters slew him.”

(vv. 1265-1290.)

She has now returned to reason, and, although much of the latter part of the play has been lost, probably nothing concerning my purpose is missing. I have quoted at such length, that I can only leave what seems to me an exquisite sketch of gradually returning reason to the judgment of my readers.

Nor need I dwell on what is called in the play the madness

* I do not find the same difficulty in this reply as Mr. Paley: it seems to me simply to imply that she sees more clearly as consciousness returns.

† “He wishes truth had come at any moment than the present, when the shock may retard her recovery from madness.”—PALEY.

of Pentheus. I suppose the poet merely meant, in the scene where he comes forth dressed as a woman and seeing double, to exhibit the state of man under the influence of wine, the chief gift of the god Bacchus ; and the whole scene, though in perfect taste, is evidently comic.

But if the drunkenness which comes from wine is thus pourtrayed in the King, we see no trace of it in his mother ; she is simply drunk with the god, and in a state of ecstatic madness.* This brings me to a point which needs comment ; editors and critics have generally considered this play as a recantation of the rationalistic opinions which appear in the poet's other tragedies ; while I would, on the contrary, say that Euripides is nowhere more consistent with his general philosophy. He was the friend and disciple of Socrates, and must often have heard the master, weary of the strife of opinions and schools, speak of the blessings of a heaven-sent madness. Mr. Paley has pointed out that there are several close parallels between passages in this play and others in the *Phædrus* of Plato ; he might, I think, have said with correctness, that the teachings of Socrates, in that most beautiful dialogue, give us the key to the purpose of the *Bacchæ*, which, hidden from the vulgar, would be open to the Socratic school.

The greatest disciple of that school puts into his master's mouth these words, that "there are two kinds of madness, one from human disease, and the other from a supernatural disturbance of the ordinary mode of life,"† but in saying so, he had been anticipated by the poet who said—

" Μάντις ὁ δαίμων ὅδε τὸ γὰρ Βακχεύσιμον
Καὶ τὸ μανιῶδες μαντικὴν πολλὴν ἔχει."

This play may, then, be looked upon as the first explicit statement in Greece of the mystical principle in philosophy ; a principle which is responsible for as grave excesses as those the poet here lays to its account, but which has ever since had a charm for many great minds, and has been associated with the highest aspirations and true progress of the human race.

* The two functions of Bacchus, first as the inventor of wine, and then as the sender of madness upon men, are well put in Teiresias' apology, vv. 298-308.

† *Phædrus*, cap. 48.

Tumours of the Brain in the Sane and the Insane. By R
BOYD, M.D. Ed., F.R.C.P. London.

(Continued from Vol. xviii., p. 536.)

The following twenty-two cases of Tumours on the Brain occurred in the St. Marylebone Infirmary, including eight scrofulous and four cancerous.

SCROFULOUS TUMOURS.

In 206 cases of pulmonary phthisis, 132 in males and 74 in females, published in the "Ed. Med. and Sur. Journ.," I found scrofulous tumours and tubercles in the brain in two males and two females.

Male, aged six years (534). Pulmonary tubercles, combined with tabes and hydrocephalus, and miliary tubercles on the *pia mater* at base of cerebrum. Congestion of blood in cerebral veins; redness of the membranes; convolutions of brain flattened; about two ounces of clear fluid in the ventricles. For three days before death there was great torpor and drowsiness.

A stableman, aged 25 (547). Phthisis, combined with delirium a week before death, when he became violent, and was removed to the insane ward. A flat scrofulous tumour, size of a shilling, on the posterior portion of falx cerebri on right side. Tubercles in both lungs and in liver.

Female, aged eight years (659). Scrofulous tubercle in the posterior and upper portion of the left *corpus striatum*, but not involving the white central fibres. Convolutions of brain flattened; about four ounces of fluid in the lateral ventricles. Tubercles and cavities in lungs; ulceration in ilium.

Female, aged 55 (708). A tumour, size of a filbert, from *dura mater*, about the centre between cerebral hemispheres. Tubercles in both lungs; aneurism of the thoracic aorta. (See Case 5, "Lancet," vol. 1, 1840-1.)

Tubercles in the brain were subsequently found in four other cases, two in males and two in females.

Male, aged five (780). Admitted with tabes mesenterica; twenty-two months before death enlargement of the cervical and inguinal glands, and latterly a troublesome cough. A scrofulous tumour, size of a filbert, in the posterior portion of

the right cerebral hemisphere. Small tuberculous cavities in lungs; scrofulous mesenteric glands.

Male, aged 13 (781). Scrofulous tumour in the cerebellum, size of a filbert, at the posterior part, at the junction of the lobes; fluid in the sac of the arachnoid. For several years a patient in the infirmary for scrofulous disease of the left wrist and elbow. The knees were contracted, the feet œdematous, body emaciated; the intellect clear to the last.

Female, aged seven (782). Scrofulous tumours on each side the *sella turcica*; one tumour in the left cerebral hemisphere, above the lateral ventricle. About two drachms of fluid in ventricles; brain unusually pale. Tubercles in the lungs and on the peritoneum; enlarged mesenteric glands and scrofulous hip joint. No history of case during life.

Case 783. A female child, aged 12 months. Paralysis, combined with hydrocephalus, a scrofulous tumour, softening in the brain, and pulmonary tubercles. The child was six months and one day a patient in the infirmary before her death. She was admitted with pneumonia, of which she got well in about three weeks. She had subsequently an attack of ophthalmia, from which she also recovered. Ten weeks after admission strabismus of the left eye was observed, which was quickly followed by inability to raise the eyelid; the other eyelid drooped a little; the pupils were dilated. Hemiplegia of the right side came on after a fit, and the mouth was drawn to the opposite side. The right arm was kept perfectly close to the side, but the forearm might be raised without her expressing pain. There was feeling in the limbs, but loss of motion.

During the last two months she was able to move the fingers of the affected side, which she could not do at first. She slept well at night; but lost flesh gradually.

After the fit, convulsions occurred about once a week, and continued for a quarter of an hour; the toes and fingers flexed; the legs straight.

During the last five weeks the convulsions became more frequent, almost every day, and for the last two days the fits were almost continuous.

The body was examined 22 hours after death.

Head.—The lateral ventricles were distended, and contained between two and three ounces of clear fluid; there was more fluid than usual in the spinal canal. There was a cavity which would contain a split pea in the posterior portion of the left cerebral hemisphere, and another and still larger

cavity in the left hemisphere of the cerebellum; there was softening of a portion of the brain around both cavities. On the right side of the *pons Varolii* was a scrofulous tumour the size of a walnut. Weight of the brain, $30\frac{1}{4}$ ounces.

Chest.—There were numerous tubercles in both lungs in various stages towards softening, but no tubercular cavities; weight of the lungs together, $5\frac{3}{4}$ ounces; the heart, 1 ounce.

Remarks.—In the four last cases tubercles were found in other parts of the body beside the brain; there were tubercles in the lungs in three, in the mesenteric glands in two, in the peritoneum in one; ulceration of the joints in two. The tubercles were situated in the cerebrum in two, and in the cerebellum in one, and on the *pons Varolii* in one.

The tubercles were confined to the *pia mater* in three out of the four examples referred to in the note; there was a tubercle in the left *corpus striatum* in one, No. 659. Tubercles were found in the lungs (P. phthisis) in all four, in the mesenteric glands in three, in the spleen in two, in the liver in two, and in the peritoneum in one.

Of the eight cases, four were males and four females; the ages from four months to 13 years, except one male, No. 547, aged 25 years.

Age.—Tubercle of the brain usually occurs before puberty, between the ages of three and seven years; according to Dr. Green, who has published an account of 30 cases in the Med. Chir. Trans., vol. xxv., p. 218, between the ages of 19 months and 12 years. The disease seldom occurs in adults; there is one adult among the eight here mentioned, and Abercrombie mentions two instances in men, one of 34 and the other 36 years (Diseases of the Brain, 3rd edition, p. 168 and 170). In old age the disease has not been observed.

Seat of Tubercle.—According to Cruveilhier (Anat. Pathol. 18 Liv., p. 2), there is no part of the brain or spinal marrow in which tubercle has not been found; he saw only two cases in which the tubercles were confined to the brain; he found the *pia mater* frequently the seat of the disease, and both he and Abercrombie found tubercle more frequent in the cerebellum than in the cerebrum. According to Andral and Green, the cerebrum is the part most commonly affected. Dr. Hope, in his Morbid Anatomy, p. 298, states that tubercles are commonly generated in the *pia mater*, and that they have a tendency to grow inwards.

In all the cases published by Dr. Green, in the cases here related, and according to general experience, the tubercles

were not confined to the brain, but existed in other organs; the greater development, however, in the brain in several leads to the idea that the disease commenced in the nervous system.

Tubercles often occur singly in the brain, frequently there are two or three, and as many as twenty have been observed. Their size varies from that of a millet-seed to the size of a hen's egg. It is usually that of a pea. A serofulous tumour occupying almost the entire of the left lobe of the cerebellum is figured in Dr. Hooper's *Morbid Anatomy of the Human Brain*, Pl. xi.

Tubercles in the brain are sometimes encysted, and, like tubercles in other parts of the body, are of different degrees of consistence, being sometimes hard and sometimes soft. (See fig. 259, Dr. Hope's *Morbid Anatomy*.)

The portion of the brain around the tubercle is often diseased, frequently softened, at other times it appears to be quite healthy.

Symptoms.—Sometimes like those of encephalitis or of acute hydrocephalus; headache is the most constant symptom. In some cases convulsions and paralysis, often diversified and irregular in succession, have been observed, as in case 783. Cerebral tubercles have been found in very considerable numbers without any cerebral symptoms, as in case No. 781.

Duration of the disease.—This is exceedingly variable. Abercrombie on *Diseases of the Brain*, 3rd edit., p. 165, relates a case in which the attack lasted but five weeks. There is one by Mr. Dunn in the *Med. Chir. Trans.*, Vol. xxv., p. 218. The illness was of six weeks' continuance. In one before referred to, No. 783, the cerebral symptoms first became evident sixteen weeks before death.

A case is related by Cruveilhier (in the work before referred to) of a soldier aged 21 years, who had been imprisoned for two years, during which time he was sullen and silent, but irritable when spoken to. He had no venereal appetite; his appetite for food was great, often excessive. From the prison he was admitted to the hospital of Val de Grace, and died in three months after. On the upper surface of the left hemisphere of the cerebellum were two tuberculous masses each the size of a pigeon's egg. There were also tubercles in the lungs. A similar case is figured in *Liv. II.*, Plate 6, of Cruveilhier's work, and also one in which the *pons Varolii* or annular protuberance is the part affected.

Microscopical appearances.—In the case already referred to,

No. 534, there were tubercles in the *pia mater*, peritoneum, and lungs. They were examined by Mr. Gulliver, who found the tubercles of the *pia mater*, peritoneum, and lungs, in this case of the same character as in many others that he had examined, viz., composed of corpuscles, giving the idea of blighted cells, generally about $\frac{1}{4000}$ th of an inch in diameter, oily like molecules, commonly from $\frac{1}{3000}$ th to $\frac{1}{8000}$ of an inch in diameter, and some granular matter. In crude tubercle, the proportion of the molecules and granular matter was greatest, and there was besides a quantity of irregularly shaped flakey particles. In the tubercles of the *pia mater* the corpuscles were connected together by most delicate and apparently fibrinous fibrils, which was also sometimes the case in miliary tubercles of the lungs.

The molecules above mentioned are of a fatty nature, like the nuclei of primary cells generally occurring in health and disease, as shown by Mr. Gulliver in his Notes to a former part of these contributions (Edin. Med. and Surg. Journal, Vol. lx, p. 158-164, and in Med. Gazette, June 21, 1843-44, p. 411.) The subject is interesting, because, before those observations, we seldom heard of fatty degeneration of any organ but the liver; whereas he has shown that it is common in the lungs, kidneys (in Bright's and in other diseases), testicles, &c.; and Dr. Johnson, in a paper read before the Royal Medical and Chirurgical Society, Nov. 11, 1845, a report of which is in the Lancet, 1845, Vol. ii, p. 565, has since detected these fatty nuclei of cells in Bright's disease of the kidney. As to the precise site of pulmonary tubercle, Mr. Gulliver found it both within the air cells and in the filamentous tissue between and on the outside of them.* Mr. Rainey has made observations to the same effect, adding that the deposit begins within the air cells, and afterwards extends to their outside.†

CANCER. (TWO MALES AND TWO FEMALES.)

Case 784. A coachman, aged 50 years, married. Cancerous tumour on the *dura mater*, complicated with softening of the brain; pneumonia and diseased liver. Admitted to the Infirmary twelve days before his death. Hemiplegia of the right side had existed for six months; after admission he had several convulsive fits; twitchings of the muscles of the face;

* Ed. Med. and Surg. Journ., Vol. lx., p. 161.

† Rainey on the Minute Structure of the Lungs, Med. Chir. Trans., Vol. xxviii.

the face was flushed. He was dull in comprehending, and slow in answering questions. Seven days after admission he became suddenly worse, and was never able to speak afterwards.

Head.—The structure of the brain softened and torn in removing the *dura mater*, which last was thickened over the posterior half and outer side of the left cerebral hemisphere; several schirrous tumours of various sizes, from a pin's head to a pistol bullet, were adherent to the thickened *dura mater* and imbedded in the brain, which was softened all around, and like cream cheese in colour. The right cerebral hemisphere and remainder of the brain quite healthy; about one ounce of clear fluid in the lateral ventricles. Weight of the brain, $43\frac{3}{4}$ ounces.

Case 785. A male, aged 52 years. Cancer of the cerebellum, complicated with abscess in the brain and cancer of the left lung and liver. He was not a patient in the Infirmary, but had been confined to bed ill at home for twelve months before his death.

Head.—The *dura mater* adherent to the anterior portion of the left cerebral hemisphere; on raising it the under surface was red, and about a teaspoonful of purulent matter was found beneath. A second abscess, filled with purulent matter, about two inches long and more than one inch wide, was found on the upper and outer side of the left lateral ventricle. There was purulent matter with surrounding redness in the substance of the *hippocampus major* on the left side. On the anterior and outer portion of the right cerebral hemisphere the *dura mater* was adherent and unusually red at one point, the size of a sixpence, the surface of which was covered with purulent matter.

There was a diseased mass attached to the outer side of the cerebellum, the size of a pigeon's egg. The membranes around very red, covered with purulent matter. In one part of this mass was a hard cancerous portion the size of a musket bullet.

Chest.—Pleuritic adhesions at the upper lobe of the left lung only, which lobe contained a cancerous tumour the size of a large orange, extending from the root of the lung; there was a softening of the centre of the tumour. Weight of the lung, $21\frac{1}{2}$ ounces; the right lung, $11\frac{1}{2}$ ounces; and the heart, 9 ounces.

Abdomen.—In the right lobe of the liver was a cancerous tumour the same size, and soft in the centre, as the one in the lung.

Mr. Gulliver, by examination with the microscope, found the matter in the lung, liver, and cerebellum to be identical, and of a cancerous nature.

Case 786. Charwoman, aged 70 years, widow. Cancer of the brain, lungs, left kidney, and left renal capsules, combined with hydatids in the liver.

Ten weeks a patient in the Infirmary; she had incontinence of urine for three weeks before her admission; urine alkaline, but contained no albumen. The aspect of the patient bore evidence of her suffering from malignant disease. There was a hard circumscribed abdominal tumour to be felt nearly the size of a newly born child's head; the bowels being either in a relaxed or confined state produced no effect on the size of the tumour. The body was examined twenty-one hours after death.

Head.—The *dura mater* was adherent to the anterior portion of the cerebral hemispheres; the convolutions flattened; in the anterior portion of the right hemisphere there was a firm round tumour, two inches in diameter, of a pink colour externally, yellowish green internally, and white at the centre, where it was softened. The portion of the left cerebral hemisphere anterior to the left lateral ventricle formed a brownish mass, attached to the membrane covering the roof of the left orbit by a dark root three-quarters of an inch in diameter. The brain immediately around the diseased mass was in a pulpy state; the lateral ventricles contained about one ounce of clear fluid, which was found, both by heat and the addition of nitric acid, to contain albumen. The weight of the brain, $45\frac{3}{4}$ ounces.

Chest.—Pleuritic adhesions on both sides; the upper lobe of left lung was firmly adherent to the second rib, which broke in the removal of the lung, being very brittle, as has been frequently observed in cancer. The superior third of the upper lobe of the left lung was occupied by a white scirrhous tumour; in the upper portion of the lower lobe there was a white tumour the size of a pigeon's egg, in a softened state; and in the lower portion of the same lobe another tumour, about one-third the size, in a similar state. The right lung presented on the external and posterior surface four firm projecting cancerous tumours, the largest one about two inches in diameter.

A model of the lungs in wax was made by Mr. Tuson, and preserved in the museum of University College.

The bronchial glands in the vicinity of the left apex were enlarged and cancerous. The right lung weighed $20\frac{1}{2}$ ounces; the left, 33 ounces; and the heart, $9\frac{1}{2}$ ounces.

Abdomen.—Liver large; a white circle of chalky matter, the size of a teacup, which surrounded a mass of hydatids near the surface of the right lobe.

The liver weighed 57 ounces; the stomach, 5 ounces; the pancreas weighed $2\frac{1}{2}$ ounces; and the spleen, 12 ounces; the right kidney enlarged, minute cells on the surface; weight, $8\frac{1}{2}$ ounces. No trace of the left kidney, the situation occupied by a yellowish green cancerous mass, which weighed 33 ounces; part of the capsule of the kidney found very much thickened, the part modelled and preserved with the lungs; the left renal capsule occupied by a firm cancerous mass; the right renal capsule weighed 2 drachms and 40 grains; and the uterus, $1\frac{3}{4}$ ounces. Weight of the body, 73 pounds; height, 5 feet 5 inches.

Female, aged 40 (60). Paraplegia, contraction of lower limbs. Caries of nasal and malar bones left side. Emaciation. *Dura mater* strongly adherent to skull at posterior part of right hemisphere. The brain beneath, for three-quarters of an inch, very firm, carcinomatous; attached to it externally a cluster of cysts containing clear fluid, forming together a tumour, size of a pigeon's egg. A similar appearance, but smaller in size, on the right side. Atrophy of the brain; weight, $27\frac{1}{2}$ ounces; heart small, $7\frac{1}{4}$ ounces; liver large, 56 ounces.

Remarks.—The four cases of cancer occurred in persons of 40 years old and upwards. In the first one the *dura mater* was the seat of the disease, there was softening of the brain, and cysts were found in the liver.

In the second the cerebellum was the part affected, the *dura mater* was adherent, and there was pus in the brain; there was also cancer in the left lung and in the liver. Cancerous matter from the cerebellum, lung, and liver, was subjected to a microscopical examination by Mr. Gulliver, and proved in all four to be identical; fatty molecules, either free or included as nuclei of the cancerous cells, were very abundant.

In the third case, the woman of 70, the cerebrum was affected with cancer, the *dura mater* adherent, and the brain around the cancerous mass in a pulpy state; the lateral ventricles contained albuminous fluid. Both lungs, the bronchial glands, the left kidney, and the renal capsules were affected with cancer. The liver contained hydatid cysts.

Duration of the disease.—The slow progress of the disease was well exemplified in the first case; hemiplegia had existed for six months; the existence of the tumours was the only

cause revealed for that unequivocal symptom. In the second case the illness was of twelve months' duration; and in the third of more than three months' duration.

Symptoms.—These are usually of gradual development, determined by the situation and size of the tumour, as well as by the direction in which the pressure is exercised, greater in proportion as it impinges on the centre and base of the brain; the sensibility of the skin is sometimes increased, sometimes diminished; and convulsions, paralysis, and stupor are the usual accompaniments; acute inflammation, fluid in the ventricles, or most frequently softening of the surrounding portion of the brain, are the usual terminations. If the patient has been for a considerable time confined to the recumbent position in bed, pneumonia is a common result, in this as well as in other diseases attended with much debility. (See “*De Dolore Capitis, Anatomiae Practicae Boneti 1700, Lib. 1, Tom. 1, Obs. 67-71,*” Scirrhus tumours on membranes of brain, scirrhus pia mater. In the same vol. additamenta after page 77, *De Reliquis Affectibus Soporosis, &c., Obs. 20, Hardness of brain, Obs. 21, Scirrhus tumour. Morgagni, Book v., Let. lxii. a. 15, Scirrhus of cerebellum*).

The fact of cysts having been found in the liver in two out of the four cases of cancer is worthy of observation. In two cases there were cancerous tumours in the lungs and in other organs.

Cancerous tumours of the meninges are figured in pl. 1, 2, and 3, Liv. 8, *Anatomie Pathologique* by Cruveilhier, who divides them into two classes, external and internal; after combating the opinions of Louis and the brothers Wenzel, that the external layer of the *dura mater* was primarily affected; as well as the opinion that the bones of the cranium were the primary seat of the disease, which was supported by Siebold, Walther, and Graff, he agrees with Ebermaier, and divides them into external and internal, as before mentioned.

The external cancerous tumours, according to Cruveilhier, make their way through the bony parietes after the same manner as an aneurism: while the internal cancerous tumours, which are much the most common, increase in the opposite direction,—ultimately compress the brain and become imbedded in its structure, the *dura mater* at the same time having become thickened and adherent; this was particularly well marked in the first of the cases here related.

The second of the cases (No. 785) appeared to be one of

those in which the cancerous tumour had its origin in the subarachnoid cellular tissue, which is not an unusual seat of the disease.

In the Supplement to Abercrombie on the Brain, edit. 3, p. 433, *et seq.* are to be found cases of schirrus of the cerebrum and cerebellum, viz., cases 5, 11, 15, 32, and 38.

In Dr. Walshe's Book on Cancer, London, 1846, from p. 487 to p. 523, will be found Abstracts of Cases of Cancer of the Brain and Membranes, from the writings of Andral, Calmeil, Broussais, Louis, Graff, &c.

Andral states that the disease is one of slow formation, and occurs at all ages. Out of 45 cases, it occurred twice in infants of 2 years, once at 3, once at 4, once at 7, once at 11, once at 12, once at 14, once at 17, three times between 20 and 30, eight times from 30 to 40, eleven times from 40 to 50, nine times from 50 to 60, five times from 60 to 80. (*Cours de Pathologie Interne*, 2nd edit. Bruxelles, 1837.)

OTHER TUMOURS. (1 MALE AND 6 FEMALES.)

Case 787. A male, inmate of the workhouse, aged 33 years. Paralyzed for some years; died three days after his admission to the Infirmary, very much emaciated; he had hemiplegia of the left side, and passed his motions involuntarily.

Head.—On the posterior portion of the right cerebral hemisphere there was a tumour which weighed 6 ounces; there was also a small tumour which weighed $\frac{1}{2}$ ounce, on the opposite side, in the left cerebral hemisphere; weight of the brain, 45 ounces.

Female, aged 95 (154). Bronchitis, natural decay. A tumour, size of a musket bullet, attached to the posterior portion of the *dura mater*, with a corresponding depression in the brain, serum on its surface, as is usual in the aged.

Case 788. A prostitute, aged 26 years. Tumours of the *dura mater*, complicated with softening of the right cerebral hemisphere.

Admitted to the infirmary six days before her death, in a state of stupor, attended with syncope; pulse feeble; pain in the head; pupils dilated. She died in convulsions, similar to apoplexy; there was no paralysis.

Head.—The *dura mater* was firmly adherent to the upper and posterior portion of the right cerebral hemisphere, and had three tumours attached to the under surface, occupying about three inches in circumference of that membrane, and

imbedded in the structure of the brain to the depth of half an inch. The brain around the tumours softened, of a smooth white appearance, like thick cream. Weight of the brain, $47\frac{1}{2}$ ounces.

Case 789. A female, aged 49 years. Tumour on the *dura mater*, complicated with a granular state of the great omentum. The body brought for burial; nothing known of the case during life.

Head.—Congestion of the brain; a small tumour, size of a pistol bullet, attached to the under surface of the *dura mater*; there was a corresponding indentation on the surface of the brain. Weight of the brain, $40\frac{1}{2}$ ounces.

Chest.—Slight pleuritic adhesions of the upper lobes of the lungs; earthy matter in the apices, and a puckered state of the pleura, probably the result of small tuberculous cavities which had healed and closed up. Weight of both lungs, $25\frac{1}{2}$ ounces; the heart 7 ounces.

Case 790. A charwoman, aged 59 years. Tumours of the falx and tentorium imbedded in the cerebral hemispheres, with softening of the brain, combined with pulmonary phthisis, jaundice, and softening of the liver. More than ten weeks a patient in the Infirmary, and ill four weeks previous to being admitted.

At intervals during her illness she became insensible for a time, and then rallied again; towards the end these attacks of insensibility became of longer continuance, and the urine and fæces were passed involuntarily. Hemiplegia of the right side came on one month before death. The body was examined 39 hours after death.

Head.—There was softening of the centre of both cerebral hemispheres, in which were found two tumours, one on each side, adherent to the falx and to the tentorium below, imbedded in the substance of the hemispheres; the largest of the tumours was the size of an orange, and on the left side; the tumours when divided appeared like melanoid matter mixed with fibrous, and were in one part yellow, and in another reddish. Weight of the brain, $47\frac{1}{4}$ ounces.

Chest.—The right lung only adherent to the parietes; the pleura thickened over the apex, and a tuberculous cavity beneath; a portion of the lower lobe of the same lung in the second stage of pneumonia; weight, $19\frac{1}{2}$ ounces. The left lung natural; weight, $12\frac{1}{2}$ ounces; the heart, 8 ounces.

Case 791. A female, aged 60 years. A tumour on the membranes of the brain, and an increased quantity of fluid

in the ventricles. She died in a chronic ward in the work-house, in a fatuous state. Occasionally she suffered from pain in the head and face, and twitchings of the muscles of the face. She had also been subject to convulsions.

Head.—The lateral ventricles of the brain contained about two ounces of fluid. Adherent to the *dura mater*, on the right side of the *sella turcica*, was a tumour the size of an almond, of a reddish colour, and firm fibrous structure. Weight of the brain, 37 ounces.

Case 811. A laundress, aged 50 years. Apoplexy, combined with a tumour on the *dura mater*, and hemiplegia on the right side. Two days before her admission to the Infirmary she was seized with a fit. About half an hour before the seizure she complained of giddiness. She became comatose soon afterwards, from which state she never recovered, and died the day after her admission.

Previous to this she had two attacks of apoplexy, the first one two years before, attended with hemiplegia of the right side. For several years she had been subject to convulsions, frequent flushings of the face, and pain in the head.

Brain.—The right cerebral hemisphere obviously larger than the left; the convolutions flattened; the arachnoid preternaturally dry. The right lateral ventricle contained a large clot of blood, which was found to extend beneath the right *corpus striatum*. There was an oblong cyst, with rusty coloured walls nearly an inch long, in the left *corpus striatum*. (This was probably the remains of the first apoplectic attack, as well as the cause of the hemiplegia.)

A tumour, the size of a walnut, was attached to the *dura mater* on the outer side, above the centre of the cerebral hemisphere. There was a corresponding depression or cavity for this tumour in the convolutions beneath. Weight of the brain, 42 $\frac{1}{4}$ ounces.

Remarks.—In the young man's case the tumour in the right cerebral hemisphere was as large as an orange; hemiplegia of the left side had existed for some years, from which it is probable the tumour was of very slow growth.

Perforating tumours of the cranium have been known to be of very long duration; one is mentioned by Graff of 37 years', and another by Louis of 40 years' standing.

In five females the membranes were firmly adherent to the tumours; very probably had their origin in the membranes, as has been frequently observed: Hooper's *Morbid Anatomy of the Brain*, plates 6 and 7. In the Supplement to Aber-

crombie on the Brain, p. 435, *et seq.* are several cases, including firm, soft, chalky, cheesy, fatty, spongy, reddish tumours, of various sizes in different parts of the brain; also hydatids, and in Hooper's Morbid Anatomy, pl. 10 and 13. In the Dict. de Med., Tom. xi., p. 470, 482, various tumours of brain and membranes are treated of; and in Dr. Copland's Dictionary of Practical Medicine, Part i., p. 207, 223-25. Cruveilhier, Anat. Pathol., 2nd Liv., p. 6. Boneti, Anatomiae, Lib. i. Tom. i., Observ. 56, 61, to 64, 70, additamenta, de Phrenitide, &c. Ob. 7, 35, p. 379, additam. Ob. 3.

Female, aged 33, married (746). About 18 months before death she was suddenly seized with giddiness and pain in her head, which has continued more or less ever since. Amaurosis and hemiplegia of the right side. In a ward for chronic cases in the workhouse. Became delirious three days before death, and was admitted to the Infirmary in a state of collapse.

Head.—Cerebral convolutions flattened; about five ounces of fluid in the lateral ventricles; optic thalami and optic nerves atrophied. The lower portion of the left *corpus striatum* was semi-transparent, and contained granules, size of a pin's head, much firmer than the natural brain structure. Between the under surface of the brain, between it and the base of the skull, were several granules, in a false membrane, similar to those in the *corpus striatum*. Brain, 43 ounces; other organs natural. Weight of the body, 118 pounds; length, 5 feet 5 inches.

Female, aged 70 (815). Admitted to the Infirmary eight days before death. Had an apoplectic fit six days before admission; an opium eater. Hemiplegia of left side; a tumour in brain; enlargement of heart; autopsy 37 hours after death. Weight of the body, 110 pounds; length, 5 feet 5 inches.

Head.—A tumour, mixed colour, red and grey, size of a musket bullet, in the anterior portion of the right cerebral hemisphere, above the roof of the ventricle. A clot of blood, about one ounce in weight in the posterior portion of the left hemisphere, the brain around eroded. Weight, 44 $\frac{1}{4}$ ounces; head enlarged, 13 $\frac{1}{2}$ ounces; other organs natural.

Of these three last cases, one was recorded as a case of hydrocephalus, from the large quantity of fluid in the brain; it was a chronic case, and most probably the tumour was the origin of the disease. The second was a case of pleuritic and chronic bronchitis, and the last was a case of apoplexy, which may have been induced by the tumour, but the immediate cause was enlargement of the heart.

Female, aged 88 (473). In a state of garrulous fatuity; admitted to the Infirmary from the workhouse, ten days before death, for dropsy, chronic bronchitis, &c.

Head.—Atrophy of cerebral convolutions, and fluid on surface of the brain; a light brown coloured mass, the size of a boy's marble, attached to each choroid plexus, the one on left side also to the floor of the ventricle; these tumours had a crystalline appearance, and were found to consist of cholesterine.

Of these 22 infirmary cases, 7 were in males and 15 in females.

The tumours which were adherent to the *dura mater* were probably of slow growth, and occurred in six females, one of whom lived to the advanced age of 95. Scrofulous tumours in the brain occurred in six cases in children, who seldom become insane, and in 2 per cent. of the phthisical cases. Only one case required to be transferred to the insane ward, and one was fatuous.

Uniformity in Public Asylum Reports. By J. A. CAMPBELL, M.D., Assistant Medical Superintendent, Garland, Asylum, Physician to the Carlisle Dispensary; and J. TODD, Clerk and Steward, Garlands Asylum.

The subject of a uniform system of asylum statistics has occupied the attention of some of the most eminent alienists in this country, among whom we may mention Dr. Thurman, Dr. Conolly, Sir Charles Hood, Dr. Bucknill, Dr. Robertson, and Dr. Maudsley. In a very able paper on this subject, published in the January number of this Journal for 1861, Dr. Robertson gave forms of Medical and Financial Tables, and made suggestions as to the Domestic Statistics for an Asylum Report which are now very generally adopted in substance in the best English Asylum Reports.

In October, 1865, the Association of Medical Officers of Asylums and Hospitals for the Insane published in this Journal the Report of a Committee appointed in 1864 for the purpose of drawing up a series of tables, as a basis for a uniform system of asylum statistics. They presented six medical statistical tables as the result of their labours. In the October number of the Journal for 1867 the second report of this committee appeared, with an increase in the

number of tables from six to ten, and appended a list of twenty-seven asylums which had, at that time, adopted those tables. Twenty of these were English county asylums, three were English city or borough asylums, one a Scottish royal asylum, and one a Scottish district asylum.

The English Commissioners in Lunacy, in their Report for 1866, remarked on the value of those tables, published the forms and description of them, and strongly recommended their use in all asylums.

An examination of the Public Asylum Reports for 1871 shows that these tables have been adopted to the following extent:—

Asylums.	Number.	Number issuing Yearly Report.	Number using Society's Tables.
English County	46	44	41
English City or Borough	8	6	6
Scottish Royal	7	6	1
Scottish District	10	5	3
Irish District	22	22	1

In a very considerable number of Asylum Reports the Society's Statistical Tables are supplemented by others which convey much useful information, but it is well worth consideration whether the use of the Society's Tables, in the order as originally intended, allowing the other tables to succeed them, would not be the better plan. Certainly for purposes of reference it would be the most convenient.

The non-adoption of these Statistical Tables by old-established asylums might, to a certain extent, have been expected. In modern asylums, however, and more especially in those that have been opened within the last year or two, that they should not have been used must be a matter of regret to every one interested in this subject. By their omission some medical officers of asylums render nugatory the labours of others, and therefore it is a pity that a legal provision for enforcing the use of these tables should not exist.

There can be no reasonable doubt that if these tables are accurately kept in the different asylums, they must, from their exactitude and uniformity, become the material from which the history of insanity in this country will be drawn.

As we have already mentioned, so many medical officers of

asylums supplement the Society's Tables with others which convey much useful information, that we think a selection of the most useful of these might be made and promulgated by the Medico-Psychological Society. From an examination of the tables of many Asylum Reports we would suggest that the following should be added to those recommended by the Society :—

- 1st. The Form of Insanity in those admitted, according to Dr. Skae's classification. See Garlands Asylum Report for 1871. Table VIII.
- 2nd. A table showing the number of previous attacks in those admitted. See Garlands Asylum Report. Table X.
- 3rd. A table showing the bodily health and condition of those admitted. See Garlands Asylum Report. Table XIII.
- 4th. A table showing the hereditary predisposition of those admitted as regards paternal or maternal transmission, and giving the degree of consanguinity of the insane relative. See majority of the Irish District Asylums.
- 5th. A table showing the form of mental disease of those remaining in the Asylum. This should show clearly the number of cases of Congenital, Epileptic, General Paralytic, Puerperal, and Senile Insanity. A somewhat similar table to this is found in the Worcester Asylum Report. Table XXI.
- 6th. A table showing the Causes of Death since the opening of the Asylum. See Prestwich Asylum Report. Table VII.
- 7th. A table showing the number of Pauper Lunatics in the county for which the Report is issued, and where placed, whether in public asylums, private asylums, workhouses, or with friends, and distinguishing between Idiots and Lunatics. See Report of the Asylum for the county of Warwick, 1870. Table XI.

The information for the 7th can be got from the returns sent to the Clerk of the Committee of Visitors from the unions.

The want of uniformity in other matters connected with Asylum Reports has often been impressed upon us. Although most of the public asylums in Great Britain give a financial statement in their Reports, yet in numerous instances it is

so vague and incomplete that some of the most important items of expenditure cannot be ascertained; and we think that anyone who has had to look into a large number of reports for some special information will agree with us that not only a general but an absolutely identical method and sequence for all statistical information would be most desirable.

We show in this table the number of Annual Asylum Reports issued, and the number which publish a financial statement:—

Asylums.	Number.	Number issuing Yearly Report.	Number giving Financial Statement.
English County	46	44	42
English City or Borough	8	6	6
Scottish Royal	7	6	5
Scottish District	10	5	5
Irish District	22	22	22

This subject, while asylums are conducted as the majority of them are at present, is one of common interest to the Medical Superintendent and to the Steward. It seems perfectly clear, for instance, that a great deal of trouble would be saved in the issuing of circulars to find out information in regard to the salaries of officers and attendants if these were given as they stood when the year's accounts closed, in each Asylum Report; and this is only one of the hundred and one things that ought to be found in a report which professes to give a statement of asylum expenditure. The total receipts of every kind, the total expenditure, both on capital and maintenance, should be clearly stated in an ordinary Debtor and Creditor form, together with the total cost of each patient per week; and the cost of each patient per week, in detail, under the various headings of expenditure.

The Annual Report should undoubtedly begin and end with the year; for besides being more business-like, this prevents the trouble of getting up some of the returns twice, viz., those required by the Commissioners in Lunacy. This is the general English and Irish practice, and it is a matter of astonishment to us that the Governing Bodies in all the Scottish Asylums have not adopted this uniform period of

closing their accounts; for, wonderful to say, out of the eleven Reports issued in Scotland, in six the medical and financial year begins and ends at some time other than the close of the year, although the returns in the Report of the Commissioners in Lunacy, which relate to those Asylums, begin and end with the year.

When the Committee of the Association of Medical Officers of Asylums and Hospitals for the Insane drew up their tables, the subject of a uniform system of Financial Statement was considered by them, but no form, except that of a general balance sheet, was recommended.

It appears to us that the time has arrived when the completion of the scheme which the Committee had in view ought to be carried out, and we venture to submit for the consideration of the members of the Medico-Psychological Society the headings of a few Books and Tables which seem to us sufficient for plainly setting forth the annual expenditure of an asylum.

Before, however, entering on the subject of the Monetary Statement, we shall shortly allude to the means of getting the information which is to be obtained in it, viz. the system of bookkeeping in use in asylums. It seems to us not only possible, but quite practicable, that a uniform system of bookkeeping might be in force in all the Public Asylums of Great Britain and Ireland, and the advantage of such a system would soon make itself clearly felt. In the event of a Medical Superintendent or a Steward getting an appointment in one asylum out of another, his knowledge of the bookkeeping would enable him with greater ease to master his work.

We might not be able to have a strictly identical set of books kept in every asylum, for one might have a farm attached to it, which would entail the keeping of a separate account, while in another a cemetery account might have to be kept. But for all practical purposes, the books which form the backbone of asylum bookkeeping, and which would furnish the facts for clearly stating the expenditure, are limited in number, and probably, with slight variations and different names, are already in use in most institutions.

We give the headings and a short description of five books, which we are of opinion would amply supply information of every kind that could be required in regard to the expenditure of an asylum. No doubt in nearly every asylum it might, for convenience sake, be found advisable to sup-

plement these with one or two others for special purposes; this, of course, would be a matter for the consideration of the bookkeeper.

Books necessary for making a Financial Statement.

I. *Day Book*.—This book consists of numerous headings, as shown. It furnishes the information required by the Commissioners in Lunacy, and also gives the expenditure, both of capital and maintenance, under the proper headings. From this book an annual financial statement, either in aggregate or detail, could be drawn up.

We show subjoined (A and B) two books which, though not necessary for asylum book-keeping, are most useful adjuncts. A is a form of want book, consisting of a description of the articles required to be sanctioned by the Committee. B a form of order, which consists of a counterfoil order and form of invoice, the latter to be returned with the goods, examined, and, if correct, signed by the steward and entered in the day-book. This invoice may be pasted to the counterfoils of an old order book, and should be numbered and indexed, and across the corner of each invoice the name of the headings under which the amounts are charged should be written, *e.g.*, “provisions.”

II. *Salaries and Wages Book*.—This book contains an account of the moneys paid to the different officials, whether weekly, monthly, or quarterly. The totals are after each periodic payment entered in the day-book, in which, by an addition of the sums under the various headings, the cost of each patient's maintenance at any time, and for any period, can be calculated.

III. *Petty Cash Book*.—This is simply an account of the minor current expenditure, which, at the time of settling, is made up and entered in the day-book under the appropriate headings.

IV. *Ledger Account with Treasurer*.—This is an account of the moneys received from the Treasurer, and the disbursements on account of the Asylum.

V. *A Debtor and Creditor Ledger*, in which the accounts with the different unions or parishes are kept.

Financial Statement.

1st Division—(a.) Showing the income from each source,

viz., receipts from the different Unions for maintenance of patients, from sale of farm and garden produce, funeral expenses, and the cost of the transfer of patients, and sums of money received from county treasurer to meet the payments on capital account.

(b.) Payments arranged according to the different headings of Book No. I., viz., provisions, clothing, salaries and wages, surgery and dispensary expenses, wine, spirits, and porter; furniture, bedding, repairs, garden and farm expenses, miscellaneous expenses, and the expenditure on capital account. These should always be made up in the form usually adopted for showing a Dr. and Cr. account.

2nd Division—Table I.—Shows the average weekly cost of each patient under the different headings of expenditure in accordance with the form required by the Commissioners in Lunacy. For the sake of convenience in calculation the daily average number of patients resident may be given in this form. In order that the real cost of the provisions should be seen, a note should be added under this heading, stating how much more this would have been had the articles supplied from the Asylum farm and garden been included. Another note should be added under garden and farm, explaining that the amount under this heading only represents the actual disbursements in money, and takes no account of the profits at all. One has merely to look at the heading, "Garden and Farm," in Appendix D of the Reports of the Commissioners in Lunacy, to see how very necessary these explanations are. The returns under this heading for 1871 vary from 3s. to 1d. in different Asylums! Under those circumstances, the sums put down under the heading "Provisions," do not at all accurately represent the actual value of the food consumed by the patients in each Asylum.

Table II.—Shows the number of patients in the Asylum at the close of the year, and the Unions to which they belong.

Table III.—Shows the contract prices of the principal articles supplied during the year.

Table IV.—A diet table, and along with this information in regard to the quantities of the ingredients used in the preparation of each dish, &c.; and also the rations allowed to attendants and servants.

Table V.—Shows the numbers and rate of payment of each of the Asylum officials separately and in detail.

(3) PETTY CASH ACCOUNT.

Date.	Receipts.	Amount.		Date.	Payments.	Amount.	
		£	s. d.			£	s. d.

(4) LEDGER ACCOUNT WITH TREASURER.

Date.	Received from Treasurer.	Amount.		Date.	Paid on account of the Asylum.	Amount.	
		£	s. d.			£	s. d.

(5) LEDGER ACCOUNT WITH UNIONS, PARISHES, &c.

Date.	Name of Patient.	Maintenance.		At per Week	Date.	Amount.	
		From	To			£	s. d.
		Time	Time				

DR.

CR.

WANT BOOK.

List of Articles required for _____ ending 187 .

(A)

No. and Quantity.	Description of Article.	For what purpose.

(B)

FORM OF ORDER.

_____ Asylum No. _____ 187 . Mr. _____	_____ Asylum No. _____ 187 . Mr. _____	No. _____ 187 . _____ Asylum. Dr. to _____
Please to supply—		Date. _____ Articles supplied or work done.
		£ _____ s. _____ d.

TABLE 1.—AVERAGE WEEKLY COST OF MAINTENANCE, MEDICINE, CLOTHING, AND CARE OF PATIENTS DURING THE YEAR.

	s.	d.
Provisions
Clothing
Salaries and Wages
Necessaries (<i>e.g.</i> , Fuel, Light, Washing, &c.)
Surgery and Dispensary
Wine, Spirits, and Porter...
Furniture, Bedding, and Repairs
Garden and Farm
Miscellaneous
Less Money received for Articles, Goods, and Produce Sold, Funeral Expenses, &c. ...		
Total Average Weekly Cost per head		

Daily Average Number of Patients resident—
 Males, ; Females, ; Total,

TABLE 2.—NUMBER OF PATIENTS IN THE ASYLUM ON THE 31st DECEMBER, AND UNIONS TO WHICH CHARGEABLE.

Males. Females. Totals.

TABLE 3.—CONTRACT PRICES OF THE PRINCIPAL ARTICLES SUPPLIED DURING THE YEAR .

Description of Articles.	For the Quarters ending			
	31st March.	30th June.	30th Sept.	31st Dec.
	s. d.	s. d.	s. d.	s. d.

TABLE 4.—ORDINARY DIET TABLE.

		BREAKFAST.				DINNER.								SUPPER.					
		oz	pt	pt	pt	oz	oz	oz	oz	oz	oz	oz	pt	pt	oz	pt	pt	oz	oz
Sunday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Monday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuesday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wednesday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thursday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Friday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Saturday	{ Men.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Women .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

EXTRA DIET (IF ANY) FOR WORKING PATIENTS.

Men.	Women.

TABLE 5.—ASYLUM STAFF AND RATE OF PAYMENT.

OFFICER.

Medical Superintendent £ per ann.

MALE ATTENDANTS AND SERVANTS.

Head Attendant £ ,,
 Ordinary Attendants £ ,,

FEMALE ATTENDANTS AND SERVANTS.

Head Attendant £ ,,
 Ordinary Attendant £ ,,

The Galvanic Current applied in the Treatment of Insanity. By
A. H. NEWTH, M.D., Sussex County Asylum.

At Dr. Williams' request I have conducted during the past six months a few experiments with the galvanic battery in mental diseases. Thinking the results of these observations will be of service to those who intend pursuing this branch of study, with his permission I take the liberty of recording them.

We have used Dr. Emil Stöhrer's battery, which is, I believe, the simplest, and being moderate in price, and easily manageable, is preferable to others more costly and more elaborate. It consists of a compact case and frame, the latter supporting forty pairs of zinc and carbon plates, and a trough containing an equal number of glass cells filled with dilute sulphuric acid; this is easily raised to put the battery in action, or lowered when not required. Running along the bar supporting the plates is a small piece of apparatus called the commutator, to this the wires are attached, and being also in contact with the plates, movement either to the right or left increases or decreases the amount of electricity conveyed by the wires. An ebony handle at the top determines the direction of the current. So much for the instrument. It would certainly bear improving, especially with reference to the electrodes, which are clumsy, painful and uncertain, but on the whole its simplicity recommends it.

In my observations I have made no attempt to estimate even approximately the amount of electricity each case received. The galvanometers in common use are delicate and expensive, moreover the conductivity of the skin varies in almost every individual case. Some persons are peculiarly susceptible, while others hardly feel the full power of the battery. That this is greatly due to the state of the skin may be affirmed by having either electrode dipping in salted water, and the other applied to some distant organ, when the effects will be strongly felt, even by those who hardly felt them before.

The state of the weather, as well as the condition of the plates, has considerable influence on the amount of electricity generated. A damp, cold atmosphere, and a coated state of the plates both weaken the action of the battery. Hence, though I have given the average number

of cells used in each case, this is but a rough and uncertain estimate of the amount of electricity each received. It is always well to begin with a low power first; we thus gain the patient's confidence, and I believe I have seen more good result from a gentle application than a powerful one. In order to test if the patient is receiving a sufficient quantity to be of any use, it is only necessary to reverse the current; if he starts it is of sufficient strength.

In some cases the hands or feet were placed in a basin of acidulated water with one of the electrodes dipping in it, the other being applied to the head or spine; this increased the receptivity, and by having both hands or feet in the water, it was possible to send a current up or down both extremities at the same time.

CASE 1. *Melancholia*.—J. L. B., male, 51, single, soldier.

History.—Had an attack of brain fever when about 18 years old. Enlisted in the army at the age of 30 years, and served in Malta and India. Conduct during service good, and he was considered temperate and steady. About two years ago he had an attack of sunstroke, while in India, and, after being in the hospital there for a short time, was discharged as unfit for service. On admission he was in a very low melancholic state, with greatly depressed bodily powers; "unable to comprehend simple questions; acts without purpose; puts his fingers in the fire; throws his clothes out of the window; runs about in an excited state almost nude." Spirits very much depressed; does not sleep much, refuses his food, and is extremely restless.

Treatment—Stimulants and nourishment were given at frequent intervals, but the restlessness continued; he wanted constant watching to prevent him injuring himself, and required to be fed and dressed. It seemed as though nothing would be of use to stay his downward course, and the electric treatment was given with but small hopes of success. The positive pole was applied to the side of his head, over the temporal muscle, and the negative was placed at the inner side of the foot at first, afterwards the hand. He resisted violently at first, but willingly submitted afterwards. The effects of the current were very evident, by much flushing of the face, and congestion of the superficial veins. The pulse was increased after each application, on an average about six beats, but became much steadier. The mean number of cells in use was 32.

The result was most marvellous, and satisfactorily attributable to the treatment. Each application was followed by decided improvement, so that in a few days he was conscious, and able to feed himself; in less than a month the treatment was discontinued. Total number of sittings, 12. The patient himself fully appreciated the benefit he had received, and warmly expressed his thanks.

CASE 2. *Melancholia*.—E. W., female, aged 50, married.

History.—Duration of insanity, about 17 months; had a previous attack 16 years before, and then resided in an asylum for 18 months. On admission she was suffering from melancholia, with excitement. Is very violent, constantly talking nonsense, and falls down in a praying attitude to strangers, begging them to have mercy on her. Frequently bursts into tears, throws herself on the ground violently, and is very sleepless. Bodily health impoverished.

Treatment.—Various remedies had been given her, such as chloral, opium, ergot, morphia, bromides, Indian hemp, &c. Cold and warm douches, wet sheet packing, &c., were also used with apparent success, but she began to evince a tendency to dementia and obesity. She has had 14 applications of electricity, the negative pole being placed to the nape of the neck, and the positive held in the hand. On an average, 20 cells were used.

The result was to increase the force and frequency of the pulse about eight beats. Her mental health improved so that she has been discharged relieved.

CASE 3. *Melancholia*.—A. A., female, 26, single, farmer's daughter.

History.—Has been insane about three months; cause unknown. Bodily health, fair. Mentally, she seems in a state of depression, with a most determined propensity to commit suicide by strangulation.

Treatment.—Chloral in increasing doses was given to produce sleep, and she had a Turkish bath once a week, but without doing any good. She broke out into a state of great excitement with violence, a fortnight after admission, and endeavoured in every way to destroy herself. This endeavour was frustrated by constant watchfulness, nurses being told off to attend her night and day, with orders never to leave her side for an instant. Wet-sheet packing, subcutaneous morphia, ergot, and various other remedies were tried; but, with the exception of some slight improvement from the packing, she seemed little better. Electricity was applied 26 times, positive pole to head negative to hand. At first, she could only bear a very few cells, six or eight, and it seemed to make her head ache; however, she was afterwards able to bear more.

The result has been very satisfactory. She appears much brighter, converses rationally; employs herself skilfully in needlework; has no desire for self-destruction. Both she and her friends acknowledge the benefit that has resulted from the treatment, and she has since been discharged, recovered.

CASE 4. *Melancholia*.—J. W., male, 45 years of age, married.

History.—No cause can be assigned for his present attack, but it is believed he has been insane before. On admission he was in low bodily health, with a weak heart and rapid pulse; sleepless. Mentally, he seemed intensely melancholic, but with a wild appearance and extremely restless manner; could not comprehend questions, or answered in a rambling manner.

Treatment.—Nothing was given him but purgatives and stimulants; for a week after admission his restlessness rather increased, and the case was thought to be hopeless. Electricity was then tried; he resisted it furiously, but it was persevered with, even though sometimes he required restraining by six people. He had 20 applications, average 25 cells; positive pole to head and negative to hand.

Result.—The pulse at first was very rapid (140), but it gradually became slower and fuller at each application until it obtained a normal state. In each case it was slightly increased by the electricity. Coincident with the improvement in the state of the pulse, his mental and bodily powers improved; but symptoms of cerebral disorganisation have shown themselves, and consequently the treatment has been stopped.

CASE 5. *Acute Mania.*—L. D., female, aged 36, married.

History.—Duration of insanity, five months. *Bodily* health on admission, fair. *Mentally* in a state of acute mania, with delusions, it was said, on religious subjects, but her mutterings were unintelligible. Spirits were exalted; she was dangerous to others, and sleepless.

Treatment.—The furious excitement was calmed by conium, but she seemed to lapse into a state of dementia; became dirty in her habits, requiring to be fed and dressed, and observed an obstinate silence. *Electricity* was applied, first with the electrode to the head, and with the anelectrode to the hand, but as this reduced the frequency of the pulse, and did not make much change, the current was reversed.

Result.—After this she improved somewhat, began to converse rationally; behaves better now, and dresses and feeds herself. Her husband notices a great improvement in her. She has lately been working well in the laundry, and is convalescent. She had 16 sittings.

CASE 6. *Melancholia.*—E. F., female, aged 28, married.

History.—Duration of insanity, about seven months; supposed to have been caused by pregnancy and a hereditary predisposition. She is in a very depressed state, and is also much confused mentally; bodily health fair. After admission she seemed to brighten up a bit, but soon showed a tendency towards dementia. After the electricity had been applied the pulse increased; she could only bear twelve to twenty cells. Positive pole to head, and negative to hand. This order was reversed afterwards for a time. She had twenty applications.

Result.—The primary effect was to throw her into a perspiration. Her mental health has improved, and she is now working steadily.

CASE 7. *Melancholia.*—J. L., male, 23 years of age, single, groom.

History.—Insanity of nine months' duration, cause of which is unknown. Is in a peculiarly terrified state; fears injury from almost any object; thinks the trees or table will fall on him. His spirits are greatly depressed, and he says "he is punished in this way because he has written the Holy Name backwards." Has attempted suicide by drowning. Health fair, but has a cold and clammy skin.

Treatment.—Cold douches were chiefly used, but failed to rouse him from his depression. Electricity was successful to a certain extent; but it had to be discontinued at the end of a month, as ulcers broke out on his feet, and it has not since been resumed; the mental health of the patient has improved.

CASE 8. *Melancholia.*—S. F., female, aged 32 years, married.

History.—Duration of insanity, nine months; supposed to have been caused by loss of child and hereditary taint. The first symptoms observed were depression of spirits. Expresses great fear of being burnt, and has tried to drown herself. Has attempted suicide several times since she has been in the asylum, once or twice by strangulation. Bodily health fair.

Treatment.—Chloral, opium, and cold douches were tried without avail. The electric treatment was persevered in for three months; but, though she somewhat improved at the end of that time, it was only slightly. She seems to be lapsing into a state of dementia. She had altogether 22 applications, average number of cells, 22. Positive pole to head, negative to hand, afterwards for a time the reverse; in either case, but especially the latter, the result was a decrease in the frequency of the pulse.

CASE 9. *Dementia.*—L. T., female, aged 30, servant.

History.—Duration of insanity, about three years; has been in this asylum before. Her previous attack was attributed to "brain and typhus fever," when about 16 years of age. She is generally in a kind of hysterico-cataleptic state, showing no sign of animation, but just doing what is told her, and remaining in the position in which she is placed.

Treatment.—Various remedies have from time to time been used, but with no result. Electricity seemed to increase the strength of the pulse, which is usually almost imperceptible, and very rapid; but the mental symptoms were unimproved. In this case the current was applied 30 times; average number of cells, 16. Positive pole was at first applied to head or neck, and negative to hand, but as this had no effect the reverse was tried, and then the interrupted current, but without any reliable benefit, though sometimes a slight improvement was thought to have taken place.

CASE 10. *Melancholia.*—F. U., female, domestic servant, aged 30.

History.—Insanity has been observed in her for nearly four years. It is of a religious character, and appears to have been caused by disappointment in love, while an hereditary tendency predisposed to it. She will stand for a long while in a kind of trance, gazing at some unseen object; then will suddenly assume an attitude of prayer, and after muttering some words in a mechanical way, will rise and resume her former state. She shows no religious ecstasy; in fact, her manner is very lost and quiet. She answers questions with extreme difficulty, and as curtly as possible, but civilly. Says she has been conversing with Christ, and believes the medical officer is He. She is a well-made,

delicately-formed woman, with light auburn hair and fair complexion. Is tolerably stout, and appears in good health.

Treatment.—An alternate warm and cold douche were given night and morning for about a month, but they had no effect. *Electricity* was applied, the positive electrode being placed on the right or left temple, and the negative in the opposite hand.

Result.—With few exceptions the result was to increase the pulse considerably; this was partly due to the effects causing pain and some excitement, for at first and on some other occasions the beats were as many as 120 in the minute. Sometimes the pulse decreased in frequency. At the end of each application she used to fold her hands in prayer and say, "For what we have received," &c. She improved at first under its use, so much so as to be able to employ herself; but it ceased to produce any further good after about three months' application. She had 33 sittings.

Case 11. *Mania.*—E. L. B., aged 23, female domestic servant.

History.—Insanity first made its appearance in March, 1872, and was attributed to the death of her sister in a lunatic asylum. On admission she was in a state of mania, verging on dementia. Was subject to periodical attacks of excitement and destructiveness, when she made use of disgusting language, and was very quarrelsome. Occasionally laughed heartily without any reason, or burst into pretended tears. Was sleepless and dirty in her habits at night, with a tendency to wander about the dormitory. She is a stout, rather coarse made girl, but with some suspicions of heart disease.

Treatment.—*Chloral*, in ten to twenty grain doses, had no effect; in fact, it did not seem to suit her at all; the restlessness and talkativeness continued unabated, though the drug was tried for ten days. *Digitalis* was next administered, but she was reported as being more noisy than ever afterwards. *Opium* was added to the mixture, but there was still no improvement, even from increased doses. Then shower-baths were employed, and subcutaneous morphia injected, but without result. *Electricity* was tried; at first little effect was perceived, except decrease in frequency of pulse. As she was excited when first placed under its influence, and required to be restrained by four nurses, the decrease might have been the result of becoming calmer. Pulse before application 80, after 64. Afterwards it was increased both in fulness, steadiness, and frequency; on one or two occasions it was over 100 after the application, but generally the increase was only two to four beats. The current was passed from the head to the extremities, varying the seat of the electrode; sometimes it was placed on the left temple, sometimes on the right, and the other electrode in the opposite hand. The number of cells was from 20 to 24; occasionally this number had to be reduced, as there was a tendency to cause charring of the skin.

Result.—Four days after its first application she is reported as being "much improved mentally." This improvement continued

steadily to progress, and though occasionally subject to relapses, these are not nearly so violent nor so frequent now. In every respect she has improved considerably, *and is now convalescent*. The treatment was discontinued after four months. Total number of applications, 35.

CASE 12 *Locomotor Ataxia*.—Male, 39, widower, whitesmith.

History.—Has been insane about six months, caused, it is believed, by excessive smoking and drinking. He is an intelligent, pleasant looking man, with somewhat irregular features, very thin and wasted. Had a paralytic seizure about $2\frac{1}{2}$ years ago, and has never been able to walk since; movements choreic. Mentally he is not wholly conscious, and refuses to answer questions; memory deficient. Spirits much excited.

Treatment.—Not much beyond extra dietary, and nux vomica and steel. The electric treatment was continued for 12 applications; average 22 cells. Positive pole to back of neck, and negative to salted water, in which his feet were placed.

Result.—It had considerable effect on him, so that he could hardly bear it. The pulse was increased about 8 beats. He has decidedly improved, and can now walk about a little, but has to look at his feet; if he does not, he falls.

CASE 13. *Melancholia*.—T. W., 53, widower, printer.

History.—Has been several times insane before; the present attack has lasted about two months. He answered questions in a childish way, but correctly; under the delusion that Day and Martin's belonged to him; was very mischievous. Bodily health fair. Became more depressed, would frequently fall down in an attitude of prayer, and had a painfully anxious expression, though it was wanting in animation, and seemed of a low type.

Treatment.—Symptoms of exhaustion showed themselves after a few applications of the electricity (10 cells). The positive pole was applied to neck and negative to hand or foot. The pulse was extremely rapid and weak, but the current, though it caused some amount of disturbance, seemed to strengthen the circulation. However, he died shortly after; but it can hardly be supposed that the electricity in any way caused this untoward result.

CASE 14. *Progressive Paralysis*.—G. R., male, 52, agricultural labourer, married.

History.—Duration of insanity unknown, but has been two months in the Asylum. Was found wandering about the country, and said he had been turned out of his home. Is a dull, quiet looking man with very low type of features, and indifferent bodily health. Answers questions childishly, but is not wholly conscious, and there is great failure of memory. Spirits neither exalted nor depressed, no delusions of grandeur; in fact he seemed to be a case of dementia.

Treatment.—Had eight applications of electricity, with thirty cells.

The pulse was increased after each about four beats, and he seemed better for a time. But symptoms of Progressive Paralysis set in, and it was considered unadvisable to go on with the treatment. He died two months after.

CASE 15. *Mania*.—E. L. G., female, 35, married.

History.—Has been insane about three months; cause unknown. She is in feeble bodily health, and has paralysis of the right arm, the temperature of which is very much lowered. Sometimes complains of temporal and supraorbital pain in the left side of head. Suffers from "fits," the nature of which is uncertain. Mentally she is childish in her manner, and has a want of power to give expression to her thoughts, though she seems clearly to understand questions. Sometimes only replies, "I told you so," and other meaningless sentences. She is rather excited, and her spirits are somewhat depressed.

Treatment—The electricity has been applied four times (12 cells), positive to left side of head, and negative to right hand. The pulse is very rapid, but it gained in strength under the current. The temperature of the affected side is much higher now (her extreme restlessness will not allow of a correct thermometric observation), and mentally there is a slight but marked improvement.*

In conclusion I would remark, that in the use of electricity we have a wide field for observation, and one that requires persevering industry and close attention. But it would be as well to employ it without regard to any preconceived theory, for till the nature of nerve element and its electrical condition is better understood, and how it is that galvanism can affect it, we must be content to trust to obtaining practical results from a series of, to a certain extent, indiscriminate applications.

I think, however, the above results show that in those cases where there seems to be a want of tone in the nervous system, the continuous electric current has in the majority of cases a most marked beneficial effect. I believe that an almost unerring guide as to whether, after a few applications, it will do good, is to notice the state of the pulse; if this increase in force and slightly in frequency, there is a great chance of the treatment being successful.

* The above cases are also recorded in the Appendix to the Sussex County Asylum Report.

The Asylums of Paris, in 1872. By HENRY SUTHERLAND, M.D.
Oxon.

The three establishments which will most repay the trouble of a visit, are the Bicêtre, the Salpêtrière, and Charenton. The Bicêtre is for male, the Salpêtrière for female paupers, and Charenton is a large private asylum for both sexes.

The Bicêtre is a large building on the Boulevard de l'Hôpital, close to the Jardin des Plantes, and is really a large workhouse infirmary for old men. It contained 2000 inmates before the war, half this number being insane, but during the siege 700 were removed into Paris, so that now 300 lunatics only are left. Amongst the inhabitants there are a great many blind, deaf, dumb, and lame old paupers.

The buildings are arranged in large scattered blocks, to each of which is attached a roomy airing court. There are at present six wards inhabited by lunatics. The asylum was not injured by the bombardment, two shells only having fallen within its walls, but both attendants and patients suffered much from privations during the siege, being obliged to live on the cats of the establishment, who were fortunately very numerous at the time.

Two wards were devoted to acute cases, and restraint appeared to be practised rather freely. We noticed one man in a tight straight jacket, tied down to a seat in the airing-court. Another, a case of general paralysis, was tied into an arm-chair out of doors, and was also confined in a straight jacket. This man had several typical delusions of grandeur. He declared that he was confined in the arm-chair by the Prussians, and that Bismark had caused all his troubles. He said he had served in every regiment in the army, had been through all the war, and had been shot dead several times in battle. He was possessed of great wealth, and everything on the face of the earth belonged to him. His insanity is said to have been caused by the war. Another case of monomania was interesting, as a contrast to the general paralytic. The patient could speak several languages, and addressed us in English, German, and French. He was just finishing his dinner, and he begged us for charity's sake to give him two sous to buy some tobacco with. Being presented with a penny, he immediately swallowed it, and then bolted a large mouthful of bread to force it down, as he said. He also had delusions of wealth, but no other symptoms of general para-

lysis. As we were leaving the airing-court, he asked us to come and look at his riches, which were spread out on a seat. These consisted of several pieces of broken glass, some coloured beads, some metal buttons, and other similar trash.

There is a good school in the asylum, well supplied with books, in which the more quiet patients are taught reading, arithmetic, and geography. There was a harmonium in the room, and we were told that they had very good performances of vocal music on three evenings in the week. There being no female patients, there was no dancing in the establishment.

We next saw the idiot-ward, in which there were about a dozen boys, aged from five upwards. One of these, an epileptic, had a large blood tumour on the head from repeatedly falling upon the same part of the skull. He had a very well-made leather turban on, but this did not seem to have protected him.

There was one large circular ward specially set apart for criminal lunatics. It was arranged as follows:—The centre of the circle formed a small round dining-hall for the attendants; outside that was a broad passage, completely encircling the dining-hall. Outside this passage were four large day-rooms, each of them forming a quarter of a circle; and outside the four day-rooms again were twenty-four single sleeping rooms, all opening into the day-rooms, six to each. Outside some of the sleeping-rooms were attendants' bedrooms, and, beyond those again, a large circular airing-court. Between the passage and the four day-rooms were some strong iron bars, and behind these bars the criminals were confined whenever they became dangerous or excited. There were bars between the day-rooms and sleeping-rooms, and also between the sleeping-rooms and the attendants' bedrooms; so that a single attendant, walking round and round the passage, could keep the twenty-four lunatics under his eye, without their being able to get at him through the bars, and the attendants could also watch the patients from their own rooms during the night. It was altogether an excellent arrangement for dangerous criminal patients.

The baths were also constructed in such a manner that patients when once placed in them could not possibly effect an escape; but they would scarcely have suited our present notions of non-restraint. Over each bath, when the patient was immersed, there was placed a heavy metal lid, which extended about half way down the bath from the head, but left the feet and legs exposed. At the upper end of the lid there

was a small oval notch, through which the patient's head was thrust; and when the lid was on the bath he was helpless, as he could not get out, nor could he get his arms above the lid to resist. The lid was secured at the sides by strong metal clamps.

The Salpêtrière is situated in the Boulevard de l'Hôpital, near the Pont d'Austerlitz, and is the largest hospital in Paris. It contains 5,300 beds for old and infirm women, many of whom are blind, and amongst them are 1,500 insane patients. To obtain the privileges of this charity, a woman must have lived at least two years in Paris, and must either be suffering from some incurable disorder, or must be upwards of seventy years old. Those inmates who are able to work are employed in washing and repairing the linen of the institution and of the other hospitals in Paris.

The insane patients are separated in different wards according to the character of their malady. In one ward we saw about a dozen little idiot girls, seated, in a row together; they were sitting in low arm-chairs, each of which had a bar passing across in front to prevent their leaving their seats. Even in this low intellectual condition one could detect the national character. The children were much more talkative and demonstrative than English idiots usually are; they chatted gibberish incessantly amongst themselves, attitudinizing like their more sane fellow-countrymen, and appearing much flattered at being taken notice of by visitors.

In another ward we saw nine old women, who were said to be suffering from general paralysis. Only two patients, however, out of the nine appeared to be young enough to be subjects of general paralysis of the insane, and these two had unequal pupils. The remaining seven were some of them suffering from hemiplegia, but appeared much too old to be the subjects of true general paralysis.

Charenton is an immense private asylum, or "*maison de santé*," situate about six miles south-east of Paris, at the junction of the Marne with the Seine, and to the south of the Bois de Vincennes.

Maisons de santé are used, however, for other purposes besides lunatic asylums in France; they are looked upon as a necessity by the Parisians for those who can afford to pay for medical treatment and repose during convalescence from fevers, or after operations. We cannot help thinking that something of this kind is very much required in England. Prisoners of the upper classes are sometimes permitted to

reside in them when condemned to short periods of confinement. This is a custom, however, that we should not care to see introduced into this country.

The asylum at Charenton is well situated at the top of a hill, and is approached by winding paths. The building is quadrangular in shape, and the four sides of the square are formed by arcades, supported by light Corinthian columns, which produce a very good effect. A chapel in the same style of architecture faces the entrance. The patients appeared to be chiefly military and professional men, of the middle and upper classes. We could not help noticing that even in an asylum in France, the dinner was composed of several courses—a custom which we have always found to be universal in every grade of French society. Being Friday, it was a fast-day; but the dinner was exceedingly good, consisting of soup, maccaroni, stewed prunes, gateaux, fruits, and other dishes; and some capital wine, which the patients seemed to thoroughly appreciate.

There were about 600 or 700 patients in the establishment.

We were informed that there was a *soirée* every Thursday and Sunday evening, at which the patients indulged in music, dancing, and billiards.

We noticed one curious case there of congenital imbecility. The patient was a man, aged 40, who had all the appearance of a Jew, although he was not of that persuasion; he had a very receding forehead, a hooked nose, long, black curly hair, and a hump back. He was a great master baker, it was said, and had many delusions of pride. He thought that the whole asylum belonged to him, and he insisted on our asking his permission to pass, before he allowed us to enter his ward. He was very particular about his personal appearance, and always carried a comb about with him, with which he perpetually combed his hair and his beard.

Another case struck us as being a very remarkable one. A middle-aged man suffered from epilepsy, and had a great number of fits every day. His mental condition was that of partial dementia, and he addressed us in incoherent language. But the extraordinary part of the case consisted in his inability to keep his arms at rest when he talked, these limbs being at that time affected with chronic spasms, exactly resembling the convulsions of epilepsy; although there was no other evidence of his being in a fit at the time. These

muscular contractions ceased the moment he left off talking. The man appeared to be suffering from the spasmodic tic, or tic non-doloureux of Trousseau, when he addressed you; and also from epilepsy at other times.

Another case of exaggerated delusions of persecution rather took our fancy. The patient was an intelligent, robust-looking man, who could speak English very fairly. He informed us that his relatives had incarcerated him unjustly, in order to obtain his money; and that he was kept in the asylum under the perpetual surveillance of the secret police of Paris. He believed that every patient was a policeman, in disguise; and told us that the people whom we saw around us were not the only spies who watched him, as the air itself was peopled with police, who filled his bedroom at night, and kept their eyes continually fixed upon him. He told us he was acquainted with a great many distinguished royal personages in London, and begged us to present his compliments to them, on our return.

An interesting case of general paralysis was shown to us in a ward specially devoted to those in the last stages of that disease. Nearly all these patients were speechless, but one of them, a Polish colonel, still cherished the delusions that he had been made a general for his services in the army, that he commanded millions of men, and that he should yet upset kingdoms before he died.

In another ward was a curious case of mania, accompanied by hallucinations. The patient was addicted to masturbation, and the paroxysms of maniacal excitement were much increased, and the hallucinations became much more vivid at the time he committed the act. He occasionally entered into long discussions with imaginary persons around his bed, in a loud tone of voice. Sometimes he was seized with a wild panic of fear that somebody was about to attack him, and at these periods he became so violent that he was obliged to be placed in restraint, to prevent his injuring himself or others. He usually inhabited a "*cellule*," which is equivalent to a single room in our asylums.

These cellules were worthy of a passing notice. The best of them consisted of two rooms, placed end to end, and separated from one another by iron bars. There was a bed in each room, one for the attendant and the other for the patient, and they were so placed that the head of the patient's bed was next to the foot of the attendant's, and the latter being slightly raised, the attendant could, as long as he remained

awake, watch the patient, almost unobserved, and without any danger of an attack being made upon him through the bars. We cannot help thinking that something of this kind might be used in our private asylums in England. We have always pitied the attendants who are forced to sleep in the same room with patients of uncertain character. An attack in broad daylight is dangerous enough, but it must be ten times more horrible in the dead of the night in a dark room. Surely something might be devised made of ornamental iron-work, or of strong wire, which, although of light and elegant appearance, might ensure the safety of that never-to-be-sufficiently praised class of beings called asylum attendants.

NOTE.—Of the three great asylums of Paris—the Bicêtre, Charenton, and the Salpêtrière—the first of these can, and the two last cannot, be visited without an order from the “*Administration générale de l’assistance publique.*” This order is to be obtained at the office of Monsieur le Directeur-Général Blondel, 3, Avenue Victoria, close to the Hôtel de Ville, and may be applied for on the morning it is required, as the office is on the way to the Salpêtrière. On the back of the order is a complete list of the other hospitals in Paris.

The Salpêtrière is situated within the fortifications of Paris; the Bicêtre and Charenton are outside.

The visitor might possibly see all three in one day by driving first to the Salpêtrière, next to the Bicêtre, and then eastwards across country to Charenton, but he is recommended to see the Bicêtre with its fort on one afternoon, and the Salpêtrière and Charenton the next day.

The omnibus to the Bicêtre is marked “Maison Blanche,” and starts opposite the Banque de France, near the church of St. Eustace, and stops within a short distance of the fort and the asylum. The omnibus to the Salpêtrière starts from the Pantheon, behind the Quartier Latin. Charenton can be reached by omnibus, starting from the Boulevard Beaumarchais, or by rail, from the Paris and Lyons station.

The visitor should endeavour to arrive at Charenton at 4.30 p.m., as at that hour the medical officer makes his afternoon visit to the wards. The morning visit at all the asylums is usually at 8.30.

A letter of introduction to M. Falret, who is a member of the Medico-Psychological Association of Great Britain, will greatly assist the visitor in obtaining admission to the asylums. M. Falret is at home on Tuesday mornings only at 114, Rue du Bac.

PART II.—REVIEWS.

Darwin on the Expression of the Emotions in Man and Animals.

By T. CLAYE SHAW, M.D.

Mr. Darwin has called his book by the title of "The Expression of the Emotions in Man and Animals," but he has gone into the mechanism of other conditions besides "Emotions." "Affirmation" and "Negation," "Reflection," "Meditation," and "Helplessness," are not necessarily associated with "Feeling," and may more conveniently be called *states of mind* than emotions. If this had been better recognised it would have prevented the making of such an "antithesis" as Indignation on the one hand and Helplessness on the other. An *indignant* man is no doubt in an emotional condition, but a man who shrugs his shoulders in sheer *helplessness* may be, and generally is, simply devoid of all emotion whatever. But then to make and apply this distinction between "emotions" and other states of mind which are unattended with emotion, is to deprive Mr. Darwin of one very important factor in his attempts to explain the origin of "expression." If Mr. Darwin had been as explicit in defining what at the end of the book he confesses himself to have a great difficulty in, viz., "the proper application of the terms will, consciousness, and intention," as he has been in assuming as proved what others have "much difficulty" in believing to have been ever proved, he might have met the reading public more on common ground. In the very last page of the book it is said "we have seen that the study of the theory of expression confirms to a certain limited extent the conclusion that man is derived from some lower animal form; but as far as my judgment serves, such confirmation was hardly needed," and, again, scattered through the pages are phrases to remind us of our forefathers, such are ". . . . Never noticed a snarling action in our nearest allies, the monkeys, in the Zoological Gardens,"—"We may readily believe from our affinity to the anthropomorphous apes that our male semi-human progenitors," and so on; so that unless we are willing to concede so much to Mr. Darwin it is useless hoping to agree with him. Those only who are "evolutionists," that is, believers in the derivation of species from other and lower forms, can accept many of the theories brought forward to

explain various expressions, whilst those who view man and all other animals as independent creations, or who maintain, with Sir C. Bell, that many of the facial muscles are a special provision for expression, though they expose themselves to the taunt that "by this doctrine anything and everything can be equally well explained," yet may take comfort to themselves that the imagination and flights of fancy necessary to their faith are as nothing to the immeasurable depths and yawning chasms bridged over by the "evolutionist," who can at one moment hang the most weighty conclusion on the slenderest thread, and at another, by free use of the potentials "may" and "might," interpolate a missing link, as yet unseen, but presumably certain. It is a great comfort to readers that Mr. Darwin has taken for granted the descent from an anthropoid ape, as they are by this assumption saved from a long, and perhaps fruitless, discussion; but it by no means follows that because men and monkeys move the same facial muscles in laughter, *therefore* they are descended from a common progenitor. It would be just as good an argument that because elephants weep, whilst none of the monkeys in the Zoological Gardens do so, *therefore* we are descended from a common ancestor with elephants. It is as well to start with a clear idea of Mr. Darwin's position. His basis is, that expression is *an accident* as it were; that certain actions, although they reveal the state of the mind, were not at first either intended or expected to do so; that expression is, therefore, something superadded to the original function. Accordingly, he cannot believe in any special muscle of expression, and he expects that by the help of certain laws which he lays down, and perhaps by some others not as yet enunciated, "some able physiologist" will explain those whose object and origin are still in the dark. It is admitted that expressions of the emotions are serviceable (and will, therefore, be retained and developed), that they are even now innate, so that we have an instinctive power of recognising them, but we are asked to believe that "*at the first* the movements were of some direct use, or the indirect effect of the excited state of the sensorium."

This we notice, that facial expression only occurs after a certain development of brain, and in combination with a loose set of facial muscles; that, however, other movements expressive of emotion may be guessed in animals which have no facial expression, such as in birds ruffling their feathers from fright, or the ruffling of a hen's feathers, or a contented

chuckle, &c. ; and in these expressive movements we can see a purpose for a definite end, affording an argument that if passions or emotions can be shown to excite in animals *purposeful* movements which are at the same time expressive, we may *à priori* state the same to be the case with ourselves, regarding the muscles of the face. This, undoubtedly, presupposes that certain muscular movements and emotions depend on the growth and development of a certain part of the brain, for all emotions are not produced at birth—witness the sexual element of love. In idiots, where the *potentiality* of certain emotions does not exist, it is impossible by any means to evoke the corresponding expressions. We take, then, attitudes (including those of the face) assumed under various mental emotions to be the direct product of a *certain bodily organization*, allowing that *some* that we recognise as expressions have been artificially adopted for a definite (but now lost) purpose, such, for instance, as the peculiar expression of some savages who show they are pleased by rubbing their bellies or hands. The origin of expression would be in this wise—a certain feeling of joy or grief, of pleasure or pain, is experienced, and muscular movements follow, calculated to promote the one or relieve the other ; whenever a similar sensation or emotion recurs there will be a tendency to the repetition of the same action, and at length we come to connect a certain *set* of features with a definite emotion, *i.e.*, we obtain an *expression of the emotion*. Now comes in the element of *Sympathy*, which serves as the glass in which we see ourselves (and which has been so ignored by Mr. Darwin, because, presumably, there is in it that *je ne sais quoi* so repulsive to evolutionists and teleology) which means, as Mr. Bain says, “The tendency of one individual to fall in with the emotional or active states of others, these states being made known through a certain medium of expression.” To rejoice with them that rejoice, and weep with them that weep, to conform to the society that we live among, &c., are a part of the human constitution, capable of being generalised under one commanding principle—“sympathy appeals to our feelings as imitation does to our actions.” The power of sympathy, that is, the re-presentation by an individual of the state of mind and expression existing in another, is illustrated by the popular theory that a man and his wife become more like each other as they grow older. Certain it is that children, however different from their parents they may be in colour of hair, eyes, &c., do, by sympathy or association, assume the

same type or expression of face. The child of a dim ecclesiastic is always depressed, and "a merry heart maketh a cheerful countenance." Who drives fat oxen must himself be fat. "Sympathy," says Burke, "is a sort of substitution by which we are put into the place of another man, and affected in many respects as he is affected. It may turn on either pain or pleasure, and is the principle by which poetry, painting, and other affecting arts transfuse their passions from one breast to another." After all, "sympathy" is merely sensori-motor action.

The necessity of Mr. Darwin's argument forces him to assume that the demand precedes the supply, that emotion or feeling precedes movement, that before a child cries there must be something to cry for, something rendering it necessary for such and such muscular combinations to occur; that before a dog uncovers his teeth and erects his tail when angry, and finally transmits these movements as heirlooms to his descendants, leaving no room for an "original" dog to devise better means, there must have been the demand for this combination, or being the best possible one for accomplishing the end; and though he has to acknowledge that many of these movements are "independent of will, and independent of habit—due solely to the indirect action of the nervous system," yet he gives as little award as possible to this which most persons look on as the great factor of all expressive movements, and relies mainly upon its association with other "principles" which he lays down. What these principles are we will proceed to examine.

However Mr. Darwin may ignore the fact, yet several eminent physiologists have assigned to the emotions a definite connection with certain parts of the brain; thus Dr. Todd referred their seat to "the posterior and superior part of the mesocephale." He says, "It is plain that that part of the brain which is influenced by emotion must be so connected that the convolutions may affect it, or be affected by it; that it may be readily acted on by the nerves of pure sense; that it may influence the spinal cord and the motor nerves of the face, when the ordinary channels of voluntary action have been stopped. The working of the intellect may act on the seat of emotion through the same channel (the optic thalamus) and an excitement of this part produce movement by its influence on the spinal cord, through the olivary columns." Dr. Laycock regards "the medulla oblongata as at least the seat of the corporeal feeling of pleasure and pain," and others

might be quoted. It is certain that these ultimate facts in the constitution of the nervous system, and other anatomical facts that we recognise, such as that under one set of emotions the flexors contract, whilst the extensors do so under another, will explain on easily understood principles, many (if not all) of the expressive movements, and it says a great deal for Mr. Darwin's "laws," that though he does not seem to have been aware of the researches of modern physiologists in this direction, yet that some of the principles he lays down do strikingly coincide with what would be expected as the functions of a certain ultimate structure and arrangement. Thus the proximity of the nerve nuclei to each other in the medulla oblongata will explain the radiation of nerve force from one to the other, and thence over all the muscles of the body, when an influence of an excessive quantity or kind is brought to bear on the brain, be it an *imaginary* joy or fear, or a feeling of horror or delight, aroused through one of the external senses, or simply an acute pain manifested through the nerves of common sensation. Hence the expression of very great joy or sorrow may be identical, as seen in the alternations of hysterical weeping and laughter in those under great affliction, though no one would for a moment suppose that this condition implied a pleased frame of mind. Let, however, a feeling *less intense* have been excited in connection with one of the sensory nerves—sight, for instance—so long as the channels are sufficient, if the term may be used, for carrying the excitement, the movements resulting are chiefly in relation with the sense in question, and though by association and habit other muscles may be involved, we are in a better position for seeing how this must or may be so from recognising what has been demonstrated concerning the relations and interconnections of the nuclei and ganglia.

Arguing backwards, an "expression" may often be seen to pass over the face of a person when it is quite clear that no emotion has been present; for instance, watch a person pressing a hard substance with the teeth—it is not uncommon to see a decided expression of grief from the action of the corrugator supercili. Why, then, if the corrugator supercili is the "grief muscle," does not the feeling occur? Because, on *true principles of physiology*, the emotion has not been caused; the nuclei in the neighbourhood of the fourth ventricle and the muscles connected with them have been aroused, but the influence has not spread upwards

into consciousness. It is, indeed, doubtful whether an emotion can ever be recalled, as some assert it can, by simply placing the features in a certain combination. It would seem that, as in sympathy, the impression must first be made on some one of the spinal sense apparatus, as when seeing an actor on the stage portray some emotion strongly and vividly we unconsciously follow him in the expression; yet even in this case it is curious how, though many will—be it from sympathy or from any law of association or otherwise—assume the kindred expression, still the *idea* accompanying the emotion (and there is always an *intellectual* accompanying the *emotional* element) will in most be different, judging, at least, from the similes used by different persons in comparing their feelings. Hence we can understand how there must be one form of manifestation for all varieties of the same feeling, and, on the principle that nerve-manifestations follow accustomed tracks, pleasing feelings which are associated with an expansive or receptive condition of sentient surfaces will, when acting downwards, display themselves by an expansive expression, just as hurtful or unpleasant feelings will act in an opposite or repulsive manner.

Of the six means taken by Mr. Darwin to ascertain, “independently of common opinion, how far particular movements of the features and gestures are really expressive of certain states of the mind,” one was the study of the insane. Few of modern days can, perhaps, approach Mr. Darwin as an observer, and it is to be regretted that he has not been able to study for himself the conditions of the insane rather than have been obliged to receive these second-hand, at the risk, as will be shown, of occasionally doubtful information. What was to have been expected from the study of expression in the insane? The insane are notoriously creatures of impulse and habit, whilst among them are monstrous and debased forms of the higher intellectual faculties, in which from, shall we say, an approach to the feral condition the higher states of mind are absent. “A faint echo,” says Dr. Maudsley, in a brilliantly-written sentence, “from a far distant past, testifying to a kinship which man has almost outgrown.” Accordingly, it appears that whilst in the latter certain forms of expressions are never seen, in the former the expressions are the same as in those of sound mind, with the addendum that under the persistence of a joyous or a painful state the particular expression is *more continuous*, and, therefore, by the law of association and habit, will lead to its

strong repetition on the slightest cause; or, when one muscle of a group forming an expression is affected by a chance spasm, the appearance of the expression will be powerfully superinduced, even though no emotion, or, perhaps, one directly opposite to that expressed, may be felt. Who has not noticed the deep furrows on the faces of the chronic insane, the busiest of busy wrinkles, or has not seen an expression of melancholy pass over the face of one who, when in a placid interval, happens to excite one of the group of the weeping muscles? What, however, in the expression among the insane we gain most information from, is the alteration that occurs in general paralysis, where the interpretation by others of an existing expression is directly opposed to the emotion itself. For instance, in the advanced stages there is paralysis or great enfeeblement of the orbicularis oris, shown by inability to compress the lips, as there is also of the elevator muscles of the upper lip; the tongue, too, is affected, but the most manifest impairment is in the utterance of the explosives p, b, &c., all of which require perfect power over the lips. Now one of the commonest expressions among general paralytics is that of grief, it being at the same time clear that no corresponding emotion is present. How does this occur? The muscles about the mouth are the first to become affected, whilst those in the upper part of the face are intact, and come into play as a kind of *extraordinary muscle* of articulation. Either thus, or from a difficulty in pronunciation, a frown is produced, or an action of the corrugator supercillii with the central fasciæ of the occipito-frontalis muscle, giving a strong expression of grief. In this way, though a joyous and "large" feeling really exists, the very opposite would, from the "emotional expression," have been guessed. The expression is probably not quite perfect, because mixed, but a real deception is caused by it. The study of cases of labio-glosso-pharyngeal paralysis and of unilateral paralysis of the face is very instructive in showing how completely unfelt emotions may be simulated under the altered relations of the facial muscles. But it is time to examine the three principles which "appear to account for most of the expressions and gestures involuntarily assumed by man and the lower animals under the influence of various emotions and sensations."

The first is that of "serviceable associated habits." Certain actions are of direct or indirect service under certain states of mind to relieve or gratify certain sensations, desires, &c.,

and whenever the same state of mind is induced, however feebly, there is a tendency through the force of habit and association for the same movements to be performed though they may not then be of the least use. Some actions ordinarily associated through habit with certain states of mind may be partially repressed through the will, and in such cases the muscles which are least under the separate control of the will, are the most liable to act, causing movements which we recognise as expressive. In certain other cases the checking of one habitual movement requires other slight movements, and these are likewise expressive. The force of association has been long acknowledged by writers on mental science, as Messrs. Bain and Spencer, to be of the first importance in explaining phenomena, and Mr. Darwin has brought from his wonderful store of knowledge of the animal kingdom many facts in support of it, whilst he has been most successful in employing it for the interpretation of expressive movements in man. There can indeed in these days of Protoplasm and Bioplasm be no difficulty in admitting almost any amount or number of transformations and combinations that may be effected from the plastic nature of organic and organised matter.

We are, sometimes inconveniently, creatures of Habit. We cannot get up early any morning to catch a train, without, *nolens volens*, awaking at the same hour the next morning. In a recent article in the "Contemporary Review," Dr. Carpenter, speaking of this force of association, relates how a certain gentleman going to his bedroom to dress for dinner, actually, from sheer force of habit, wound up his watch and got into bed! Certain horses, again, called by the natives "Aguillos," have acquired as an inheritance a shambling run, a specially developed combination of movements of the legs in consequence of their ancestors having been artificially broken to the pace. Plüger's well known experiment on the decapitated frog, the pushing forwards of the feet by cats when pleased, the turning round and round by dogs before lying down, the scratching of the head when puzzled, and many other actions, small in themselves, are urged by Mr. Darwin as illustrative of his principle, and a very curious instance is quoted from Mr. Galton to show how unmeaning and purposeless gestures may be transmitted. He even allows that sympathy may have come into play primarily, as when "children learning to write often twist about their tongues as their fingers move, in a ridiculous fashion,"

although in the opening chapter of the book he is rather hard upon Gratiolet for ascribing to sympathy a movement which certainly does seem better so explained than in any other manner, viz. :—following the movements of a billiard ball by a similar or “sympathetic” inclination of the body. Habit is the volitional repetition of similar acts under similar circumstances, and closely connected with it comes reflex action. The whole of this very interesting chapter will probably meet with universal approval, unless some may perhaps take exception to the assertion that “sneezing and coughing were originally *acquired* by the habit of expelling as violently as possible, any irritating particle from the sensitive air passages.” It would appear that “sneezing and coughing” were from the first purely reflex actions, as much so as contraction of the iris under a bright light; for in the first place they belong to the respiratory system, which is peculiarly an independent system, and almost entirely free from control of the will, next, the muscular combinations are very intricate, and one cannot easily imagine how such a complex arrangement so admirably adapted to its end could have been first voluntarily acquired, and then transmitted; thirdly, these actions are performed perfectly before will is developed and in animals of very low order in the scale of creation, and they act when the will is suspended, as in “destructive lesions” of the brain; and, lastly, a favourite argument of Mr. Darwin’s, we cannot by any voluntary means exert these muscles as powerfully as they act when doing so automatically. “Why the act of clearing the throat is not a reflex action, and has to be learnt by our children,” Mr. Darwin “cannot pretend to say.” Is it not because the natural way of clearing the throat is *by swallowing*, a reflex action stronger and more often used than forcible expulsion by a sudden artificial expiration? The observations on animals acting under the influence of this law are all true to life, and, indeed, its all-pervading influence is seen in every chapter of the book that follows. By-the-by, is it not possible that the scratching backwards by a dog of all its four feet has nothing whatever to do with voiding its excrement, but is simply done from the desire of getting rid of the uncomfortable sensation produced by over-grown toe nails, for dogs, no more than wolves and jackals, ever cover up their excrement as cats do, and it is no science to presume a “purposeless remnant originally followed by some remote progenitor of the dog genus,” when we have a readier, and quite as plausible, explanation at hand?

The second general principle is that of "Antithesis." "Certain states of mind lead to certain habitual movements which were primarily, and may still be of service; and we shall find that when a directly opposite state of mind is induced, there is a strong and involuntary tendency to the performance of movements of a directly opposite nature, though these have never been of service. This "principle" has involved him with most of the critics, and on first sight one is tempted to exclaim, "Ad Triarios ventum est." This is the last excuse of a man pushed into a corner for his explanation, and choosing any rather than none at all. Does it follow that because one side of a shield is seen to be white, and it can be shown why it must be white, *therefore* the other side, which is black, must be so *by antithesis*? or because the black side is first seen and cannot be accounted for, it is *because* in some shields we can explain why the other side is white? Yet this is quite as logical an argument. True, the principle is only occasionally brought in to account for a puzzling phenomenon, and Mr. Darwin seems to feel its weakness, and even to anticipate the objections to it, for he says (p. 288) "It may be asked, why should surprise, and only a few other states of the mind, be exhibited by movements in antithesis to others. But this principle will *not* be brought into play in the case of those emotions such as terror, *great joy*, &c. &c., which produce certain effects on the body." Turning back to p. 51 we find that the actions in a dog resulting from "*great joy*" are quoted as typical of these antithetic gestures! Shrugging the shoulders seems the "best instance of a gesture standing in direct opposition to other movements naturally assumed under an opposite frame of mind;" and though he gives some instances not innate where the principle seems to be asserted, yet he is surprised how few are unequivocal; such are the gesture language of the Cistercian Monks and the signs used by the deaf and dumb. It seems at one moment as if Mr. Darwin was going to allow us an easy solution of these movements, for he says "there is no *à priori* improbability in the supposition that gestures manifestly of an opposite nature to those by which certain feelings are already expressed should at first have been voluntarily employed under the influence of an opposite state of feeling;" but the cup is immediately dashed from our lips by what follows—that "it is more than doubtful whether any of the cases which come under our present head of antithesis have thus originated!"

His next principle seems to be quite enough to explain these antithetic movements, viz., that "when the sensorium is strongly excited, nerve-force is transmitted in directions dependent on the nature of movements habitually practised, or the supply of nerve-force may be interrupted." Thus, when a dog is strongly affected, as in the now well-known instance of the dog with the "hot-house face," it was to have been expected that the feeling would be shown by the passage of nerve-force along the tracks usual under such a sentiment. Not that it is for a moment necessary to suppose that the dog voluntarily put on his dejected attitude, though it is not quite so certain that "it cannot be supposed that he knew that I should understand his expression." Is not Mr. Darwin rather arbitrary in his selection of the antithetic expression? The expression of joy or humility may be the one naturally assumed from the first, whilst some dogs never feel savage or show fight. Would it be said here that the "good and gentle" element had been a special modification inherited from some pacific line of ancestors? How are animals to know (as undoubtedly they do) and correctly interpret the emotions of other animals not possessed of language, unless the "expression" has a definite meaning to them? And if they can thus correctly interpret the meaning of certain expressions it is impossible to deny them the *intention* of certain attitudes assumed for distinct purposes. "The principle on which this is founded appears to be, that every movement which we have voluntarily performed throughout our lives has required the action of certain muscles, and when we have performed a directly opposite movement an opposite set of muscles has been brought into play. As the performance of ordinary movements of an opposite kind, under opposite impulses of the will, has become habitual in us and in the lower animals, so when actions of one kind have become firmly associated with any sensation or emotion it appears natural that actions of a directly opposite kind, though of no use, should be unconsciously performed, through habit and association, under the influence of a directly opposite sensation or emotion."

That is, Mr. Darwin, after distinctly premising that for the development of movements which come under the present head some other *principle distinct from the will and consciousness* must have intervened, proceeds to state that such and such actions result from *different conditions of will*, and *from these* draws an analogy to actions connected with sensations

and emotions! Was there ever such a complete ignoring of premises in any scientific deduction? Besides, in the order of development of functions of mind, feeling and emotion *precede* will, and though it may be true that in performing the voluntary act of lifting or lowering a weight an opposite set of muscles has been brought into play, it is by no means so that opposite emotions are displayed by antagonistic groups of muscles. In the "opposite" actions, done under certain states of the will, where antagonistic muscles are called into use, there may be the same absolute feeling or emotion present, and, conversely, emotions of an opposite character may succeed each other without being expressed by such "opposite" muscles as are used in turning to the right or the left, indeed the muscular expression of opposite emotions *may be identical*. The typical cases to show this principle of antithesis, if analysed, though they point to a *difference* in the position assumed under the different emotions of anger, and joy, or pleasure, are not directly antithetic in the sense of positive and negative; thus, "when a dog approaches a strange dog or man in a savage or hostile frame of mind, he walks upright; his head is raised, tail held erect, and quite rigid, hairs bristle, ears directed forward, and eyes stare. Let us now suppose that the dog suddenly discovers that he is approaching his master. Instead of walking upright, the body sinks or even crouches; his tail is lowered and wagged from side to side; his hair becomes smooth; his ears are depressed and drawn backwards." Will any one, in looking at the illustrations accompanying this description, say that the attitudes are directly the opposite of each other? The same is true of the description and illustration of the angry and pacific cat; in this instance, in order to give play to the "principle," we have two emotions combined on one side (cat in fear and in anger), to oppose to one feeling on the other. Nor are we more fortunate in examining some of the gestures in men. Indignation and helplessness are not "antithetic" emotions, and the attitude of a helpless man may be quite as well explained on another hypothesis as by contrasting it with movements performed under an emotion with which it has no especial relation. So again, the movements assumed under a state of *astonishment* are said to be directly antithetic of those assumed in a listless frame of mind; but is it right to call astonishment and listlessness opposed emotions? Surely attention and listlessness are the direct antithesis of each other, and the expression of

astonishment is not the same as that of attention. If we arrange in antithetic order a few of the emotions (so far as such "opposition" is applicable to states of mind) and compare the expressions and attitudes assumed under them, the doctrine of antithesis will prove unsatisfactory, for many, though strongly expressed on one side, are almost negative on the other; thus, anger and kindness, joy and sorrow, courage and cowardice, hope and despair, power and impotence, pleasure and pain, love and hate, terror and confidence. Therefore, on the grounds that movements under feeling precede those under will, that some states of mind have been classed as antithetic where no opposition can be shewn to exist, and that some of the attitudes displayed under these opposed states are only modifications, and not real antitheses, whilst the principles of direct nervous action and of association by habit can be made to explain all, Mr. Darwin's second principle must, apparently, be accepted with reserve.

The third principle is, that certain actions which we recognise as expressive of certain states of the mind, are the direct result of the constitution of the nervous system, and have been from the first independent of the will, and, to a large extent, of habit. Good instances are afforded by the trembling of muscles, sweating of the skin, the modified secretions of the alimentary canal and glands, loss of colour of the hair under extreme terror or grief, direct action of the heart, involuntary erection of the hair. But this principle is often in a complex manner combined with that of habitually associated serviceable movements; thus, in the violent movements that take place under extreme suffering, the undirected radiation of nerve-force from the nerve-cells which are first affected, the long-continued habit of attempting by struggling to escape from the cause of suffering, and the consciousness that voluntary muscular exertion relieves pain, have all probably concurred. "Under a transport of joy or of vivid pleasure, there is a strong tendency to purposeless movements, and to the utterance of various sounds." Does not this explain the purposeless movements of a dog in a pleased state of mind better than the doctrine of antithesis? If an emotion does not lead to action, it does not, says Mr. Darwin, cause any outward sign, and so we are enabled to tell the important part played by the principle of associated habit. The instance selected to exemplify this is not a felicitous one. Few will be disposed to admit that "a mother, feeling the deepest love for her

helpless infant, may not show it by outward sign." The principle of antithesis is invoked to co-operate with this third law, as when "a frantic woman rushes about, tears her hair or clothes, and *wrings her hands*." This latter action is due to the second principle, betraying an inward sense of helplessness. To what movements are wringing of the hands antithetic, and why may not this action be explained, as the other wild and violent movements are, by the flow from the surcharged and liberated nerve-force? Even the change from extreme action, in the case of frantic grief, to despair, may merely be the result of exhaustion of the nervous system, without the consciousness that "nothing more can be done." A recent writer on expression, Dr. Daniel H. Tuke, in a work entitled the "Influence of the Mind upon the Body," has also elaborated a "principle" which agrees to a large extent with Mr. Darwin's first, that of serviceable associated habits. Feeling dissatisfied with Sir C. Bell's assertion that "the outward signs of passion in the face and elsewhere are to be traced to the heart and lungs, and all the extended instruments of breathing," he sees "something more than this—a certain fitness between the emotion which agitates the muscle of the mouth and nostrils, and the form which they assume, and which may be due to the action of another and more comprehensive principle." "This principle rests on the fact that the functions of the bodily organs are assisted and guarded from injury by, and, in short, are dependent on, the action of the muscles. In regarding the action of the emotions, therefore, upon the muscles, it seems natural to trace their movements to their *original use and signification* in their immediate connection with the bodily organs, particularly those of special sense." "As all movements have as their great end the preservation as well as the enjoyment of the individual, and as contraction and relaxation take place primarily to attain this end, a *general expansiveness of expression* and gesture is allied with all the emotions which are excited by impressions of a beneficent character, while a *general exclusiveness or contraction* of the features is allied with emotions excited by maleficent impressions; the object of one class of movements being to court and receive, and of the other to avoid and reject." "We suffer pain of two kinds—bodily, as toothache; mental, as grief or anxiety; and when the latter occurs the outward signs, allowing for local differences, are curiously similar to those which are exhibited in the former. Hence when joy

and fear respectively cause respiratory and cardiac excitement, the expression of the features is entirely different—the form assumed being determined by the corresponding bodily form excited by common and special sensation—the rough outline representing common sensation and the delicately specific shades answering to the predominating special sense figuratively affected.” Thus Mr. Darwin and Dr. Tuke seem, independently, to have arrived at somewhat similar conclusions as to the origin of the expression of emotions.

The chapters of the book that follow the enunciation of the three leading principles teem with observations of the marvelously minute and exact character in which Mr. Darwin so excels; they require, and well deserve, the most attentive perusal. Many kinds of animals are brought under notice, and the signs and gestures of all people from the uttermost parts of the earth have been obtained, partly through Mr. Darwin himself in his travels, and partly by answers to a series of printed questions which were circulated, with the result that “the same state of mind is expressed throughout the world with remarkable uniformity. This fact is interesting, as it affords a new argument in favour of the several races being descended from a single parent stock.” There are, of course, amongst different nations *tricks* of expression due to the inheritance of some at one time capriciously adopted gestures (just as we see oddities transferred in families from father to son, and so on through a considerable line), which gesture may be quite peculiar and seen in no other people; but the many points of close similarity in the various races are due to inheritance from a single parent form, and prove that the races of men are not descended from several aboriginally distinct species. The emission of sounds by various animals under emotion is accompanied by a theory of the acquirement of musical tones in man before speech, and how it is that a different pitch of voice is related to a certain state of feeling. An attempt is made to bring the principle of antithesis to explain the cacchinations and screams from pain in monkeys; the satisfied grunt of a pig and its harsh scream of terror or pain; the bark of anger and that of joy in a dog. “As might have been expected,” the operation of this “law” is doubtful. The erection of the dermal appendages is of more direct interest to us, as a special application has been made by Mr. Darwin of some of his theories to the condition of the hair in the insane. “Hardly any expressive movement is so general as the involuntary

erection of the hair, feathers, and other dermal appendages. These are erected under excitement of anger or terror, and the action serves to make the animal appear larger and more frightful to its enemies or rivals." Then comes a body of facts, showing how general the action is with mammals, birds, and reptiles. The action is referred to the class of those induced by the direct action of the nervous system, like sweating and trembling, independent of the will. Still it is "hard to admit that the creation of the dermal appendages by which an animal is made to appear larger and more terrible to its enemies should be altogether an incidental result of the disturbance of the sensorium." Now comes the crux. The *arrectores pili* are unstriped muscles. How then can they be brought under the influence of the will? Mr. Darwin would gladly take refuge in such an argument as that the *arrectores* from being once voluntary muscles had since lost their stripes and become involuntary. But no pretence for such a line of policy can be shown. Nor is there any more reason for believing that the converse can occur, that a striped muscle is ever replaced by unstriped. Some other explanation must be sought, and it is suggested that in the first instance these hair muscles were slightly acted on in a *direct manner*, as in our so-called *goose skin*, that a channel for the rush of nerve-force was thus acquired, rendering such erection more likely to follow on the next recurrence of the emotion. After a certain time, animals, seeing the effect of this erection on the appearance and bulk of the bodies of their rivals, would (might?) have wished to make themselves appear larger and more terrible by voluntarily assuming a threatening attitude and uttering harsh cries. Hence not only are actions done by involuntary muscle, but possibly (?) animals might when "dimly conscious" of a change in the state of their hair act on it by repeated exertions of the will! Variation and natural selection have also here come into play. Now it seems pretty clear that Mr. Darwin has confounded in his arguing on this subject two distinct actions; one, the action of the voluntary muscle, the *panniculus carnosus*; the other, the action of the minute *arrectores pili*, involuntary muscles, which as shown by Kölliker are attached in the deep layer of the skin to the capsules of the small hairs, and *enclose the glands at the bases of the follicles*. The former is the muscle used when a dog approaches another in a hostile frame of mind, when a lion erects his mane in a rage, when any alteration occurs in the direction under anger of

the hair on the scalp of a man. The latter are the set brought into play under emotions of *fear*, where the whole body shrinks into as small a condition as possible, in the "rigor" preceding an attack of acute disease, or in different conditions of the skin in connection with its use as a secreting organ. In describing the attitude of an attacking dog, Mr. Darwin says the "hair bristles especially along the neck and back," and these are just the parts where the panniculus carnosus has most play; but the hairs over the parts of the surface are by no means erected, those namely which are acted on by the arrectores pili. Take again the instance of a cat in anger not combined with fear, there is only a slight or no erection of the hair; whilst in the state of fear there is a universal bristling all over the body, more a secondary result of the suppressed action of the skin than a primary erection due to a voluntary muscle such as that used in anger. Let us now turn to the subject of erection of the hair in the insane. It is, as Dr. Brown says, not always associated with terror. In by far the majority of cases, there is no element of terror in them, and where the greatest alteration in the condition of the hair is seen (as in some chronic insane and idiots), there have never been any symptoms of terror or rage sufficiently prolonged to have given rise to an associated habit. Several causes have concurred to materially alter the condition of the hair in the insane, and chiefest of all is the changed and imperfect action of the skin, especially as regards the sweat-glands. Anyone knows how difficult it is to brush the hair when the digestion is out of order, and chronic dyspeptics have an habitually shock head of hair. Now the skin of the insane is, as all who have seen the effects of the Turkish Bath and the peculiarly sticky nature of the sweat know, very defective in its action, and in acute mania the glands of the skin are in some way especially suppressed in their action, for a maniac may rage about for hours in the most violent manner without sweating in the least degree, and some patients in the Turkish Bath cannot be made to sweat at all. Any cause, therefore, that tended to lock up the secretions of the sweat-glands, such as contraction of their orifices, would at the same time *alt r the direction of the hair* so that in all probability the altered blood which is at the bottom of the skin affection is more the cause of any alteration in the state of the hair than is an emotion of fear or rage. Besides, when the hair is affected

under rage it is, (as in the case of the dog), just those parts which are more immediately under command of the occipito frontalis which are moved. Change in the condition of the digestive organs also modifies the *electrical* state of the hair, for when, owing to suppressed action of the cutaneous glands, the hair becomes dry, the slightest friction, whether by brush or the hand, develops a curious state of attraction and repulsion in the individual hairs. So long as this imperfect action of the skin continues, then so long should we expect the rough state of hair to remain. In all persons who have the hair "hogged" that is, cut very short—as in some places on the Continent—a peculiar erect condition is after a time superinduced, and there is no doubt that the system pursued in most asylums of keeping the hair cut short, especially in the troublesome and violent persons, has rendered this change of direction more conspicuous. The cropped heads of the French are doubtless in part due (if not chiefly) to the close way in which for generations the hair has been cut. Owing to disturbance in the circulation of the brain and tissue of the scalp in the insane, a thickened condition extending to all the parts forming the scalp is not uncommon. This would of course tend to increase the effect of the above-mentioned states on the hair, whilst the hairs themselves grow faster and are rendered coarser, and more liable to take on the erect state.

There appears then to be no other reason for giving a different explanation to the erection of hair in the Insane, than there is in those of sound mind. When it occurs *voluntarily* under the influence of rage it is simply partial, and due to a very slight alteration of direction from the action of the occipito-frontalis. When under the influence of terror or in a state of chronic insanity (the best instance of altered direction of the hair we ever saw, was in a *demented* girl without any but the most vegetative existence, whose skin was always dry and cold), a bristling is noticed; it is a secondary effect due to changes in the skin, especially of the sweat glands, and is no more connected with emotion, as emotion, than is the crop-head of a foreigner to be ascribed to it. When therefore it is attempted to explain the erection of the hair in animals under different emotions by changes wrought through *disease* in the Insane, the analogy seems to fail, and it is a pity that Mr. Darwin has not kept distinctly forward the difference between the *moving of a portion of surface with hair on it* AS A WHOLE, and the *separate movement of each*

particular hair whilst the surface to which they are attached remains stationary.

The fifth chapter is devoted to special expressions in Dogs, Cats, Ruminants, and very fully in Monkeys whose modes of rendering such states of mind as astonishment, anger, pleasure, &c., whilst in some degree they resemble the expressions of man, yet in others, as weeping and attention, are different, or absent altogether. Weeping, as an expression of suffering, has received great attention at Mr. Darwin's hands. It is still by him considered as a *habit*, acquired since the period when man branched off from the common progenitor of the genus *homo* and of the non-weeping anthropomorphous apes. Following Sir C. Bell, the cause of contraction of the muscles round the eye during screaming is shown to be of serviceable origin by defending the eye from injury under a different condition of the circulation within the globe. The "order of contraction" of the muscles is well observed, and the fact of the depressor *anguli oris* being less under control of the will than the other muscles, is particularly noted, as depressed corners of the mouth are often seen in persons who try to restrain their emotions unsuccessfully. Sobbing seems to be peculiar to the human species; no monkey has ever been known to sob. It is, indeed, closely connected with the secretion of tears, and does not occur at a very early age, before, in fact, tears are secreted." Mr. Darwin thinks that "it is, at least, in part due to children having some power to command, after early infancy, their vocal organs, and to stop their screams, but from having less power over their respiratory muscles these continue for a time to act in an involuntary or spasmodic manner." This explanation seems most probable, but is perhaps not all, for the fact of the action only arising after tears are secreted, connects it in a special manner with them, the object of the short, jerky inspirations being to prevent the tears which flow down the nose from falling on the upper lip, and to bring them into the pharynx, where they can be swallowed. Again, sobbing occurs at the end of a protracted crying fit, that is, when from the prolonged expiration the lungs are much emptied of air, and the chest walls are contracted; it is something like the hiccough that comes on after a severe fit of laughing, and the jerky inspiration of sobbing probably is a reflex act due to the accumulation of deleterious products in the lungs, and the necessity for a change of the air. Why, again, sobbing is not seen in very young children is, perhaps,

because the crying fit is not so prolonged in them as to lead to the requirement of this spasmodic refilling of the lungs with air, so that after all the shedding of tears *may have nothing to do* with sobbing more than being a mere concomitant of it, for as children of a later age do have most protracted fits of crying, implying great emptying of the lungs, the necessity for receiving air would be equally great, whether tears were secreted or not, but as they are observed to be first secreted at the time when in a child these protracted crying fits occur, a significance as to their necessary connection with sobbing has been urged, which scarcely, on a close analysis, seems justifiable.

In explaining the cause of the secretion of tears, Mr. Darwin has, it appears, in his anxiety to give a physical explanation wherever possible, somewhat exaggerated the action of the orbicular muscles on the lachrymal gland. He says, "That after a certain stage of development (for the lachrymal gland is not found to act in infants until after many days) whenever the muscles round the eyes are strongly and involuntarily contracted tears are secreted, often in sufficient abundance to roll down the cheeks, as in laughing and crying, coughing and straining. The contraction must be *involuntary* and prolonged, for these *involuntary* movements are more energetic. In the act of yawning the tears are apparently solely due to the spasmodic contraction of the muscles round the eyes." It does seem as if the action of these muscles on the gland has been exaggerated; for, look at the position of the gland, placed deep under the external angular process of the frontal bone, with only a very slight part of it protruding. Again, we may deny most distinctly that in the act of yawning there is a very strong contraction of the muscles around the orbit; why, it is very rarely that the eyes are completely closed in yawning! Where, then, is the external pressure to come from? True it is that in yawning there is an embarrassment of the respiration, which, on principles quoted from Mr. Bowman and Professor Donders, may lead to engorgement of the eyeball, and perhaps also of the gland, but (is it from the principle of habit?) the greatest flow of tears is often associated with the very slightest yawn. Can we not see a better reason for the connection between yawning and lachrymation, in the fact that the depressor muscles of the jaw are supplied by the same nerve as the lachrymal gland, and that it is extremely likely that a radiation of nerve force from any cause should implicate all or some of

the most usual of the ramifications of the nerve. This would also explain, from the connection of the fifth with other nerves, the peculiar choking feeling in the pharynx (not noticed by Mr. Darwin) whenever weeping occurs, or is attempted to be suppressed. It will shock all poets and sentimentalists to read the conclusion arrived at—that “we must look at weeping as an incidental result, as purposeless as the secretion of tears from a blow outside the eye.” If this view be generally adopted, Magdalenes may cease to weep, and mourners dry “the cunning waters of their eyes,” for they will find no sympathy in a practical age, which would deny a direct emotional purpose in this tenderest of all expressions, even to an angel. The obliquity of the eyebrows is made a special subject by Mr. Darwin, and has been by him worked out in a most ingenious and painstaking manner. If any expression has ever been considered as special, that is, if any muscles have ever been deemed to specially serve for the expression of an emotion, they are the corrugator supercillii combined with the central part of the occipito-frontalis. The expression is certainly very marked, and has been adopted by innumerable painters whenever they have wished to exhibit grief; for instance in the “*Francesca di Rimini*,” or in the pictures by Rubens in Antwerp Cathedral. Certain it is, however, that the expression may be there when no feeling whatever of grief is present, and when a direct explanation on other grounds is at hand. For several years Mr. Darwin was unable to see why grief or anxiety should cause the central fasciæ alone of the frontal muscles, together with those round the eyes, to contract. Here seems a complex movement for the sole purpose of expressing grief! The explanation is best given in his own words, “we have all of us, as infants, repeatedly contracted our orbicular, corrugator, and pyramidal muscles in order to protect our eyes whilst screaming; we cannot when distressed and wishing, when older, to restrain our emotions, prevent, in consequence of the force of habit, a slight contraction of the above-named muscles. But the pyramidalis muscles seem to be less under the control of the will than the other related muscles, and their contraction can be checked only by the antagonistic contraction of the central fasciæ of the frontal muscle. The result is the oblique drawing up of the eyebrows, the puckering of their inner ends, and the formation of rectangular furrows on the middle of the forehead.”

This expression has been noticed amongst Hindoos, Dhaugars, Malays, Negroes, Australians, and in old Greek sculptures—it is, indeed, universal. There is, however, another explanation of these “oblique eyebrows,” as seen in the expression of grief or suffering. Wherever the combination is seen there will be noticed *an upward direction of the eyes*, and the circumstances are such that a feeling of devotion or of longing for assistance from a higher Power is present. Now devotion is generally expressed, as shown by Dr. Maudsley, in his lectures on “Body and Mind,” by a *contraction of the elevator muscles of the eye*, so that the *eyeball is upturned*, and we might say that under a feeling of Grief the corrugator superciliis is contracted (grief being of the nature of a concentrating, as opposed to *expanding* emotion), but the tendency of the mind, when under grief or sorrow, is to look upwards for help, as to a *superior Being*, hence the muscles which elevate the eyebrows and the eyes themselves, will be upturned; but the corrugator superciliis has, from its very position, a *mechanical advantage over the outer fasciæ of the occipito frontalis, which it has not over the CENTRAL fibres*; these central fibres, therefore, contract under the influence of the upward impulse, and the result is the “horse shoe” mark or oblique eyebrows. When not acting themselves, these facial muscles often serve as *points d’appui* for the action of others, or, in some instances, as substitutes for them, and the deep wrinkles in and about the brows of those with mobile face muscles testify to both these purposes. As a curious fact, it is worth noticing, in connection with the secretion of tears, that idiots very rarely weep, that is, true congenital idiots; they may laugh to an immoderate degree, or storm in impotent rage, but tears are rarely seen. The same is the case with crétins; but in both these classes of beings the “grief muscles” come into play as expletives of other facial movements, and “oblique eyebrows” occur without the slightest development, apparently, of any corresponding emotion. Professor Partridge used to relate in his lectures the case of a gentleman in whom, for certain reasons, the corrugator superciliis was divided subcutaneously, one of the *effects being an increased flow of tears*; this result being most likely due to some reflex action on the lachrymal gland, though Mr. Darwin might take advantage of it as showing why the attempt to restrain weeping in those under an emotion of grief should lead to a contraction of the “corrugator.” In whatever way the emotions of grief and

sorrow, and the expressions caused by them, are viewed, Mr. Darwin, by his lucid and vigorous analysis, must be acknowledged to have thrown a flood of light on the subject.

Beyond a recapitulation, with some few additions, of the form of the face in laughter, Mr. Darwin has little to say in explanation. There is an attempt to explain the cacchination by a sort of antithesis—"as in distress the expirations are prolonged and continuous, with the inspirations short and interrupted, so it might have been expected, as is the case, that with the sounds uttered from joy the expirations would have been short and broken, with the inspirations prolonged." Like weeping, laughter seems to be developed only after a certain stage of development, and the gradual transition from the first appearance of a smile to a fully-developed laugh was noticed by Mr. Darwin in a child between the 45th and 113th day after birth. There is to be noticed occasionally an expression recognised as suppressed mirth, apparently due to a combination of muscles somewhat resembling that of the corrugator and occipito-frontalis in the emotion of grief; namely, the firm contraction of the orbicularis oris and the depressor anguli to counteract the zygomaticus and the elevator muscles of the upper lip. The corrugator and orbicularis oris often act together, seem to become associated by habit (as in frowning, bearing pain, &c.), as do the occipito-frontalis and the zygomatici, and a curious illustration of this occurs in the attempts by patients in an early stage of general paralysis to suppress laughter; for owing to the weakness of the constrictor muscle of the mouth the zygomatics have more power, whilst the corrugator and frontalis, acting together from previous association with the other, give a comical expression of *grief*, none of course being felt. The jerking noise owing to the sudden expulsion of air through the nose and upper nasal passages renders suppressed laughter an easily recognised and well-known expression. There is a freemasonry amongst mankind in the facial expressions of pleasure and delight, though not in the mode of showing affection.

How different is Mr. Darwin's description of music from Milton's! The former says, "Music has a wonderful power of recalling in a vague manner those strong emotions felt during long-past ages, when our early progenitors courted each other by the aid of vocal tones," and "Music often produces a thrill or slight shiver, which runs down the backbone

and limbs of many persons when they are powerfully affected." Listen now to the latter—

“ And ever against eating cares,
Lap me in soft Lydian airs ;
In notes with many a winding bout
Of linkèd sweetness long drawn out ;
With wanton heed and giddy cunning
The melting voice through mazes running ;
Untwisting all the chains that tie
The hidden soul of harmony.”

Utrum horum mavis accipere !

Under the head of “ Disgust,” and to account for vomiting from a mere idea, we read that the suspicion arises that “our progenitors must formerly have had the power of voluntarily rejecting food which disagreed with them.” It is a well-known fact that some idiots “chew the cud,” *i.e.*, they at times vomit their meals and eat them again ; but this is anything but the regular and voluntary action of ruminating animals, and cannot be placed in the same category. Mr. Darwin’s explanation seems forced and unnecessary. Is it not more probable that, as vomiting from some real cause always causes a feeling of nausea going upwards, so when in the higher centres, from an idea or sickening sight the same or a kindred feeling is experienced, the expression of nerve-force will take the same channels? How could “our progenitors” formerly have rejected food which disagreed with them, except from an amount of reasoning power which it is futile to assume? Before a substance can be estimated as to its agreeing or not with the body, it must be digested, or, at any rate, passed on through the stomach, and would, therefore, if it did not of itself excite vomiting from irritation whilst in the digestive passages, be out of the power of rejection by the will. We see that animals refuse to take by *instinct* (an apology is due for using this word without shewing that this “instinct” is a result of experience which has now become innate) certain articles of diet, whilst they have no power of voluntarily rejecting all matters which disagree with them, by vomiting ; for instance, a dose of castor oil, which most assuredly would not be voluntarily taken by any animal ; and the same applies even to animals which ruminate. Children will swallow large quantities of poisonous matter, but are unable, without artificial aid, to vomit, even though strongly urged to do so. Surely it is to be regretted that so useful a faculty as the power of voluntarily vomiting was civilized off the elaborated man as he now exists ! Why

may not the principle of the "direct action of the nervous system" be made to explain, as it is quite sufficient to do, the act of vomiting from nauseating ideas? It serves to explain trembling, bleaching of the hair, blushing, and involuntary *mechanical actions of other parts of the intestinal canal*, using the word "mechanical" advisedly, though there may also be an action on the secreting structures of glands as well, shown by increased secretion of urine, whilst the very *suddenness* with which, consequent on an idea, vomiting occurs, is another reason, if one be needed, for its being due to direct action of the nervous system. True, the doctrine of evolution is not so well served as by the "suspicion" of the lost power of a once voluntary habit; but why go out of the way to introduce a very doubtful and improbable "suspicion," after stating (p. 68) that "the manner in which the secretions of the alimentary canal are affected by strong emotions is another *excellent instance* of the direct action of the sensorium on these organs, *independently of the will, or of any serviceable associated habit.*"

Shrugging the shoulders, common to men in all parts of the world when they are in a state of mind simply passive, has been already considered. It is taken by Mr. Darwin as his great example and demonstration of the principle of "unconscious antithesis." It is not, however, apparent that indignation and a "passive frame of mind" are directly opposed emotions or states of mind, though the movements of shrugging the shoulders, bending in the elbows, showing the palms with extended fingers, &c., are in some degree the antithesis of the muscular expression of indignation; whilst another explanation due to the direct action of the nervous system is more acceptable. Besides, it is quite fair to suppose that the opening of the palm of the hand, and the presenting it forwards with extended fingers, may be a *directly intentional movement* to show that there is no weapon concealed, and the outspread direction of the bent fore arm from the body *exposes the region of the heart* to attacks, and is equivalent to a *vote of confidence* in the person before whom the gesture is made. Granting, then for a moment that there is an antithesis in the expressions of attack and impotence, it is anything but an "unconscious" antithesis; on the contrary, it seems *directly designed* to counteract other movements, in all probability as directly designed also. Though the gesture, or some parts of it, is commonly seen in different parts of the world, it is not absolutely universal, and it would be interest-

ing to pursue an enquiry in the direction and spirit of Mr. Buckle or Mr. Lecky, with the object of discovering whether the gesture is confined to people fighting with peculiar weapons, or attacking in a definite manner, and with a special regard to certain parts of the body most vulnerable. The same holds with some of the attitudes assumed under Astonishment (as in the *pose* of Mr. Rejlander). Do we not, when threatened by an unseen object, lift up our open arms, with extended fingers, to protect the head, and hence perform the same movement by force of habit and association when surprised by any cause? Yet Mr. Darwin sees in the "expression" due to Astonishment another illustration of the principle of antithesis. The opposites chosen in this instance are indifference, or an indifferent frame of mind, and Astonishment. We lately saw that "Indifference" was opposed to "Indignation," and the corresponding antithetic movements were then "shrugging the shoulders" and an "offensive" attitude. It would appear, then, from Mr. Darwin that "indifference" may act as an antithesis of "indignation" or "astonishment," and assume a different form in each case! Some Indian tribes, Australians, and Kaffirs have another gesture expressive of astonishment, viz., placing the hand over the mouth. This would seem to have been intended either to prevent the involuntary exclamation that often attends surprise, and which would be injurious to these wild tribes in their nomadic habits and customs, or else to a desire to conceal the mouth, which is a great tell-tale of what is passing in the mind. Under the feeling of "Horror," again, Mr. Darwin cannot explain how it is "that when we feel cold, or express a sense of horror, we press our bent arms against our bodies, raise our shoulders, and shudder." An obvious and easy reason would seem to be, that it is because there is a desire to make the body as small as possible, either for purposes of warmth by exposing a smaller extent of surface for the cooling agents to act upon, or for the purposes of self-defence, to preserve by a process of in-folding the most vulnerable parts from injury.

The chapter on Blushing is one of the most acceptable in the book. Whether from shyness—from shame as a real cause—from shame owing to a breach of etiquette, from modesty, from humility, or from indelicacy, it depends in all on the same principle, viz., a sensitive regard for the opinion of others, primarily, in relation to our personal appearance, especially our faces; and, secondarily, by association and habit, in relation to the opinion of others on our conduct. It is a well-

established fact that attention directed to any part of the body for a longer or shorter period affects the nutrition or blood supply of the part, as in hypochondriasis, when there is every reason to believe that a *certain idea* about some part or viscus may ultimately *cause* a diseased state in the part. The phenomenon is commonest in women and children, and is also seen in the coloured races, and the extent of surface involved corresponds, as a rule, to that usually uncovered; thus in Europeans it is the face and neck, which give ground for the greatest display of it, but in some of the people who invariably go about in a semi-nude state the "expression" may be seen on the body so exposed. The well-known instances given by Sir James Paget of a lady who felt a pain in the foot, and had a swelling in it from merely seeing a child in danger of being crushed in the foot by a closing gate, or the experiment quoted by Dr. Maudsley from Volkmann, that when one finger is pricked the skin of the corresponding finger on the other side is thereby rendered more sensitive, are sufficient to show the influence of attention in temporarily modifying the nutrition of a part, whilst the intimate connection existing between the skin and the brain is seen in epileptics and in the subjects of hysterical catalepsy, where the capillary circulation is so responsive to the slightest stimulus that it is possible, by merely drawing the finger lightly over the body, to mark out the name of the individual in distinct red letters, marks which, as in blushing, are immediately succeeded by pallor. This pallor, consequent on the redness, has been shown by Dr. Burgess to be general in blushing, and it is more than probable that in those cases where "paleness instead of redness is caused under conditions which would naturally induce a blush," the blush has really been there, but has been so rapid as to have escaped notice, and has given place to a strongly pronounced pallor; just as in rabbits, shown by Dr. Brown-Séguard to be affected in a very rapid manner, and to pass through a very short stage of "rigor mortis" after death by lightning. *Suddenness* appears to be a condition of blushing. A "hardened villain" is one who, having well considered certain evil courses, betrays no emotion when taxed with them, because there is no element of surprise; they are the story of his life. It is the sudden and pointed gaze, the quickly-pressed question, the *immediate* precipitation into a breach of etiquette, that summon up the blood.

"Those who believe in design," says Mr. Darwin, "will

find it difficult to account for shyness being the most frequent and efficient cause of blushing, as it makes the blusher to suffer, and the beholder uncomfortable, without being of the least service to either of them." But is this quite fair? Many will be disposed to maintain that though it may cause discomfort, yet it is not so "unserviceable" as is made out. There is no better protector of a maiden's modesty than her blushes, and nothing can so atone for one who by some *faux pas* has caused blushes involuntarily, as blushing in his own person. It is, indeed, a flag of warning, or of distress, hoisted to give notice that a *certain effect has been produced*, and that further advance in that direction must be abandoned, or cautiously carried on. Those who are most sensitive, and, therefore, run the greatest risk of being most frequently offended, are the greatest blushers, and were it not for blushing many a small crime would go undetected. It is not necessary to believe that it was "*specially designed*" to appreciate its value as an expression of a certain state of mind, any more than it is necessary to believe in weeping, laughing, &c., having been "*specially designed by the Creator, and therefore opposed to the general theory of evolution, which is now so generally accepted.*" A non-evolutionist might fairly ask of Mr. Darwin—"if, as you say, blushing, which originated at a very late period in the long line of our descent, is of no service to either blusher or beholder, but rather the reverse, why is it retained, or on what principle of usefulness was it ever evolved? If an accident, due to direct action of the nervous system, it has at least come to acquire a very curious significance in informing us of the moral condition of others, and in acting as a shield to the weak." The summary contains a speculation—a pure speculation—on the period at which the various expressive movements, now exhibited by man, were acquired, and as to what might have happened if the structure of the organs of respiration and circulation had been different. "If a man had breathed water by the aid of external branchiæ, his features would not have expressed his feelings much more efficiently than now do his hands or limbs." Very curious, indeed, would be Mr. Darwin's Frankenstein, and these "idle speculations" almost seem as if intended to make caricatures of humanity, after the manner of those artists who illustrate children's picture books and "comic" journals, by adapting the head of a fish to the body of a man (or some such hybrid combination), or in still

greater variety during the pantomime season. He who looks at the wag of the tail of a Syren from the point of changed structure in the organs of circulation, will, as Mr. Darwin says, "view the whole subject of expression in a new and interesting light."

No one can read this book without being struck by the earnestness and extensive range of observation visible in every page. It was a powerful grasp of the mind to generalise on community of expression of the whole human race, in all its stages of development, from the Babe to old Age; and if Mr. Darwin has not succeeded in explaining all, there can be no doubt that he has given a new phase to our ideas concerning the expression of emotions, by his practical application of some, now well recognised, laws of nerve action and association. Wherever the subject is discussed or debated, this last contribution of Mr. Darwin's will necessarily be quoted; and if some of the explanations should prove unsatisfactory—as we think will be the case—they will, at least, be acknowledged to be ingenious. One cannot but have the greatest respect for his good faith and sincerity, but he starts with a pre-conceived theory, and, in some things, his knowledge is defective. From the class of persons by whom Mr. Darwin's books, through his great reputation and versatility, are read, it was, perhaps, impossible for him to enter on the question of sexual emotions, though, by not doing so, the opportunity is lost of enforcing much that already is written. These are very strong—the strongest of all the emotions, and at times lead to correspondingly forcible expressions. The Heliotype Plates, from Ginx's Baby crying, to Mr. Rejlander, in apparently a state of stupified amazement (it would be interesting to know if the "twenty educated persons of various ages and both sexes," who formed the jury of expression, would have understood, "without explanation," the emotion Mr. Rejlander intended to pourtray), are not worthy of the Book or the Author.

There are many gestures which are merely *tricks* peculiar to one country or to one tribe; these can receive, of course, a merely empirical explanation—very often no *raison d'être* can be given. As an instance, among the signs of Contempt, Mr. Darwin has mentioned "snapping the fingers;" this is not very intelligible, but may be understood by reference to certain gestures in use among the deaf and dumb, where anything insignificant or contemptible is denoted by somewhat similar signs, just as in language we use the termina-

tion ling, the German *lein*, to express *smallness*, and, secondarily, contempt. But there is another gesture, very expressive of Contempt, which has been completely ignored, perhaps because it has a ludicrous side, though scarcely any gesture expresses so well the meaning intended to be conveyed, viz., *placing the extended fingers to the end of the nose*. To put it in the language of the sixteen Queries:—Is contempt expressed by placing the open hands, with extended fingers, at the end of the nose, the right hand being generally nearest the body, with the palm pointing to the left side? No one of the three “principles” seems adequate to explain it, so we are left to conjecture. It would be interesting to know whether, or not, Gaika would recognise the movement; also whether, or not, amongst the Kaffir women, contempt is shown by “the nose being slightly turned up”—to use some of the latest words of the Poet Laureate—“tip-tilted like the petal of a flower.”



The Treatment of Criminals in Relation to Science. An Essay read before the Royal Society of Victoria, Melbourne, by H. K. RUSDEN. Melbourne, 1872.

We have frequently, as critics, to deplore the want of vigour, if not also of originality in the works which come before us for review, and when one thinks of the numberless medical publications which are issued from the press every year, the cause of the lassitude is not far to seek. Competition is so severe, and the ranks of the profession so overcrowded, that a certain class of our professional brethren have no other way of keeping themselves before the public than by writing windy books and essays. The consequence of this is that a sort of carelessness has crept into the ranks of the medical critics also, and the spirit of vigour and independence which distinguished the earlier writers have given way to a system of indiscriminate praise or unnecessary condemnation. In fact the critic just now is something like Byron's description of Peter looking after the gates of Heaven—

“ St. Peter sat by the Celestial Gate—
His keys were rusty and the lock was dull,
So little trouble had been given of late.”

In such an indolent state of mind were we when this pauph-

let reached us for review. "Treatment of Criminals!" same old story, we suppose, and we proceeded to the perusal of it with a feeling of philosophic calmness which would have done credit to Zeno himself. However, on reading a few lines, we came to a quotation from Mr. Carlyle, which gave us hope, more especially as the quotation was given with a manifest smack of Mr. Rusden's lips as if he enjoyed it, and thought it a singularly brief and true definition of a criminal—"The Devil's Regiment of the Line." To pursue the comparison we have made between the critics and Peter, we will take the liberty of quoting a little more—

" St. Peter sat by the Celestial Gate,
And nodded o'er his keys ; when, lo ! there came
A wonderous noise he had not heard of late."

Mr. Rusden is not wanting in originality of conception, nor in a vigorous mode of placing his conceptions on paper. If his ideas are startling, and in some instances seem impracticable, we must not forget that this is the case with all discoveries, good or bad, and that it is not until theorists have ridden their hobbies to death that the more composed and judicious disciple revives and uses the good in them. We do not say that Mr. Rusden's theories are practicable, in fact some of them may perhaps raise a smile, but they are certainly worthy of a hearing.

Mr. Rusden begins by summing up the various plans which have been proposed for dealing with criminals, and after recounting a number of merciful or cruel ones, he proceeds to say that he believes "that this variety of opinion arises from want of clear perception of the nature of crime and of criminals, and of the relations of society to both. Most of those who are best acquainted with the subject agree, that there is a large and more or less distinct class of persons, who by birth, education, habit, and therefore inclination, subsist entirely, or mainly, by crime ; by systematically preying upon their neighbours' property, generally with small care whether their neighbours' lives become involved in the acquisition. It appears that though occasional accessions from without are received by this class, they are actually trifling in number, and comparatively easy to deal with ; it does not seem that the ranks of crime would thus be permanently augmented, but for the association with the criminal class which the adoption of such a career necessarily involves. On these points the evidence of experts is consistent as a rule, but one of the leading psychologists of

the day traces all such cases of apparent aberration from a moral type, either to hereditary taint or physical lesion.”*

Now, for reasons which may be easily understood and appreciated, we have no intention of either praising or depreciating Dr. Maudsley in these pages, but it is no dispraise of him to say that he is not any more the original author of the idea quoted above than Mr. Rusden. Although it may be admitted that no one has clothed it in more fascinating and appropriate language, the theory itself is as old as the hills, and did he ever claim it as his own, which he does not, we should merely refer him to his own quotation from Jeremiah, who flourished about 2,500 years ago. The disclaimer used by Mr. Rusden, then, is quite unnecessary in the present case.

After quoting Mr. F. Hill's objection to short periods of confinement for criminals, that gentleman being of opinion that such imprisonment is of no use at all, because they return to their vomit as soon as they are set free; and also quoting with much relish Mr. Hill's notion that all criminals should be confined for life without any distinction, Mr. Rusden goes on to argue in favour of this proposition. Let him speak for himself—

Mr. Hill speaks of the imprisonment for life of all our criminals at once, as very desirable, though scarcely practicable; and appears to regard the state of public opinion as a more insuperable difficulty than even the cost of their arrest and maintenance. The first obstacle must, I think, give way, if it be only plainly and often enough shown that the balance of results would be clearly and largely good. And if a criminal cost much more in plunder, surveillance, detection, conviction, and occasional imprisonment, than he would in detention for life, the latter course must clearly be the most economical. The diminished expense for detections and convictions in the future should not be omitted from the calculation. And even if ten times the present expenditure were found to be necessary for gaols at first, a large economy would thus inevitably result; while far more important objects would also be attained; namely, the increased security to society, of life and property; the fewer accessions to the criminal class from evil example and association; and the certain check to the propagation of criminal children. This, as the most perfect of all preventatives, is

* Dr. Maudsley's address before the Psychological Section of the British Medical Association. "Lancet," 10th August, 1872. In justice to myself, I must state that with the single exception of the above allusion, any coincidence between my papers and Dr. Maudsley's invaluable address, is purely accidental. This paper was prepared for the meeting of the Royal Society of Victoria, on the 14th of October, and Dr. Maudsley's address was not received in Melbourne until the following mail.

an object of such transcendent importance, as should counterbalance many weighty objections, did such exist. But prevention has always been subordinated to cure, and to cure of the most imperfect and impossible description; instead of being adopted as *itself* the most perfect cure of all.

But it seems more than doubtful whether any extra expense would be involved for gaols—even at first. “No unreformed inmates of a prison,” says Mr. M. D. Hill (“Repression of Crime,” p. 465), “however extravagant its expenditure, cost the community so much as they would do—if at large. This fact has been so often proved that I must be allowed to assume it as undeniable.” It has been estimated that a criminal at large costs three or four times as much as when perpetually imprisoned. But even if the cost should be found to increase a little, that little would inevitably soon decrease; and before I conclude, I shall propose an expedient by which the cost—and every other real disadvantage—would be reduced to a minimum, while incalculable benefits would demonstrably result to the community, both physically and morally.

The broad proposition—that *no convicted criminal should ever be released*, is one which can scarcely be expected to gain ready acceptance on its first proposal; though I look upon its ultimate adoption as certain. The wisest and most beneficent suggestions have always met with strenuous opposition at first, and have never been cordially adopted, until the objectors discovered that the ends they *themselves* had most at heart, were actually being best effected in spite of their opposition. Man, however, never learns anything—except under compulsion. Few will contest that of all economic subjects, this is one—the solution of which is of the first importance, or that it has yet to be found; and fewer still will fail to recognise that the moral aspects of the question are more important still.

The present state of things is notoriously unsatisfactory, but the full extent of the mischief produced can scarcely be apprehended, for it is of daily increasing proportions. A worse than foreign enemy is maintained by us in our midst, and favoured with every advantage that our civilisation can furnish. We endow the criminal—known or unknown—with every protection from the ministers of the law which is accorded to the honest citizen, and actually assume that he has not done what we know he has done, until a certain method of proof has been fulfilled; and any loophole that a clever lawyer can find, is made effectual to save him from the legal consequences. But if—by force of circumstances, a conviction follow, the consequences tend rather to confirm him in his evil career, and perfect him in his profession. He lives as before, at the cost of his honest neighbours, with medical and every other attendance free; the most select of the society he prizes most, and no more work than is exactly calculated to keep him in health. He is far better fed, housed, and cared for, than many honest labourers.

Mr. Rusden now proceeds to his definition of a criminal, in which occurs the striking instance of literary coincidence, to which he refers in his disclaimer. Everyone knows Dr. Maudsley's address to the Psychological Section of the British Medical Association, delivered on the 7th August, 1872; the pamphlet we have at present under consideration was read before the Royal Society of Melbourne, on the 11th November, in the same year, or just three months after the publication of Dr. Maudsley's in the "British Medical Journal," for the 10th of August. Mr. Rusden's paper was, as he says, ready for a previous meeting of the Society, and was consequently prepared before Dr. Maudsley's reached Australia, so that the great similarity betwixt some of the passages is accidental. We copy here the remarks made by each gentleman, not so much in the light of a contribution to science, as in that of a remarkable instance of how two writers, at the Antipodes from each other, may not only have the same ideas, but also express them in very similar language.

Dr. Maudsley, 7th August, 1873—

Crime is not always a simple affair of yielding to an evil impulse or a vicious passion which might be checked were ordinary control exercised; it is clearly sometimes the result of an actual neurosis which has close relations of nature and descent to other neuroses, especially the epileptic and the insane neuroses; and this neurosis is the physical result of physiological laws of production and evolution. No wonder that the criminal *psychosis*, which is the mental side of this *neurosis*, is for the most part an intractable malady, punishment being of no avail to produce a permanent reformation. A true reformation would be a reforming of the individual nature; and how can that which has been forming through generations be reformed within the term of a single life? Can the Ethiopian change his skin, or the leopard his spots?

Mr. Rusden, 11th November, 1873—

I would define a *criminal* as one whose acts are *habitually* predatory, and in contravention of the laws which protect property and person. If a criminal act were shown to be incongruous with the character and previous habits of the perpetrator, I would not call him a criminal; but if his criminal act were shown to accord with his habits and disposition, I would at once class him as a criminal upon his first conviction. A second conviction should be taken as decisive—as to criminal habit and disposition under any circumstances. One criminal act may not *prove* a habit or disposition; but its recurrence is proof of a liability which *must* augment with repetition. A habit is only a more

advanced stage of the same course. But habits are formed and confirmed under ordinary conditions of life; and there can hardly be a more glaring or mischievous fallacy than the supposition, that conduct produced by the discipline, and exhibited within the precincts of a gaol, will probably be maintained under opposite conditions outside it, and in the face of habits which were the outcome of previous longer life, and which are stronger in proportion. "Can the Ethiopian change his skin, or the leopard his spots? Then may ye also do good, that are *accustomed* to do evil." (Jer. xiii. 23.) Experience and statistics combine to prove the strict truth of this wise saying, and that it is impossible to make good citizens out of confirmed bad ones. In fact, they must be TRANSFORMED physically, before moral reform can be possible. Every tree is known by its fruits, and good deeds should no more be expected from bad men, than grapes from thorns, or tenderness from tigers. Vice to the vicious, and crime to the criminal, are as natural as heredity, habit, and association can make them; and if their subjects are temporarily susceptible *under certain conditions* to corrective influences, they are inevitably more so to the predeterminations of inheritance and habit, when the conditions are renewed under which they were originally developed. Every individual is as much an example of the PERSISTENCE OF FORCE, as is any other object in the universe. The force of habit is as certain and necessary as that of gravity. And this is admittedly a fact, proved by the statistics of crime, so far as they have been investigated.

Mr. Rusden then proceeds to argue in favour of Mr. Hill's suggestion that criminals should, without exception, be imprisoned for life, at any rate after the second conviction. He says—

A criminal should never be released. It is characteristic of the criminal classes, that they are both unscrupulous and improvident, and set at nought the restrictions which society imposes upon the numerical increase of morally-disposed persons. An enormous impediment to the moral progress of the people would be at once removed, were convicted criminals never liberated to propagate their evil kind; the honest poor would be so far relieved from competition—at an immense disadvantage—with others who do scruple not to avail *themselves* of means of subsistence from which honesty excludes; a part more or less—of the burden of foundling and reformatory asylums would be saved to society; the proportion of uneducated—or rather mis-educated—children would be largely reduced; and the first direct step probably in the history of the world would have been taken to improve, or rather to stay the deterioration of the race of human beings. For it must be obvious that if those below the general average of morality and intelligence multiply—as we know they do—far more rapidly and promiscuously than those above it, the tendency *must be* to lower the general average. And that tendency is enormously en-

hanced by the consequently increased competition, against which the honest poor have to contend in living, and in educating their children. And the highest authorities agree, not only that the majority of criminals are the children of criminals, but also that the large majority of the children of criminals become criminals themselves. And this is only what might naturally be expected by those who believe in cause and effect. It is inevitable—by that law of the persistence of force, which is as much the explanation of habit as the cause of heredity. And for all these reasons a criminal by *habit* should never be released under any circumstances.

Mr. Rusden, after saying that he believes that the expense of feeding and lodging our criminal population would be more than provided by the smaller expense we should have to be at for police, magistrates, and the other machinery of the administration of the criminal law, and after saying that he would do away with prison labour, if remunerative, for the reason that the criminal, if his labour is remunerative, is fed and treated in a manner better than the honest labourer with whom he is made to compete, and whom he thus indirectly helps to starve; after saying this, goes on to suggest what use he would make of them. He says—

Though perpetual imprisonment would prevent convicted criminals, after their conviction, from contaminating Society, and propagating criminals, it is still *open to grave objections*. For the honest starving poor who contribute to their support should not be so mistaught that crime will entitle them to State maintenance and solve all their difficulties; and if criminals were made by their labour to pay for their keep, they would so far compete with honest labour, which would thus be placed at a disadvantage, though entitled to a preference for any employment or expenditure. It therefore remains to be shown that there is a sure means both of preventing an increase of the expense of maintaining criminals, and of avoiding, at the same time, the slightest appearance of offering to *them or to others* the premium to commit crime; these being the defects of the system of perpetual imprisonment. If, in attaining perfectly these ends, my proposal can be proved to present also the means of acquiring knowledge of the most important character, unattainable otherwise, and which would confer unprecedented benefits upon the human race generally, it is difficult to see what more could reasonably be desired. Nevertheless, I undertake to fulfil all these conditions, and also leave no room for the common complaint of competition with honest labour. More than this, my expedient has already been tried on a small scale, and with perfect success.

In the English Cyclopædia, under the head of "Inoculation," it is

stated that that preventive of a deadly disease was very slowly adopted in England, after its introduction from Turkey in 1721, by Lady Mary Wortley Montague, "and it was not until after it had been practised on six criminals (whose liberty was promised to them if they recovered, which they fortunately [!] did) that it was generally received." My proposal is, to adopt this expedient and apply it generally; not, of course, to inoculate our criminals with small-pox, still less to liberate them afterwards; but to utilise as subjects for physiological, medical, and surgical experiment, *all our criminals without exception*. They should be divided into, say three classes; of which the first might be simply made subjects of experiments in diet, or in the trial of the effects of drugs of such a character as to produce the least inconvenience or pain, and extending over long or short periods. The second class might be used for experiments of a more critical or important character—if, indeed, any experiments involving such results as the improved health, longevity, and morals of the human race should be called other than important. The last class should be reserved for experiments in which life might be risked or taken. But the welfare of society in the advancement of medical and physiological knowledge should always form the prime consideration, and every other should be entirely subordinated to the scientific perfection of the experiments. No unnecessary pain should be inflicted; in fact, it would be generally indispensable to avoid it by means of anæsthetics. But even without their use, I confidently appeal to competent physiologists to say whether a capital surgical operation, in sound tissues, causes nearly as much actual pain as one ordinary gaol flogging;—a mere revengeful barbarity—which is barren of all good results that would not be far better and more amply attained by my proposal. Judges and juries would have solely and simply to determine the class to which any particular criminal should be assigned; and a felon of the deepest dye might thus be privileged to become the means of conferring unequalled benefits upon the human race. In the selection of subjects, I should, however, be inclined to allow the skilled experimenters as much latitude as the exigencies of science might demand or suggest, if subjects of experiment were required for any particular purpose. Every organ and function of the human body might thus be brought under direct observation and scientific experiment far more completely and advantageously than in the case of Alexis St. Martin.

We have quoted at so great a length from this pamphlet that we have only space for one other extract. Mr. Rusden has been answering the objections which he anticipates to his proposal, and winds up as follows:—

A fourth advantage is the enormous reduction of cost in the final disposal of criminals which would obviously result; as all the worst criminals would be utilised for experiments, involving so much risk or

certainly of death, as would speedily reduce their numbers. I believe that the present cost of disposing of criminals would be reduced far more than fifty per cent., and that the supply of subjects for experiment would soon fall far short of the demand.

Far be it from us, in the present transitory nature of all earthly things, to say that Mr. Rusden's proposals are extravagant, but the last quotation, in the quiet gravity with which it is urged, puts us very much in mind of Swift's modest proposal for preventing the children of poor people in Ireland from being a burden to their parents and country, and for making them beneficial to the public, in which he proposes to eat a certain per centage of them up. We are not the less deterred from criticising Mr. Rusden's pamphlet, because in the edition of Swift before us, we see an ominous editorial note to the title of the "Modest Proposal,"—"A foreign author is said actually to have regarded the 'Proposal' as serious, and to have quoted it as an instance of the extremity under which Ireland laboured."

R. W. B. W.

The Physiology of Man. Nervous System. By AUSTIN FLINT, Jr. M.D. Appleton and Co., New York, 1872.

The present volume was written as one of the series of volumes which are, when completed, to constitute a complete "Physiology of Man." The publishers having, however, lately issued a Treatise on Nervous Diseases by Professor Hammond, were desirous of presenting a complete work on the "Physiology and Pathology of the Nervous System." The two volumes are intended to fulfil this purpose. Dr. Flint has endeavoured to make his work a satisfactory representation of the present state of knowledge with regard to the anatomy and physiology of the nervous system. What strikes us at the outset as not a little extraordinary is, that in a volume which is presented as a work on the Physiology of the Nervous System, the anatomy and physiology of the special senses should be entirely omitted. This is almost as bad as the play of Hamlet, with the part of Hamlet left out. However, for some reason, satisfactory doubtless to publishers or author, the consideration of the special senses has been deferred to another volume.

To one who looked at the present volume simply on its

merits as a treatise on the physiology of the nervous system, it might appear to be somewhat wanting in fullness of information, and in thoroughness of execution, but if it be looked at as what it is—a particular section extracted from a treatise on physiology—it would be unfair to make such a complaint. In some respects we think the author might properly have been less general in his statements. Thus he takes from Sir Charles Bell the credit, which has generally been accorded to him, of having discovered the different functions of the anterior and posterior roots of the spinal nerves, and unhesitatingly assigns the discovery to Majendie. In this he may be correct, but it would have been satisfactory to have had a more explicit statement of the facts upon which he bases his opinion. In the same way he denies to Marshall Hall—rightly, as we think—the merit which he claimed of having been the first to discover the reflex function of the spinal cord, but the perfunctory way in which he disposes of the question is not, perhaps, the best calculated to produce conviction. Moreover, there are some passages in the book which may well make persons who are not connected with the Bellevue Medical College, of New York, distrust his judgment. While Sir Charles Bell, Marshall Hall, and other lights of the same magnitude, are dismissed with somewhat scant courtesy, Dr. Flint bows down in the profoundest admiration before the author of “the companion-treatise to this volume,” in which “the chapter not only contains a full historical account of the disease, but is enriched by numerous original observations of the most striking character. The profound acquirements of Dr. Hammond as a physiologist, and his skill as an original investigator in this department, lend additional weight to his deductions,” &c. Now, we are not going to find fault with Dr. Hammond’s Treatise, which we noticed on a former occasion, but we must say that it is very far from being what, in these days of exact scientific observation, we have a right to look for in a scientific treatise on Nervous Diseases. If Dr. Flint really feels the enthusiasm which he expresses, we can only hope that his qualifications for writing a treatise on physiology are greater than his qualifications for judging the worth of a treatise on pathology.

Having said so much by way of criticism, we have only to add that the present volume fairly fulfils its aim. The style is clear and forcible, and the concise description of the func-

tions of the different parts of the nervous system, embodies most of the most recent additions to our knowledge of complex and difficult subjects regarding which knowledge is constantly changing.

Parliamentary Blue Book. Judicial Statistics of England and Wales, for 1871.

The first part of the last issue of the Judicial Statistics deals with the Police, Criminal Proceedings, and Prisons. We find that in the year 1871 our persons and our property in England and Wales had for their protection a force of police and constabulary numbering 27,425. Comparing the increase of the police and constabulary for the previous ten years with that of the population for the same period, the former is found to exceed the latter by 15 per cent.

It is undoubtedly satisfactory to find that the total number of the criminal classes for 1870-71, as compared with that for 1869-70, had decreased by 2843, or 5·3 per cent. ; more especially as this follows a decrease of 1,262 or 2·3 per cent. in the total for 1869-70, as compared with 1868-69. The criminal classes are reckoned up under the three heads of known thieves and depredators, receivers of stolen goods, and suspected persons; the rule being to exclude from the list individuals known to have been living honestly for one year at least subsequently to their discharge after any conviction. The total number of the criminal classes for 1870-71 was 50,144, of whom 6,788 were under 16 years of age, and 11,228 were females. This total does not include criminals confined in prisons and reformatories, who numbered for the year 31,071—so that the grand total of criminals and the criminal classes reaches 81,215.

The proportion of police to those of the criminal classes at large, taken on these figures, would be as 5 to 9; and with this relation between the two, we find that the apprehensions in 1870-71 were in the proportion of 52·9 per cent. to the number of crimes committed; the highest proportion in any year having been 58·2 per cent. in 1862-63.

The total number of indictable offences shows a decrease of 6,823, or 13·1 per cent. as compared with the previous year. The following condensed table shows the numbers of the more interesting crimes for three successive years:—

CRIMES.	1870-71.	1869-70.	1868-69.
Murder.....	130	101	151
Manslaughter.....	273	219	236
Attempts to Murder, Assaults, Shooting, &c.	1180	1282	1525
Rape, Unnatural and Indecent Offences ...	695	727	683
Concealment of Birth.....	138	164	178
Cattle, Horse, and Sheep Stealing.....	694	923	981
Robberies and Attempts with Violence ...	518	630	716
Burglary and Attempts.....	3635	4464	5212
Larcenies.....	31413	36103	40827
Arson.....	310	449	
Attempting Suicide.....	726	779	

In summary convictions there was an increase of 4·6 per cent. upon the previous year.

Suicides.—In 1871 there were 1464 suicides (391 females), being a decrease of 53 upon the previous year. There has been a marked, though not progressive, increase in the number of suicides during the past four years, the annual average for that time being 1498, as against an annual average of 1354 for the preceding seven years.

In 1871, 13 persons, two of whom were females, were convicted of murder. The number of executions was four, the smallest on record for any year.

Criminal Lunatics.—The total number under detention during the year ending with Sept., 1871, was 862 (679 males and 183 females), an increase of 74 upon the previous year. Of these 862, 524 were confined in the State Asylum at Broadmoor, 243 in County Asylums, the rest being distributed among City and Borough Asylums and Licensed Houses.

Of the whole number during the year, 34 died, 29 were discharged on becoming sane, 16 were removed sane for trial or punishment, and 6 escaped. There was no suicide among them during the year.

The number and the proportion per cent. for various offences in the case of those under detention were as follows:—

Murder, 173 (20·1 p. c.)	
Concealment of Birth and Infanticide.	} 6 (·7 p. c.)
Attempts to Murder, Stabbing, &c., and Manslaughter.	
	} 148 (17·2 p. c.)

Rape, Unnatural and Indecent Offences.	} 35 (4.0 p. c.)
Larceny and Petty Theft, 191 (22.1 p. c.)	
Burglary and Housebreaking, 48 (5.6 p. c.)	
Arson and other malicious offences, 57 (6.6 p. c.)	
Vagrancy, 18 (2.1 p. c.)	
Other Offences, 186 (21.6 p. c.)	

The following shows the original judgments or orders for detention, and the proportion per cent. :—

Found Insane, 186 (21.6 p. c.)	
Acquitted Insane, 242 (28.1 p. c.)	
Insane, committed by Justices, 48 (5.5 p. c.)	
Convicts becoming insane after trial	} 386 (44.8 p. c.)

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *French Retrospect.*

On the Nomenclature and Classification of Mental Diseases.

By Dr. Ach. FOVILLE, FILS.*

(*Abstract by Dr. T. W. McDOWALL.*)

The nomenclature and classification of mental diseases are among the most important and most difficult of medico-psychological studies, and it is upon these subjects that physicians devoted to this speciality are most exercised. As Buchez has said, "When they consider that they have completed their studies, rhetoricians write a tragedy, and alienists arrange a classification." But this multiplicity of attempts is of itself the best proof that the task has not yet been accomplished, for none of the proposed classifications have been accepted by the generality of practitioners.

In attempting to obtain a classification free from the faults of those already in existence numerous difficulties are encountered. We have to contend against the imperfections of language. Unfortunately almost all the words which are employed in the nomenclature of mental diseases have received, from very early times, acceptations variable or even contradictory. Others of these words have, in ordinary language, meanings which do not at all agree with their medical significations. As with the word insanity, so with the names of its principal forms, mania, melancholia, monomania, and dementia; they are used in an inexact manner and with varying comprehensiveness.

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The meaning of the word dementia, as used in a medico-legal sense, differs from that attached to it when used in pathology. Besides, there are morbid states, as stupor and imbecility, which have been confounded with dementia by such eminent men as Pinel and Parchappe. Numerous other examples might be brought forward to show how loosely such words as mania and monomania are used.

Esquirol, struck by the confusion which existed in the nomenclature of mental diseases, attempted to introduce exactness and definiteness of language. The intention was excellent; the result was not so good. To achieve his purpose, Esquirol invented two words, lypomania and monomania. The former has a definite meaning, of which it has never been deprived. But it is not so with the second. Its inventor himself employed it indistinctly, sometimes at an interval of a few lines only, to point out two very different things, either partial delirium, whatever its nature, or partial delirium exclusively gay and expansive. Since the time of Esquirol the term monomania has been the subject of fierce discussion from this cause. General paralysis is another striking example of confusion caused by a faulty system of nomenclature. All the names by which it has been proposed to designate this disease are faulty. Even the term general paralysis, by which it is most commonly known, is a daily source of confusion.

In what concerns the nomenclature of mental diseases we are, even in the present day, in a state of chaos. Although in the last pages which he has written Parchappe has stated, "For a long time I have endeavoured to bring to an end, in connection with this subject, all inexactness and confusion in ideas and words," this author does not appear to us to have succeeded better than Esquirol and many others.

In such a state of matters, ought we, like Guislain, to throw aside all the old terms and invent a series of names entirely new? Even such an attempt would have few chances of being favourably received in the actual state of science, for the morbid groups to be so christened are still far from being distinctly defined. It is doubtless much better that we should still employ those already in use, provided that we indicate exactly how we use them.

It is greatly to be desired, for the perfecting of the medical sciences, that the natural method of classification should be applied to nosology in general, and to each of its great divisions. In the case of mental diseases, we agree with Jules Falret, who has insisted upon this point with much force and ability, that the common defect of all classifications, till now, is that they are all nothing but systems (by which the diseases are arranged according to a single character or a small number of characters), and that no new classification can be definitely adopted unless it conforms to the natural method. Unfortunately, in the actual state of science, if it be possible to indicate the leading characters of a good methodical classification, we are not yet able to complete the task.

The characters which, till the present day, have been taken as the basis of classification may be referred to four heads ; these are :—

- The presumed mode of alteration of the mental faculties ;
- The external manifestations of the disease ;
- The causes and origin of its development ;
- The anatomical lesions which are characteristic of it.

Hence we have the names of psychological, symptomatological, etiological or pathogenic, and anatomical classifications.

All the ancient classifications belong to the first two classes.

Some are purely psychological. We may mention that of Felix Plater (1625), who considers the intelligence as constituted by the union of three internal senses—the imagination, reason and memory ; and who classifies intellectual diseases according to the perversion, enfeeblement, or the abolition of these internal senses. Again, Weickard (1790) divides the diseases of the mind into two great classes, those of intelligence and those of sentiment. He subdivides each of these according to the augmentation and exaltation, the diminution and the depression of the various intellectual faculties or passions.

Other classifications are purely symptomatological. Such is that of Sauvages (1767), which admits four orders of *vesaniæ* and divides the third order, that of delirium, into five genera. Although varying more or less in details, this method was followed by Ploucquet (1791), Erhardt (1794), Valenzi (1796), and Cullen (1782). The classification of Cullen divides insanity into three genera—mania, melancholia, and dementia ; a division adopted by Chiarugi (1794).

Others finally are mixed ; psychological in the primary divisions, symptomatological in the secondary divisions. Gallian recognises three directing faculties—imagination, reason, memory, and considers them as each exposed to three orders of lesion—abolition, enfeeblement, perversion. He considers the various forms of delirium as constituted by perversion of the imagination and reason ; then they are symptomatologically divided into pyrexial, phrenetic, and apyrexial. Arnold (1782) bases his first division upon the distinction between the sensation which produces the ideas and the reflection which generates notions. Hence we have ideal insanity and notional insanity. All his subdivisions are based upon symptomatology.

Pinel (1800) adopts the classification suggested by Cullen, and to the three genera established by that writer he adds idiocy, but without sufficiently distinguishing between it and dementia.

Esquirol, on the contrary, makes numerous changes. He introduces two new genera, *lypemia* and *monomania*, and divides all insanity into five genera :—

1st.—*Lypemia* (melancholia of the ancients), delirium upon one or a limited number of subjects, with predominance of sadness and depression.

2nd.—*Monomania*, in which the delirium is limited to a single or a small number of subjects, with excitement and predominance of a gay and expansive feeling.

3rd.—Mania, in which the delirium extends to every subject, and is accompanied by excitement.

4th.—Dementia, in which the patients are insane because the organs of thought, their energy, and the force necessary to the fulfilment of their functions are abolished.

5th.—Imbecility or idiocy, in which the organs have never been sufficiently developed to perform their functions correctly.

Esquirol's classification was for a long time the most perfect symptomatological classification of insanity. It was almost generally adopted, and even in the present day it prevails in science, literature, medical jurisprudence and official statistics. And yet to how many practical difficulties does not its application lead? To how many serious objections is it not open?

In Germany, about the same time, Heinroth (1818), although he had lived in Paris, with Pinel and Esquirol, based a new system of psychology on metaphysics alone. According to him, insanity is a disorder of the mind affected in its immaterial essence. Ideler, however, considers the forms of insanity to be but the reproduction, with an increasing intensity, of those of passion which was itself but the exaggeration of the ruling propensity.

These spiritualistic theories encountered, even in Germany, many opponents, notably Friedreich and Jacobi. The latter particularly, a devoted partisan of somatic doctrines, sees in intellectual disorders only a symptomatic bodily disease, and the *point de depart* of the different mental affections should be found, according to him, in the lesions of the different viscera of the body. This is making all forms of insanity sympathetic diseases.

French physicians now devoted themselves to the clinical investigation of the various forms of mental alienation, and to follow out the work began by Esquirol, but this work put them more than once in opposition to the ideas of their master. Thus Foville remarked that there is not, properly speaking, any lunatic who has absolutely only one delirious idea. Falret added that in every case of insanity, however limited it may appear, there exists a general disorder of the faculties, which, mutually dependent, cannot be any more insulated in a morbid than in a diseased condition.

Ferrus simply divided insanity into general and partial delirium. It was objected, however, that partial delirium may, at certain moments, extend and become general, without the disease really changing; on the other hand, even in general delirium, there are moments when certain faculties or sentiments appear free from disorder. To avoid this difficulty, Delasiauve raised the integrity or loss of the syllogistic faculty into a criterion of the partial or general disorder of the understanding. Whilst retaining monomania and mania, he interposed, as an intermediate group, a new class, that of pseudo-monomania, or "monomanies diffuses."

Until that time, the principal forms of insanity, mania and

melancholia, continued to be considered as distinct and independent morbid entities. It was objected, however, that this theoretic distinction was not supported by experience, and that in many lunatics, exaltation and depression, instead of excluding each other, alternate or are intimately mixed, without our being able to say that these patients are alternately, or at the same time, afflicted with two different affections.

This difficulty was partially removed by Baillarger proposing to classify these cases under the names of *folie à double forme*. Falret suggested the title *folie circulaire*.

To obviate the undoubted difficulties experienced in the application of Esquirol's classification, many methods were proposed.

Some, recognising the existence of mania and melancholia as distinct pathological entities, admitted that these diseases might frequently be transformed, the one into the other, or alternate. Hence we have the *trepomanie* of Brierre de Boismont, and the *formes mixtes* of Marcé.

Others, considering that the division of insanity into genera and species was in opposition to an enlarged view of the subject, reduced mania and melancholia to the position of simple varieties of a single disease. Thus Parchappe recognises only simple and complicated insanity, and the authors of the *Compendium* and Griesinger view the different divisions of mental disease only as forms of one malady.

Others, finally, maintain that mania, melancholia, and monomania are not morbid entities, but merely symptoms which do not constitute the essential characteristics of mental diseases. These authors base their classification on etiology or rather pathogeny.

Attempts in this direction have been made by Skae and Batty Tuke; but the most important is that of Morel (1860). He divides mental diseases into six groups:—

1st.—Hereditary mental diseases, arranged in four classes, from simple predominance of the nervous temperament to idiocy.

2nd.—Insanity caused by intoxication, alcoholism, narcotism, pellagra, &c.

3rd.—Insanity caused by transformation of certain neuroses, or hysterical, epileptic, hypochondriacal insanity.

4th.—Idiopathic insanity, including feebleness of the mental faculties following organic lesions of the brain and general paralysis.

5th.—Sympathetic insanity.

6th.—Dementia, or common terminal form.

This classification, though a decided advance in a scientific direction, is open to many and obvious objections.

It is necessary to refer to the anatomical system of classification. It has been attempted, quite recently, by Auguste Voisin, who has relied chiefly upon the results of numerous microscopic examinations. But the four species of acquired insanity which he considers anatomically distinct, and which he calls congestive, anæmic, atheromatous

insanity, and that arising from cerebral tumours or other lesions, appear far from being exactly defined, particularly from a symptomatic point of view, and they do not by any means include all the varieties of mental disease.

The mass of cases of mental derangement is not actually known to be dependent upon any constant anatomical alteration. They have merely the character of simple neuroses, and form a genus by themselves.

We propose to study, in detail, this genus of insanity uncomplicated with specific anatomical lesion.

The species of simple insanity which appear to us ought to be regarded as distinct morbid entities are the following:—

I. *Mania*.—We are far from giving this name to all the pathological states in which, as Esquirol says, “the delirium extends to all kinds of subjects and is accompanied by excitement.” This very comprehensive definition is applicable to maniacal delirium, and this delirium may be observed in many forms of insanity which are not mania in our opinion. We consider mania to be a special form of insanity, of which the following are the principal characters:—Maniacal exaltation with general incoherence constitute the predominating symptoms; it breaks out under the influence of various, chiefly moral, causes; it may be produced accidentally, by violent shocks, in subjects not hereditarily predisposed. It generally runs an acute course, and ends in some months in recovery, which may be permanent. In other cases, it passes into chronic mania, and finally into dementia which almost always preserves a certain exaltation, a relic of the primitive form of insanity.

It is of the utmost importance that we distinguish between maniacal delirium, an accessory or transient symptom in most forms of insanity, and mania properly so called.

II. *General Lypomania*.—The predominating symptom of this species is a general state of melancholic delirium, with despondency, sadness, fears, &c. We call it general lypomania, the better to indicate that we distinguish it from those partial deliriums of which melancholia was formerly considered the type. It is not because all the ideas of patients suffering from this disease are delirious—that never happens—but because there exists a general lesion of the intelligence which causes them to see everything *en mal*. In its other features, general lypomania corresponds pretty nearly to those of mania.

It may appear under three principal aspects:—

- 1st. Anxious lypomania (*aliénés gémisseurs*);
- 2nd. Calm or apathetic lypomania (simple melancholia);
- 3rd. Stupid lypomania (*stupidité*).

It often happens that a lypomaniac passes successively through several of these forms.

III. *Partial Lypomania*.—Under this name are included the *lypomania* and *monomania* of Esquirol. Both consist of a partial delirium; but in the former, sadness and depression predominate,

while in the second (*amenomania* of Rush) there is excitement, with a gay and expansive delirium.

Partial lypemania, as we understand the term, is intimately associated with hallucinations and illusions. In all forms of insanity hallucinations play a more or less important, but not a leading part. Here, on the contrary, they predominate, and are really specific.

Hereditary predisposition plays, in the etiology of this disease, a greater part than in mania and general lypemania. Its beginning is almost always very slow, and the intellectual process, which originates the delirium, from its being based upon false sensations, remains long latent, but once it really has appeared, it progresses, so that the delirium becomes more and more complicated and organised. Its progress is usually slow from the beginning, interrupted in many cases by acute paroxysms at long intervals. Its termination is seldom favourable, but its transformation into dementia is often slower than in cases of mania and general lypemania, which do not recover.

Sometimes the sensorial disorders consist in illusions and hallucinations, which relate to the body of the patient. Such cases are examples of *hypochondriacal insanity*.

Much oftener the disordered sensations appear to the patient to come from without, and affect at once the general sensibility and the special senses. These effects are attributed to some unknown and mysterious power, as magnetism, the Jesuits, &c. Such cases have usually been known as examples of "insanity of persecution."

These "*hallucinés persécutés*" may labour under a delirium still further systematised. We have, elsewhere, attempted to show how ideas of persecution in these patients give rise to ideas of grandeur, these being constantly based upon an imaginary modification of their individuality, and chiefly upon the belief in themselves being of princely or royal descent. To this class of cases we apply the title *megalomania*.

Finally, there is *demonomania*, which now rarely appears in an epidemic form.

IV. *La Folie à Double Forme*, or *Folie Circulaire*.—This species is one of the most natural and best defined. It is the result, more than any other, of hereditary predisposition. Its features are well known. This disease, once fairly established, persists, with great variations in intensity, during the life of the patient, and although rarely curable, it often passes into dementia.

V. *Instinctive Insanity*.—This species includes what is usually called *manie sans délire*, *manie raisonnante*, and moral, impulsive, or instinctive insanity. It corresponds to the second and third classes of the hereditary insanities of Morel. Its chief cause is hereditary tendency. In many points it resembles *folie à double forme*, but it presents less regularity in the return of the paroxysms, and in the alternation of depression and excitement. It is rarely curable, and often degenerates into dementia.

VI. *Epileptic, Hysterical, and Choric Insanity*.—Although the

symptoms of this species of insanity may vary somewhat, they ordinarily present certain special characters, such as the return in paroxysms, the suddenness of the impulses, and the excessive mobility of the ideas and sentiments. The evolution of these forms of insanity is essentially connected with that of the neuroses with which they are associated. Such cases ultimately end in dementia.

VII. *Puerperal Insanity*.—This species includes all the forms of mental derangement which are developed in women in connection with the different phases of the generative functions—gestation, parturition, and lactation. The symptoms observed are exceedingly various, and there is nothing specific in the erotic delirium.

Such are the seven species of insanity which we consider as possessing a true pathological individuality.

Following these divisions of simple insanity, we must now place, as forming a very characteristic and distinct group—

General Paralysis.—Notwithstanding a great mobility in their external manifestations, all its characteristics have a real fixity, and by their harmonious union they form a very distinctly marked species.

Finally, to complete our classification, we must add—

Dementia, Idiocy, Imbecility, and Cretinism.

The following table exhibits our classification:—

I. *Simple Insanity, without specific anatomical lesion.*

1st. Mania.

2nd. General Lypemania	{ Anxious lypemania. Calm or apathetic lypemania. Stupid lypemania.
3rd. Partial Lypemania (essentially hallucinatory)	

4th. Folie à double forme.

5th. Instinctive insanity.

6th. Epileptic, hysterical, choreic insanity.

7th. Puerperal insanity.

II. *Insanity with specific anatomical lesions.*

Paralytic insanity or general paralysis.

III. *Acquired cerebral and intellectual infirmities (Atrophies).*

Dementia.

IV. *Congenital cerebral and intellectual infirmities.*

1st. Idiocy.

2nd. Imbecility.

3rd. Cretinism.

2. *American Psychological Literature.*

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American Journal of Insanity, Vol. xxviii., January to April, 1872.

January, 1872. No. III.—“*Theories of Evolution.*” No. II.—“*Case of Pierce—Plea, Insanity,*” by S. T. Clarke, A.M., M.D. “*Ophthalmic Examination of Sixty Insane Patients in the State Asylum at Utica,*” by Henry D. Noyes, M.D. BIBLIOGRAPHICAL: “Review of Asylum Reports for 1871.” “Review of Books and Notices of Transactions of Societies, and Pamphlets.”—NOTICES: “An Act to provide for taking testimony in certain matters relating to State charitable institutions.”

April, 1872. No. IV.—“Edward H. Ruloff,” by Prof. Geo. C. Sawyer. “Provision for the Care and Treatment of the Insane,” by Dr. E. H. Van Deusen. “*Psychological Retrospect.*” BIBLIOGRAPHICAL: “Review of Asylum Reports for 1871.” “Foreign Reports.” “Reports of Boards of State Charities,” &c. “Reviews of Books.” SUMMARY: “Life Insurance and Insanity.” NOTICES: “Meeting of the Association of Medical Superintendents of American Institutions for the Insane,” &c.

July, 1872. Vol. xxix. No. I.—“State Provision for the Insane. Buffalo State Asylum: its History and Description.” “Case of Excessive Hypodermic Use of Morphia: Three Hundred Needles removed from the Body of an Insane Woman.”—Reported by Judson B. Andrews, M.D. “Physiology.—The Functions of the Brain,” by M. Claude Bernard; Translated from the *Revue des Deux Mondes*, by G. C. Sawyer. “Theories of Evolution.” No. III.—“Is Insanity a Disease of the Mind, or of the Body?” BIBLIOGRAPHICAL: “Review of Asylum Reports for 1871.” “Foreign Reports.” “Reviews.” “Reports of Societies and Institutions, and Pamphlets Received.” SUMMARY: “Conium in the Treatment of Acute Mania,” by J. Crichton Browne, M.D., F.R.S.E., Medical Director, West Riding Asylum. “Case of Disease of the Brain—Left Hemiplegia—Mental Affection.” [Under the care of Dr. Hughlings-Jackson.] “Psychological Medicine in our Public Schools,” by Dr. C. H. Hughes. Appointments. “Notice of Meeting of the Association of Medical Superintendents of American Institutions for the Insane.”

October, 1872. No. II.—“Proceedings of the Association of Medical Superintendents of American Institutions for the Insane.” “Thoughts on the Causation of Insanity.” BIBLIOGRAPHICAL: “Reviews of Books.” “Review of Reports.” “Transactions of Societies, and Pamphlets Received.” SUMMARY: “Habeas Corpus.” “Burning of the Northern Ohio Lunatic Asylum, Newbury,” &c., &c.

Case of Pierce.—In this case Dr. Clarke appeared as a psychological expert for the prisoner, who was accused of the murder of

William Bullock. It would appear that Pierce has a sister, with whom Bullock had for some time been quite intimate, and that there was a promise of marriage between them. Bullock, it is further alleged, under promise of marriage, seduced the young woman, and then neglected or refused to perform his promise. When the consequence of their intercourse became apparent to Miss Pierce, her lover showing no disposition to consummate their marriage, she made known the condition of affairs to her mother. Pierce was at that time employed in Chicago, but came to Lockport to have an interview with Bullock. After a conference in the house of Pierce's father, they proceeded down town together, and about 10 o'clock in the evening reached the corner of Main and Pine streets, where they had some further talk, which ended in the shooting and subsequent death of Bullock, and the arrest of Pierce.

Excepting *malice prepense*, none of the facts of the case were disputed by the defence; but it was contested that, at the instant of shooting, the prisoner was in the condition of mind known as *mania transitoria*. The evidence established the following facts: the high moral tone of the prisoner's character; the absence of malicious, vindictive, and querulous habits; his great personal purity; that even in the army he gained for himself the *sobriquet* of "Virgin of the Battery;" his extraordinary affection for his only sister. No premeditation could have existed, in that, the day before the act, he arranged with the father of his affianced for his daughter's hand, the marriage to take place in a few weeks; he telegraphed his employers to expect him on the 13th (the shooting occurred on the 11th March, 1871); that the *victim* invited the prisoner to walk down street with him, *and not the reverse*; that it was only at his sister's request that he put on his overcoat, *in which was the pistol*; that he had been in the habit of carrying a pistol *always* when travelling.

The family history of the prisoner indicated strong hereditary tendency to insanity. A maternal uncle died insane; two maternal aunts died insane, one labouring under melancholia, the other under epilepsy; his mother is a hysterical, nervous woman; a paternal aunt was insane for twenty years. The prisoner, it was shown, inherited the same temperament as his mother and his uncle who died insane. The unexpected intelligence of his sister's condition appears to have produced in him a condition of *mental shock*; for, on the evening of the shooting, he frequently wept, paced the floor, wrung his hands, repeated an irrelevant question a dozen times in half an hour, and arose from and sat in his chair alternately as often during the same time. He had not slept an hour in seventy-two. He was quite conscious, and still believed that Bullock would marry his sister, until on parting, in answer to his oft-repeated question, "What shall I tell my sister?" Bullock replied, "Go to hell;" he then lost consciousness, and did not recover until he found himself under arrest.

Taking the whole facts of the case into consideration, and giving due

weight to the opinions of Maudsley, Castlenau, Ray, and others, Drs. Pierce and McCollum concluded that they had to do with an example of mania transitoria. They correctly "defined this state of mind to be an instantaneous abeyance of reason and judgment, during which period, whether it be longer or shorter, the individual would be actuated by mad and ungovernable impulses; that its first manifestation would usually be an act monstrous, unpremeditated, motiveless, and entirely out of keeping with the previous character and habit of thought of the person. It would be preceded by some mental strain or agitation in a sudden mental shock. It would probably be transient in proportion as it was violent, and the transition would most likely occur on the completion of the act of violence. The person so affected, should he commit a homicide, would be likely to justify the act, or fail to remember it; but would *very rarely* attempt to conceal his work, or fly from punishment. It would most likely occur in individuals who were predisposed to some form of insanity, and the person most likely to inherit would also present a mental and physical constitution similar to that branch of his family in which the hereditary taint descended."

Dr. Cook, on the contrary, denied, "on general principles, the possibility of anyone being sane the moment before the commission of an act, insane during the act, and sane the moment after. He did not think the condition of the prisoner, as described by the family physician and others, together with his hereditary tendency to insanity, his former blameless life, and the sudden and terrible shock which he had sustained, would warrant him in saying that the prisoner was *insane* when the act was committed."

The acquittal of the prisoner gave great public satisfaction; a fact, Dr. Clarke remarks, not to be entirely overlooked in estimating the effect which the testimony had upon the minds of the jury.

In concluding his remarks upon the case, the author says:—"It follows, therefore, that every individual, with the insane predisposition, who has ever laboured under an attack of mania transitoria, should be required to avoid all exciting causes, and to hedge himself about with all possible protections against recurring attacks; and, doubtless, in the event of a *second pleu of mania transitoria in defence of the same person charged with a capital offence*, the question would properly be raised—*whether the individual, knowing his unfortunate mental organisation, had so avoided causes likely to provoke the insane state, and had as thoroughly deprived himself of the facilities and opportunities for committing crime, as his former warning would suggest, and his circumstances permit.*"

Ophthalmic Examination of Sixty Insane Patients in the State Asylum at Utica.

In this paper Dr. Noyes records the results of the ophthalmic examination of 11 cases of general paralysis, 18 of dementia, 15 of

acute mania, 5 of sub-acute mania, 6 of chronic mania, and 5 of melancholia.

He found in the cases of general paralysis, with two exceptions, hyperæmia and infiltration of the optic nerve and retina; the striation of the retina, near the nerve, was often extremely pronounced, rendering, occasionally, the edge of the nerve hazy and indistinct. The uniformity in the aspect of the fundus oculi was so considerable that he soon learned to suspect from ophthalmoscopic appearances what was the nature of the patient's malady.

In 12 of the 18 cases of dementia the optic nerve and retina were hyperæmic and infiltrated. The mental disease was caused by epilepsy in two cases, by masturbation in three, by excessive sexual indulgence in one, by phthisis in one, by ill-health in one; and in one the cause is not stated.

In the six cases in which hyperæmia and infiltration of the retina did not exist, the mental disease was caused by epilepsy in one, by hemiplegia in one, by intemperance in one. In the three remaining cases no cause is assigned.

Dr. Noyes found that, while there is nothing like uniformity in the ophthalmoscopic appearances, the preponderance of hyperæmic cases is to be noted. The vascularity, affecting chiefly the capillary and venous circulation, was very intense.

Of the 20 cases of acute and sub-acute mania, 14 presented hyperæmia of the nerve and retina; in the remaining six these tissues were normal or anæmic.

In the hyperæmia cases the mental disease followed meningitis in three, epilepsy in three, masturbation in one, over-work in one, intemperance and syphilis in one, typhoid in one, phthisis in one, ill-health in one. Of the cases not hyperæmic, the causes were—intemperance 4, masturbation 1, ill-health one.

From the results of his examination of the cases of acute and sub-acute mania, the writer would not assume that the vascularity of the nerve is always an index of the circulation of the hemispheres; but he suggests that the variety found in the appearance of the optic nerve accords with the view that mania is the result of exhaustion of nerve force, as well as of over excitation. It must be remembered, however, that, in those cases where retinal hyperæmia was absent, the maniacal symptoms were severe.

In six cases of chronic mania, Dr. Noyes found signs of inflammatory action or hyperæmia in three; in the others no lesion existed.

In only one case of melancholia, though five were examined, could any evidence of abnormal condition be detected within the eye.

Provision for the Care and Treatment of the Insane.

Dr. Van Deusen begins his paper by stating that "the virtual abandonment of the present system of treatment and provision for the insane in large institutions has been advised, and several reasons

assigned; that the public will not consent to the expense of their erection in sufficient number to meet the requirement; that the cost of the support of the insane therein is too burdensome; and that they are unsuited to the purpose. A few of those who have presented these views favour the substitution of a collection or group of cottages; others, a central hospital with detached cottages; others, again, suggest that the insane be received as boarders in families, making their care an avocation; and, by others, it is asserted that they can be more successfully treated at their own homes."

The author does not view home-treatment with any favour. Whilst admitting that some cases, as of hypochondriasis, may indeed be injured by removal to an asylum, he concludes, as the result of special inquiry, that "the results have not been such as to establish any advantage in home treatment. Aside from the attendant mortality, which has been large, and the number of suicides and accidents occurring, the frequent instances of domestic comfort destroyed, of serious injury to impressible members of the family, and the unpleasant influence upon children from the association (which have been communicated to us, in subsequently urging admission), show that any advantage which may possibly have accrued to the few, has been far more than counterbalanced. How far these attendant difficulties and evils may be obviated through a more generally acquired experience in the care of the insane, and by domestic arrangements designed specially to promote their comfort, we have no means of determining."

Referring to a cry very often heard in this country, that lunacy rates are a grievous burden and hardly to be borne, the writer is sure that there is not only a disposition to meet every expense necessary for the proper maintenance of the insane, but that more attention is now actually demanded for the insane than at any previous time, and that pecuniary considerations alone are less regarded, and those of humanity and scientific requirement and suggestion far more than ever before.

It is unnecessary to follow Dr. Van Deusen in his calculations as to the comparative cost of patients treated according to the various methods, for this subject has been treated very fully already by various writers in this country.

He believes that the system of provision which is the most economical, "and at the same time best adapted to the care and treatment of the insane who can not reside at home, or in private families, is the erection of the requisite number of public institutions, plain but substantial structures, characterised by good taste, furnished with everything essential to health, comfort, and successful treatment, and of course without extravagant embellishment and unnecessary expenditure." It is thus evident that Dr. Van Deusen is a firm believer in the advantages of asylum life for the majority of lunatics. Those advantages he considers consist in the facilities for supervision, the ease with which patients can be classified and the food and medicine

distributed, &c. Should, however, a patient be a suitable case for cottage treatment, he would place him there independent of all considerations of cost.

In some remarks on asylum organisation it is stated that "the assistant medical officers should be gentlemen of ability, if possible with previous hospital experience, and should receive such salaries as would justify them in devoting themselves to the study and treatment of mental disorders." Here I am strongly tempted to draw attention to some of the real causes which lead to many assistant medical officers in asylums to quit the specialty. In England, certainly, they are better off, in the majority of cases, than assistants to private practitioners or in general hospitals. Indeed, unless a man have special facilities for beginning general practice, asylum life offers him many advantages. To be sure he is, at first, not extravagantly paid, but he knows that, should he persevere in his official duties and improve his opportunities by doing original work of sterling quality, he will at last secure a superintendentship, a position infinitely better than that enjoyed by most average men in general practice. In using the word *better* I do not necessarily mean more honourable, but that it is more congenial to men of certain tastes. In a properly organised asylum the medical officers have remarkable opportunities for engaging in original work of the most interesting description; yet it cannot be denied, nay, on the contrary, it is universally admitted and deplored, that they do not sufficiently avail themselves of them. If medical superintendents desire to create an enthusiasm in their assistants for the specialty, let them encourage them to do original work. There are, unfortunately, some men unable or unwilling to undertake real scientific labour; they are content to get along as easily as possible by a strict attention to routine duties; their ample leisure they fill up with desultory reading and social enjoyments. It is, doubtless, very pleasant for a junior officer to be entertained at dinner by his senior; but, without omitting socialities, a real benefit would be conferred on the assistant did the Superintendent but urge him to improve his time and opportunities. When we consider their relations, the Medical Superintendent labours under a grave responsibility in regard to the manner in which he directs the work, reading and thought of his junior, a man, as a rule, fresh from college, and rather apt, perhaps, to relax somewhat in his devotion to study. It is greatly to be feared that some really able men have been driven from the specialty, and that others industrious and eager for work have been forced into unpleasant relations with their senior officers, because of a disinclination on the part of the Superintendents to facilitate the efforts of their assistants in the prosecution of genuine work. Is it to be wondered at that a man quits a specialty when he sees his senior utterly absorbed in studying the quality of shoe-ties, the cut of a cap, and the immensely important subject, whether a woman's dress has six or seven hooks upon it?

Case of Excessive Hypodermic Use of Morphia—Three Hundred Needles Removed from the Body of an Insane Woman.—This case, as reported by Dr. Judson B. Andrews, is certainly somewhat remarkable. The facts are briefly as follows:—A woman, æt. 30, of a highly nervous temperament, had always been of delicate health. In April, 1862, when 20 years of age, she suffered from short, but severe pain in the head, and at the same time she was delirious. Since that date the attacks have recurred at intervals of from one to three months, and are believed to have occurred at the menstrual periods. In 1864, she had acute rheumatism, and in 1865 a severe attack of diphtheria.

To relieve vomiting, which began after the throat symptoms had disappeared and persisted for five weeks, recourse was had successfully to the hypodermic injection of morphia. In July, 1867, she had enteritis and peritonitis, and was delirious during the illness, a period of four weeks. During the four months subsequent to her recovery she had frequent attacks of frenzy, during which she threatened violence to herself and mother. By October she had considerably improved, but it was soon discovered that she was using morphia hypodermically to relieve pains in various parts of the body. She used as much as two drachms in a week, in one or two well authenticated instances; the average, however, was one drachm per week. On May 8th, 1871, she was sent to the Asylum in an acutely maniacal condition, having been in that state for some weeks. She asserted that she had employed the hypodermic injections for three and a-half years, once, and much of the time twice a-day; that during the last few months of its continuance she had used a drachm and a-half of morphia per week; that she inserted the needle perpendicularly to the surface, and often carried its full length into the tissues. On the 13th of August the first needle was extracted from the right breast; another was removed on the 15th, and a third on the 29th of the same month. From this time till September 28th, from one to five needles were removed daily from the breast. During October and November needles were taken from various parts of the body; from the left breast, the abdominal parietes, the mons veneris, the labia, the vagina, the thighs, the legs down to the ankle, the buttocks, the region of the arms, and from the back as high up as between the shoulders. The largest number extracted in any one day was twelve. The patient ultimately died 25th December, 1871, and eleven needles were removed from the tissues at the *post-mortem* examination.

It is impossible to give further particulars of this case, interesting in several particulars surgical and psychological. She presented, in a very striking manner, that excitement so often witnessed in women during the menstrual flow.

Is Insanity a Disease of the Mind, or of the Body?—Dr. Gray and Dr. Wilbur appear to be representatives of the conflicting opinions held concerning the influence of moral and physical causes in the production of insanity. The author of the paper now under notice

applies himself to the consideration of the opinions published by these gentlemen, and has for his object, "to define as clearly as possible the views of these two schools of pathologists, and discuss some of the problems involved." It may be remarked, in passing, that materialism finds little favour in the eyes of our American brethren. To call a man a materialist is considered insulting; "for this word is now deservedly odious, as representing a doctrine weak in science and unsound in morals." Dr. Gray, on the one hand, holds that insanity is a disease of the brain, originating in that organ or in other parts of the body, depending on physical causes, or on moral causes only so far as they are capable of producing physical effects, and to be treated by the same methods as other bodily diseases. Dr. Wilbur, on the other hand, maintains that it is a disease of the immaterial mind, depending for the most part directly on moral causes, and to be treated mainly by moral agencies.

This subject has of late been discussed so frequently that it is quite unnecessary to reproduce here any of the arguments or illustrations adduced on either side. It is very questionable indeed if, with our present information and accumulated facts, much good can result from continued disputation on the matter. Original work and observation are much needed. In its present condition, it may be truly said that the subject has been written to death.

Proceedings of the Association of Medical Superintendents.—With the limited space at our command, it is impossible for us to more than mention the subjects discussed at the twenty-sixth annual meeting of the Association of Medical Superintendents of American Institutions for the Insane held at Madison, Wisconsin, in May, 1872. It would be absurd to attempt to condense matter occupying 125 pages into half that number of lines.

Following the reading of a paper by Dr. Curwen on the "Diagnosis and Treatment of Insanity," a discussion arose, of which Mania Transitoria formed a leading topic. Several very interesting cases were alluded to by various speakers in illustration of the many difficulties encountered by experts in arriving at a true and unbiassed conclusion concerning the mental condition of persons submitted to them for examination.

Dr. Gray read a paper on the "Causes of Insanity." He agrees with the statement made by Dr. Brigham that he always found morbid changes in the brain or meninges at the *post-mortem* examinations of a large number of cases of insanity. "Still," he continues, "it must be borne in mind in this connection, that most of these examinations are made in cases of chronic insanity, and that we are by no means able to infer with certainty from changes then found, the starting point or character of the original lesion. The brain, in such cases, may have passed through consecutive morbid changes. The insanity may have commenced from a general or local congestion of the meninges or brain, due to a diseased condition of the blood vessels,

or it may have followed a shock or great grief or pecuniary loss, occurring while the person was in a depreciated or anæmic state of body, and unable to bear the stress of trouble, for local or general hyperæmia may follow from strain and increased cerebral action under such moral influences, and thus the moral becomes the remote or inciting cause. Months afterwards other changes may take place, either in the blood or the blood vessels, or in the nervous element, or in all from neglect of treatment, or from improper care. Again, the brain may have been overworked just previous to the moral shock, as well as undernourished. In such cases, the congestion or hyperæmia may continue and spread, and the patient die, and examination reveal effusion or simple distension or fulness of vessels to the naked eye. But in cases of sudden death in the acute stages of insanity, we have found congestion, and, under microscopic investigation, often degeneracy of vessels and nerve element more or less marked. This degeneracy, indeed, may have been an antecedent condition to the congestion or hyperæmic state, which acts as the immediately exciting cause of the insanity. In every case, therefore, it is important to have a full history of the previous physical health for some time preceding the actual outbreak. With such information we may often be able to designate the initiative, and the successive pathological changes."

Without denying the potency of moral causes, Dr. Gray attempts to show their true relation as predisposing or inciting influences to the exciting physical conditions, which are the real potential causes. He desires to make it clear "that moral influences operate naturally on all individuals under the laws which govern the inter-relations of mind and body; that moral causes influence physical conditions, both in health and disease, as a fundamental law of being. That, as a general rule, grief, shocks, high emotional activity, &c., do not, in health, carry individuals beyond the limits of physiological action, or simple increased physiological activity; that to produce increased physiological action under emotion is normal, and that accompanying high psychic activity, even manifested in intense, overwhelming grief, or furious passion, is not insanity—we have not disease."

Dr. Landor made a communication on some forms of hysteria which simulate insanity. A case which he related, and others mentioned during discussion, may be referred to by anyone desirous of obtaining curious and interesting information on this very troublesome and puzzling class of patients.

An Act to Protect the Insane.—A woman, called Packard, described as a patient formerly under treatment in an asylum, and discharged unrecovered, has been the means of obtaining the most absurd lunacy legislation which has, perhaps, ever been heard of. She persuaded the Iowa Legislature to pass the act named, the principal features of which, as stated by Dr. Ramsey, are as follows:—A visiting committee is to be appointed by the Governor of the State with extraordinary

powers—higher powers than those possessed or those granted to the Board of Trustees of the hospital. This committee has been appointed by the Governor, and has the power to send for persons and papers, and examine witnesses on oath, to inquire into matters of admission and retention of patients, and their treatment in hospitals by the officers and attendants, and correct any abuse found to exist. It consists of a lawyer, a physician, and a lady of the State. They have power to discharge any person employed in the institution, in their opinion meriting discharge; and for non-compliance with, or violating any provision of the act, imprisonment not exceeding three years, or a fine not exceeding one thousand dollars, or both imprisonment and fine may be imposed upon conviction. This committee is to visit the hospital monthly or oftener, and they are obliged by the act to attend immediately to the requests or charges of any patient who complains of improper treatment in the hospital. In the language of the bill, patients are allowed to write when, what, and to whom they please, and the superintendent of the hospital, or any person employed, is forbidden, under the penalties of the act, to open these letters or retain them. All letters may be sent, not directly to their friends, but to this committee, who have the power to read them and to judge of the propriety of sending them to their destination. The names of this committee and their post-office address must be posted up in every ward of the hospital, and the patients may write as often as they choose, though it seems probable one clause in the bill gives the superintendent power to restrict writing to once a week. This committee have the power to prohibit patients writing, if they see fit; but the act takes away all power of the superintendent as to his discretion in the matter.

Although this act has been but a short time in operation, its evil effects are already apparent. Dr. Ramsey states that patients under curative treatment are prematurely removed, and discipline has been utterly destroyed. Yet no relief can be obtained for two years from this most absurd and wicked law. It is to their credit that the trustees of the hospital assisted Dr. Ramsey in his opposition to the act, and it is to be hoped that they will not cease to defend him and his patients from the effects of such an absurdly ignorant and villainous enactment. With justice does Dr. Workman suppose that the members of Legislature of the State of Iowa are in a fit state to fill the only asylum in the State.

As is well known, we have in this country some troublesome men, sane and insane, who have long attempted to prejudice the public mind against asylum management. A short time ago their efforts were really frantic, yet, not only did they fail in substantiating their charges, but they benefited the people they hoped to injure. Our enemies proposed some wild measures, a few almost as absurd as the Iowa "Act to protect the Insane," but they all have ended in smoke, and our position is firmer than ever. It cannot be denied that, among the general public and the medical profession in this country, old prejudices

are gradually disappearing, and an intelligent interest taken in the management and medical treatment as pursued in our public asylums. Some wiseacres, like those comprising the Iowa Legislature, have attempted to carry into practice the idea that asylum boards should interfere with the most minute details of asylum management. Fortunately this idea has been carried out in a very limited manner in this country; where it has been attempted, the results have been disastrous. Experience has proved beyond dispute that an asylum can be best managed in every respect when it is directed by an able Superintendent, possessing almost, if not absolute power, in all matters.

The Journal of Psychological Medicine, vol. vi., January to April, 1872.

January, 1872. No. 1.—ORIGINAL COMMUNICATIONS: "The Psychical Status and Criminal Responsibility of the Totally Uneducated Deaf and Dumb," by Isaac Lewis Peet, A.M. "Materialism in its Relations to the Causes, Conditions, and Treatment of Insanity," by H. B. Wilbur, M.D. "Medico-Legal Points in the Case of David Montgomery," by William A. Hammond, M.D. "The Development of Religious Ideas," by James J. O'Dea, M.D. "Remarks on a Case of Reported Recovery from Glosso-labio-laryngeal Paralysis," by T. M. B. Cross, M.D.

CONTEMPORARY LITERATURE: Reviews. Bibliographical Notices. CHRONICLE: Letter from George E. Day, M.D., F.R.S. Physiology and Pathology of the Brain and Nervous System.

April, 1872. No. 2.—"The Hamlet of Edwin Booth: a Psychological Study," by A. O. Kellogg, M.D. "Historical Sketch of the General Paralysis of the Insane," by M. le Dr. Ach. Foville, jun., translated by E. S. Dunster, M.D. "A New Definition of Insanity," by Thomas K. Cruse, M.D. "On the Pathogeny of the Infarctions or Congested Patches which follow Embolism," by John J. Mason, M.D. "A Case of Diffused Cerebral Sclerosis," by Henry R. Baldwin, M.D. CONTEMPORARY LITERATURE: Reviews. Bibliographical Notices. CHRONICLE: Letter from George E. Day, M.D., F.R.S. Physiology and Pathology of the Brain and Nervous System. Anthropology.

July, 1872. No. 3.—ORIGINAL COMMUNICATIONS: "The Composition of Mind," by John Fiske. "Some Medical Questions of the Lawler Will Case," by Robert Bartholow, A.M., M.D. "Suggestions relative to the Sequestration of Alleged Lunatics," by R. W. Parsons, M.D. "On the Phenomena and Movements of Rotation consecutive upon Removal of the Brain," by M. Onimus. Translated from the *Revue des Cours Scientifiques*, by C. N. Hammond. "Theomania," by Allen McLane Hamilton, M.D. CONTEMPORARY LITERATURE: Reviews. CHRONICLE: Letter from George Fielding Blandford. Physiology and Pathology of the Brain and Nervous System.

The Psychical Status and Criminal Responsibility of the Totally

Uneducated Deaf and Dumb.—Mr. Peet's experience of nearly thirty years enables him to add his testimony to that of other instructors of the deaf and dumb, to the effect that the cases of hearing-mutes, with good intellectual capacities, are so rare as to make the possession of hearing in connection with want of speech *prima-facie* evidence of mental imbecility. He mentions the curious facts, "that the drum will at once attract the attention of any deaf-mute, however profound his deafness, and the idea of musical *time* is appreciated by the majority of this class. Experiment has shown that the telegraph alphabet of Morse, beaten on the drum, on the principle of a single strong beat for the short dash, and a quick double-beat for the long one, gives rise to vibrations affecting the deaf so distinctly, that a class of such persons, with their faces so turned that they could not catch sight of the instrument, have recognised words spelled by this means, and written them promptly and accurately upon the black-board; and, in at least two instances, deaf-mute young ladies, without a particle of hearing, have been taught to render correctly, on the piano, strains of music represented to the eye by notes."

It must be remembered that "the term *uneducated*, as applied to deaf-mutes, is not to be understood as implying merely the absence of training in verbal language, but of all successful attempts on the part of those around him to make available to him the observation and experience of others, and to fix in his mind general principles of thought and action."

Opinions have differed widely as to the intellectual capacity of the deaf-mute. According to Blackstone, those deaf, dumb, and blind from birth must of necessity be idiotic. Mr. Peet, however, refers to the celebrated case of Mitchell to prove that, in such apparently hopeless circumstances, the germs of a sign-language are capable of development, so as to furnish a medium for all necessary communications.

M. Guizot, of Groningen, held that "this unfortunate class (the deaf and dumb) are by nature cut off from the exercise of reason; they are, in every respect, like infants, and, if left to themselves, will be so always, only that they possess greater strength, and their passions, unrestrained by rule or law, are more violent, assimilating them rather to beasts than to men." On the other hand M. Bébien contends that "deaf and dumb persons only differ from other men by the privation of a single sense. They judge, they reason, they reflect. And, if education exhibits them to us in the full exercise of intelligence, it is because the instructor has received them at the hand of Nature, endowed with all the intellectual faculties."

Mr. Peet says that "to reconcile these conflicting opinions of eminent authorities, we must recal the fact already stated, that there is an immense difference, both mental and moral, between a deaf-mute who has been neglected, and possibly hidden away from society as a family disgrace (a treatment not unusual in the times before the zeal and success of De l'Épée made deaf-mutes objects of curiosity, attention, and

wonder), and a deaf-mute who has been blessed with kind companions, and has been encouraged and aided to enlarge and improve his pantomimic dialect. In a deaf-mute in the *former* condition, even the germs of the rational and moral faculties are scarcely manifested. In the *latter*, they have acquired a very considerable but somewhat peculiar development."

It is a very interesting and important fact that all who know the deaf and dumb thoroughly, agree in stating that there does not exist a well-authenticated case of a deaf-mute who gained any correct ideas on religious subjects by his own unaided powers of observation and reflection. No deaf-mute has given evidence of having any innate or self-originating ideas of a supreme being, to whom love and obedience are due, of a Creator, or of a superintending providence, of spiritual existence, or of a future state of rewards and punishments.

From a consideration of the facts brought forward in the paper, "it may be inferred that by his own unaided, uninformed intellect, and uninstructed nature, the uneducated deaf-mute does not arrive at the idea of what is really right or wrong, and is ignorant of general law, either human or divine. He may be obedient, diligent, affectionate, habitually honest, but it will be owing to the influence of kind and firm control and good example, *not* to the higher moral and religious motives that are addressed to children who hear. He is too often self-willed, passionate, prone to secret vices; but this unfavourable phase of character is generally chargeable to early injudicious indulgence, the example of evil companions, and the lack of those *higher* motives that are supplied by religious education. He is *suspicious*, because he has been the butt of thoughtless companions. He lacks self-control, because he cannot, as well as others, appreciate the consequences of his actions. He *wishes*, as well as those who hear, to be *loved* and *respected*, and, like them, conceals his evil practices from those whom he knows would disapprove of them. But he cannot distinguish between the approbation of the good, and the mere complaisance of the unthinking; is apt to mistake the laughter of the latter for applause; and, when he is thwarted in his desires, the folly and criminality of which he cannot appreciate, he is apt to think himself the victim of an unjust discrimination and oppression.

"The view which has been taken of the intellectual and moral condition of the uneducated deaf-mute seems to settle the question of his criminal responsibility. One who knows, and can know, no more of law than what he can infer from the consequences which he has noticed are likely to follow from specific acts, who often mistakes his impulses for principles, and whose character is settled for him either by natural endowment or by the peculiar circumstances in which he may be placed, can hardly be considered as accountable in any ordinary sense of the term. Still, when he commits crime, he imperils the safety of the community, and violates the sanctity of the law, whose interference must, in some way, be invoked."

Such being Mr. Peet's views on the subject it is scarcely necessary for us to follow him when he discusses the legal aspect of the question. In connection therewith he brings forward much interesting material, which may be with profit referred to by anyone interested in the subject.

Medico-Legal Points in the case of David Montgomery.—In attempting to give a summary of this case, with Dr. Hammond's remarks thereon, we shall simply reproduce a sentence, or paragraph, here and there, as occasion may require.

The prisoner, Montgomery, is twenty years of age, has followed the occupation of a carter, and has never been suspected of mental derangement, dementia, or epilepsy, by those who knew him outside of his own family. Several members of the family, however, testified, in the previous proceedings relative to his sanity, that he had been subject to epilepsy since infancy; but the commissioners could only satisfy themselves that he had had three attacks up to the time of the homicide; therefore it may easily be assumed that, notwithstanding the possible existence of epilepsy, his mind has not, in consequence of such disease, undergone marked deterioration.

At the age of about eighteen he married; but had lived upon bad terms with his wife, who had been a prostitute, and who insisted upon returning to her former occupation. A week before the homicide she left him, taking with her their child, eight months old. On the evening of the day (Saturday) before the homicide, Montgomery went to her mother's, where she was stopping, and persuaded her to return home with him. They arrived at their home about twelve o'clock at night, and she was killed the next morning between the hours of six and eight. Many of these particulars, as well as the subsequent ones, are derived from the statements of the prisoner.

From these statements it appears that they awoke early in the morning, and began to talk of their difficulties. He told her that if she would remain at home and stop going with other men, he would forgive her. She replied that she would not, that she was a prostitute when he married her, and he knew it; and that she had always been one, and always would be one. He replied that he had made up his mind that, if she would not live with him, she would not live with anyone else. He then got out of bed, partially dressed himself, and went to his father's house, a few rods distant, and took from the back-yard an axe, with which he returned to his own residence. On entering the room where his wife was, he found her asleep. He stood by the stove a few minutes deliberating whether he should kill her or not. Finally he determined to do so, and then struck her on the head, just above the left temple, inflicting a mortal wound, of which she died.

He then left the house, and, meeting a younger brother in the street, told him what he had done; and then taking a razor from his pocket attempted to cut his own throat. In this effort he was prevented by

his father and brother, and was by them persuaded to give himself up to the police. On his way to the gaol he stated to the officer that he had at first thought of going to Canada after killing his wife, but, concluding that he would be caught, he had determined to give himself up.

Upon a careful consideration of the evidence I gave it as my opinion that epilepsy of itself was not sufficient to destroy responsibility, and that, though the prisoner had probably suffered from occasional epileptic seizures, there was nothing to show that the crime of which he was accused was in any way the result of such a paroxysm. On the contrary, the circumstances appeared to indicate that the prisoner acted with deliberation and full reason. I, however, stated that I could not give a definite opinion on these latter points without examining the accused.

Two careful examinations of the prisoner left no doubt on my mind of his entire responsibility for the murder. At the same time there was no question that his intellect was undeveloped, and that he had had occasional paroxysms of epilepsy. There was, however, no mental aberration, and the circumstances of the deed and his subsequent conduct were such as to shut off all idea of unconsciousness.

It by no means follows that an individual suffering from epilepsy is not as fully responsible for his actions as healthy persons.

Reynolds, who has written the best work on the subject in the English language, states that the disease in question, even when fully pronounced, does not necessarily involve mental change. In thirty-eight per cent. of his cases the mind was unaffected in any way.

It is very certain, therefore, that the mere fact of the existence of epilepsy in a person accused of a crime is not sufficient to abrogate responsibility. My own experience abundantly supports this view, and it is well known that some of the greatest men who have ever lived, and who were remarkable for their intellectual vigour—Julius Cæsar and Napoleon Bonaparte for example—were epileptics. Cases have been under my observation, in which the disease had lasted for many years, without apparent mental derangement or failure.

It frequently happens that the insane in lunatic asylums are at the same time epileptics. But insanity with epilepsy is a very different thing from the insanity which results from epilepsy. It is for this reason that Falret, in the foregoing quotation [Dr. Hammond gives an important passage from Falret's "*L'Etat Mental des Epileptiques*"], attaches little importance to the views of asylum physicians on this subject, and his opinion is the more valuable, as he is himself the superintendent of a large asylum in France.

Crimes may be committed by epileptics without responsibility under three conditions, and no others:—1. Either as a consequence of mental imbecility resulting from repeated attacks of epilepsy. In such a case the condition of the individual would be one of dementia, and he would be incapable of judging of the consequences of his act, and the act

itself would be without motive. 2. During the state of high maniacal excitement which sometimes follows an attack, and in the otherwise insane precedes it, in which case the act would be indeterminate. 3. During the state of unconsciousness, resulting or attending upon the paroxysm. In this case there would be no subsequent recollection.

We consider the preceding extracts sufficient to indicate the nature of the case, and the value of Dr. Hammond's observations in connection with it. The prisoner was convicted of murder in the first degree, although several experts gave their evidence in support of the plea of insanity.

(To be concluded in the next number.)

3.—Italian Psychological Literature.

The numbers of the "Archivio" which have come to hand since our last notice do not contain the usual amount of interesting original matter. One reason for this is much to be regretted; the death of Professor Castiglioni in October, 1871, deprived the periodical of an able editor, whose own contributions were always of value.

Dr. Castoldi has published an excellent monograph on *Alcoholism*, as observed by him in the Ospitale Maggiore of Milan. This state has become far more frequent in Italy since the grape disease has prevailed there, and led to the use of spirits instead of wine. Maniacal attacks following a drinking bout seem to be relatively more frequent there than with us; they are of sthenic character, resembling meningitis in the general character of the symptoms, which are aggravated by opium. *Delirium tremens* (which he describes very carefully) he treats usually with chloral-hydrate, reserving opiates for those cases where the tremor and weakness are particularly prominent; he usually combines the opium with bark.

There are some sensible remarks on the *therapeutics of insanity*, in the triennial report of San Servolo's at Venice, by Padre Salerio, the medical superintendent. He attaches the greatest importance to abundant food, which needs to be more substantial than in health, and has comparatively little faith in drugs; however, he considers cinchona, administered for a long time, to be the best sedative of the nervous and vascular systems, and relies on a combination of digitalis and opium in melancholia accompanied by hallucinations.

An interesting case has occurred to Prof. Burresi, in which a young man received a stiletto wound in the dorsal region close to the right side of the vertebral column. The symptoms immediately produced were those of *spinal hemiplegia*, and a careful examination distinguished them as follows:—In the right lower limb, power of voluntary motion was lost; reflex movements normal; tactile and thermic sensibility were preserved, and the sense of pain was increased as far as the groin. In

the left lower limb, on the other hand, the power of voluntary and reflex motion was intact, but sensibility to tactile, thermic, and painful impressions was abolished, the muscular sense only being intact. This case bears out, in an interesting manner, Brown-Séquard's experimental semi-sections of the spinal cord, the only point in which it seemed opposed to his results being that the temperature was always found to be about 0.5° C. lower in the right than in the left ham.

There is a good sketch of *moral insanity*, by Dr. Brugnoni, of Bergamo, who gives a remarkable case of a woman who had tried to castrate her children, to poison her family, to blacken the characters of others by false accusations, and had committed other acts of the like enormity, but who concealed or explained them away with such consummate art that her condition could not be established until she had been placed under continued observation in his asylum. He points out that "moral insanity" is almost always hereditary, and being, therefore, due to some congenital malorganisation, has no stages of incubation, development, or recovery, but is essentially chronic and continuous, admitting of improvement, but not of cure. In those few cases where it is not hereditary, it occurs (the author considers) in persons of an hysterical or hamorrhoidal diathesis, and is of very short duration.

Dr. Verga has begun to give an account of *General Paralysis*, which is interesting. His experience seems to have led him to believe that the melancholic variety of this disease is more frequent than is generally supposed, at any rate in England. He has observed certain prodromata in general paralysis which are not seen in ordinary insanity, viz., headache, epistaxis, heat of head, redness of face, somnolence, fornication, convulsive, apoplectiform, or syncopal attacks, &c.; rather later, the character may be observed to be completely changed, or there may be a notable exaggeration about everything that the patient says or does. The hereditary affinities of general paralysis are not with ordinary insanity, but with paralysis, apoplexy, and other brain diseases.

We have received, for the first time, the "*Rivista Clinica*," of Bologna, for the year 1872, the second year of its existence under its present management. It is a monthly periodical of considerable merit, and, although most of its contents cannot be noticed here, it may be confidently recommended as a very favourable specimen of medical journalism. There is an article by Dr. Meriggi, of Paria, on the *Influence of Variola on Insanity*, which is important. The author has observed variola followed, in four cases, by insanity: two of these appear to have been cases of maniacal delirium in patients enfeebled by the previous disease, and speedily recovered; the other two were of a melancholic type, and one of these died, the other remaining in a very unpromising condition. In one case of epileptic mania an attack of variola was followed by a great diminution in the number of the fits, and considerable mental improvement; and in two other cases

chronic maniacs were considerably better after having small-pox. Finally, Dr. Meriggi gives two cases from his own practice, and quotes one of Dr. Lombroso's, in which insanity, supposed incurable, completely passed away after an attack of the same disease. He points out that this is exactly analogous to the relations between typhus and insanity recently described by Nasse of Berlin in his monograph.

Two interesting cases of progressive muscular atrophy are described by Dr. Riva, in one of which mania, in the other melancholia, accompanied the other disease. Galvanization of the sympathetic in the neck cured the latter case; the maniacal patient dying of intercurrent pneumonia, but considerably improved under treatment.

The "*Rivista di Discipline Carcerarie*" gives an interesting account of a paper, by Dr. Biffi (also contained in the "*Archivio*"), on the provision which should be made for criminal lunatics. In the main his conclusions are optimistic; he believes the proportion of lunatics in the Italian prisons to be extremely small, and considers that they do not "present such alarming moral conditions" as at Broadmoor and Perth. He objects very strongly to all the criminal lunatics in Italy being collected into one asylum, and thinks that, as a matter of justice, all those persons who are recognised by the law as having been insane before the commission of the criminal act, should be confined in the ordinary asylums, public or private, but subject to special police supervision. Those only who become insane after a crime has been committed should be placed in a separate asylum, after some observation in the prison infirmary.

This paper was read before the Institute of Lombardy, and elicited some judicious criticisms from Prof. Lombroso, who believes that the number of lunatics not recognised as such, and detained in the Italian prisons, is very much larger than Dr. Biffi supposes. As to the more favourable moral character of Italian criminals, he believes Dr. Biffi to have been led into error by having seen only the prisoners in the reformatories and houses of correction: had he had to deal with convicts he must have come to a very different conclusion. His own examination of the Italian prisons has proved that in all of them there are lunatics confined in strong cells.

It is to be feared that, in the present political and financial condition of the kingdom of Italy, no change will yet be made. On the other hand the existing asylums are being improved, and fresh ones are being erected, under the self-government of the different provinces; the details given are most gratifying, and show that no expense or pains are spared to provide suitably for the insane. Southern Italy is much worse off at present than the north or centre; and unfortunately a war was waged for some time, as to the management of the new asylum at Madonna dell' Arco, between Dr. Micaglia, who is known to our readers, and the authorities of this house, as to the merits of which we cannot judge, but which seems to have ended disastrously for the good government of the asylum.

PART IV.—NOTES AND NEWS.

QUARTERLY MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A Quarterly Meeting of the Medico-Psychological Association was held in the Medical Society of London Rooms, 32a, George Street, Hanover Square, on the evening of January 22nd, 1873.

In the absence of the President (Sir J. COXE),

Dr. H. MAUDSLEY, F.R.C.P., was voted to the chair.

The following members were present :—H. Maudsley, H. R. B. Wickham, Thos. B. Christie, Dr. Boyd, J. H. Paul, J. Murray Lindsay, Dr. D. Macintosh, Dr. Sankey, Dr. Niven (of Bombay), A. H. Stocker, Robt. Dunn, Dr. Lockhart Robertson, Harrington Tuke, W. Rhys Williams, S. W. D. Williams, W. Orange, H. J. Manning (Salisbury), W. J. Mickle, J. R. Greenway, H. Rayner, T. Warwick, E. S. Willett, W. Clement Daniel, F. Schofield, J. D. Seaton, Edgar Sheppard, M.D.; visitor. Dr. J. Ogle.

Dr. MAUDSLEY, on taking the chair, said that he regretted to have to make an announcement which must be disappointing to the members present. The paper which Dr. Blandford had been announced to read he had, unfortunately, been prevented from preparing by reason of family illness. There would not, therefore, be any formal paper to-night; but he hoped that, notwithstanding the disappointment, there might still be a profitable evening of scientific discussion, and that each member would feel himself called upon to contribute thereto from the stores of his experience. He should call first upon Dr. S. W. D. Williams to make some remarks on some morbid specimens of softened bone in the insane.

Softening of the Bones in the Insane.

Dr. S. W. D. WILLIAMS During the last four years so much has been said in the Press respecting the occurrence of fractured ribs in Asylums, that I have paid special attention to the conditions of the ribs in patients dying at Haywards Heath Asylum; and thinking that there would be a quarterly meeting of the Association in October last, I had prepared some very good specimens of diseased bone to show. These are all, unfortunately, now destroyed, and I fear those I have with me this evening are not of much pathological value. I have with me, however, ten specimens of more or less diseased ribs, taken from ten different individuals. These are the product of the last four months, and would lead us to infer that nearly half the insane have ribs more or less diseased. This is, of course, due rather to feeble health and exhausting bodily disease than to the mental symptoms. A rough analysis of some of those bones showed that in most instances, contrary to a normal state, the animal matter much exceeded the earthy. Gray gives the organic constituents of healthy bones as being one-third, as against inorganic two-thirds. In the bones I analysed, roughly, I found that, as a rule, the converse obtained, the organic being in excess of the inorganic. My rough analysis was made by subjecting the bone to dilute nitric acid to obtain the quantity of animal matter, and calcining it to obtain the earthy.

H K., *æt.* 70, female.—Suffered from chronic mania, with feeble health and chronic rheumatism for many years. When admitted to Haywards Heath Asylum, in 1862, she was in very feeble health, and she remained so until her death, last September. Her death was due to valvular disease of the heart. The bones throughout the body were extremely soft, and the ribs broke on the slightest pressure. Many of the ribs had been fractured, and were partially healed; there was, however, no displacement of the ends, and union was cartilaginous. Many bones were bent, and the ribs were pressed in at the sides. A force of 1lb. broke the sixth rib, and one inch of the bone weighed 5gr.

A rough analysis gave—

Animal Matter	...	...	...	72.73
Mineral do.	...	...	...	27.27

E. B., female, *æt.* 73.—Suffered from senile melancholia from 1868—extremely feeble state on admission, and is said to have suffered from rheumatic fever some years ago. Her condition never improved. She often refused food, and her bodily health remained very feeble. An attack of acute pneumonia carried her off in the latter part of last year. The cranial bones were thin and soft. The ribs, as the specimen will show you, were a mere shell, extremely thin, and filled with a dark reddish fluid marrow. A force of 2lbs. caused an immediate fracture. One inch of bone weighed 8gr.

ANALYSIS.

Animal matter	...	...	...	...	...	56·87
Mineral do.	...	...	...	...	...	43·13

E. P., female, *æt.* 65.—Case of dementia. General health bad. Suffered from double cataract Neurosis of bones of ankle, &c., and died from Bright's disease of kidneys. The cranial bones were thin and soft. The ribs very easily broken by a force of 3lbs., an inch weighing 12gr.

ROUGH ANALYSIS.

Animal matter	...	...	...	...	...	55·15
Mineral do.	...	...	...	...	...	44·85

L. G., *æt.* 23, female.—An idiot corresponding to Esquirol's third class. She was small, feeble, and deformed, and unable to walk. Died of pulmonary consumption. Ribs very soft, and easily bent. Broken by a force of 6lbs., each inch weighing 13gr.

S. F., female, *æt.* 70.—Suffered from senile dementia; duration of disease 12 months, died from sanguineous apoplexy. Heart diseased. Cranial bones thickened, ribs very fragile, and fractured by a force of 8lbs. Weight of 1 inch of bone 22gr.

C. G., male, *æt.* 38.—General Paralysis of three years' duration. Admitted to Haywards Heath 4th January, 1872; died 10th October. Exhibited the usual symptoms of general paralysis. Force required to break rib 9lbs. Weight of 1 inch of bone 23gr.

C. E., female, *æt.* 54.—Suffered from epileptic dementia for many years, but her general health was good until within a few months of her death, which occurred from cancer of the liver. Ribs easily fractured by a force of 13lbs, and one inch weighed 19gr.

F. D., female, *æt.* 46 yrs.—Suffered from epilepsy for many years, and died eventually from a rapid succession of fits. Had also amyloid degeneration of liver and kidneys. Ribs soft, and easy broken or bent. A force of 12lbs. broke them, and each inch weighed 16gr.

ROUGH ANALYSIS.

Animal matter	...	...	...	...	...	55·17
Mineral do.	...	...	...	...	...	44·83

J. A., male, *æt.* 48 yrs.—Case of general paralysis of an ordinary type. Skull very thick, in some places fully $\frac{1}{2}$ inch. Ribs all very brittle. Great deficiency of osseous tissue. with increase in medullary substance. Force required for a fracture, 14lbs. One inch weighed 18gr.

R. R., male, *æt.* 51 yrs.—Suffered from mania of many years' standing. Died with fatty degeneration of the heart and tuberculosis of the lungs. Ribs large, but brittle; broke with a force of 12lbs. They weighed rather heavily, viz., 25gr.

Dr. SANKEY said he had expected, from the title of the paper read by Dr. Williams, that he was about to show that a condition of *mollities ossium*, or at least a diminished strength of the bone existed, as a rule, in general paresis—a conclusion which was quite contrary to his own convictions and experience. Dr. S. had himself offered to this society a different solution of the frequency of fractured ribs in the insane. He had attributed it rather to a condition of slothfulness of the nerve current in general paresis. But so far from Dr. Williams' observations demonstrating that a state of *mollities ossium* was a morbid characteristic of general paresis, it seemed to point to an entirely opposite conclusion. The author had shown satisfactorily that the strength of the bony tissue has varied much from the normal state in the bodies examined by him in his asylum, but apparently this condition did not occur so frequently among the patients dying of general paresis as among the rest of the subjects. Dr. Sankey's own experience went to prove that the

instances of fractured ribs were much more frequent in the recent admissions and at the earlier period of the disease, but the instances of diminished strength of bone, so far as he could gather during the reading of the paper, seemed to be gleaned from old standing cases, in the greater proportion at least. So that the cases have no reference (as the title of the paper had led him to suppose) to the pathology of paresis in particular. Dr. Sankey had frequently met with abnormal conditions of the bones in his old cases, and attributed it rather to a state of general mal-nutrition from different causes. The bony tissue he had found so fragile as to be readily cut with a scalpel. Sometimes the opposite or an ivory state of the calvaria was present. In one case he found the calvaria about one inch in thickness, but so porous that water ran through it as though it was a sieve.

Mr. R. H. B. WICKHAM said he had once a good deal of experience of broken ribs, and being struck with the fact that nearly all the cases were those of general paralysis, had instituted enquiries into the matter. He found the test of suspending weights to the ribs of paralytics most fallacious. Having procured some healthy bones from Professor Turner he found that in some instances ribs which snapped like pipe stems when *in situ* bore up more weight than those healthy ones. He also tried kneeling on the corpses of deceased general paralytics, but was never able to break the ribs in that way, although when he had taken out the sternum the bones were singularly brittle. Perhaps, however, the ribs are more easily broken in the living than the dead subject, as in the latter, offering no resistance, they would not be in a state of tension. He was of opinion that the test by weight could only be regarded as good corroborative evidence of the brittleness of ribs, which must first be determined microscopically and chemically. In reply to a remark made by Dr. Sankey, he said that he was afraid they were drifting into the discussion of too large a subject. It ought not to go forth to the public that they were trying to make them believe that if a man got his ribs broken in an asylum, therefore he had diseased and easily fractured bones. If two or three strong men resolve to master a maniac at any hazard, and are utterly without scruple in the means they employ, the strongest ribs in the world may be broken. In a case which he had seen himself, an unfortunate man was taken down two flights of stone stairs by two men. They had a struggle at every step, and the patient was of a most vicious turn, attempting to bite and so forth. A day or two after, when he arrived at the asylum, he was found to have at least half a dozen ribs broken. So far from considering it due to disease, he looked upon it as the most natural termination to the performance.

Dr. MURRAY LINDSAY—My experience would generally confirm the remarks of Dr. S. Williams, as I have known instances of disease other than insanity where the bones were soft and easily broken, and I do not think it is confined to the insane, but in general paresis where the case is of old standing I have found the ribs very soft, and also in epileptics, where I have easily snapped them asunder.

Dr. TUKE—I have not in my own practice met with any case of fractured ribs, nor have I noticed in general paralysis that tendency towards fragility of the bones which is proved to be not unfrequent by the experience of the writer of the paper read this evening, and the concurrent testimony of so many observers. It appears to me that it is well the fact should be established, not to account for ribs already fractured, but to warn us that all violence must be avoided, and that in addition to the care and gentleness required in the care of the insane, we have a new reason for caution, in the danger that seems imminent of easily fracturing the more exposed bones.

Dr. RHYS WILLIAMS stated that when he was at the Three Counties Asylum they found a confirmation of the opinion expressed as to the softness of bones in old standing cases of general paralysis, but his experience at Bethlehem led him to say that excessive fragility was not present in recent cases, and where the paralysis is more rapid.

Dr. OGLE was much interested in the subject of the paper, inasmuch as the action of the nervous system on the growth, structure, and condition of bones, had fallen within the scope of some lectures which he gave at the College of Physicians, on the Nervous System. The influence of insanity, a condition in which there is aberration of the nervous centres, upon the osseous tissues, received illustration from experimental interference with nerve supply to bone and from other conditions. That bone was supplied by nerves, although this fact had been disputed, was a matter of demonstration, albeit it might be uncertain what share or part the so-called sympathetic, and the purely cerebro-spinal systems had in this supply; and

experiment had shown that injury, such as section and excision of nerves supplied to the limbs, led to changes in the structure, not merely of the soft parts, but of the bones; and this, independently of the alterations in the bone from resulting absence, or diminution of muscular action. In some experiments, however, curiously enough, interference with nervous supply to bone led to hyperostosis. Physiologists had taken different views on this subject, but further reference to these differences Dr. Ogle thought out of place at the present time. Dr. Ogle then referred to some interesting preparations made by the late Professor Van Der Kolk, which at his lectures at the College of Physicians he was able to show, through the kindness of the authorities of the University of Oxford, by whom they had been purchased. These preparations illustrated the effects of injury of nerves upon bones of the extremities of lower animals. Dr. Ogle also alluded at some length to the cases (somewhat rare) which had been placed on record, of fracture of an upper and of a lower limb coincidentally with fracture of the spinal column, and injury of the cord; in which the healing and union of fracture in the upper limb above nerve supply remained intact, contrasting very markedly with the tardiness or absence of union in the lower limb, whose nerve-supply had been interfered with by the injury to the spinal cord.

Dr. WILLIAMS—Respecting the cases I have exhibited to-night, and owing to there being some slight misunderstanding as to the object I had in view, I wish to explain that I have not confined myself to general paresis, but have taken ribs from all classes of insanity. I am not at all prepared to advance the theory that general paralytics suffer from any special disease of the bones; all I would say is, that the insane generally, being often the subjects of exhausting bodily diseases, have very brittle and diseased bones, not because they are insane, but because they are usually the subjects of exhausting bodily diseases. Therefore, such being the case, it is scarcely to be wondered at that occasionally fractures of ribs occur in asylums. Dr. Wickham has asked me to explain the process by which I have endeavoured to arrive at the force necessary to break each rib. My mode of procedure was as follows. I obtained an ordinary small steelyard, weighing up to 40lbs. On the dial above the index, and running freely in the same groove as the index, was a small movable piece of metal, which, when the index rose, was pushed up the dial, and on the index falling remained at the highest point to which the index had risen. Then, always taking the 6th rib, I cut the intercostal muscles on each side, and having fixed the hook of the steelyard to the sternal end of the rib, pulled until the rib broke. The piece of metal remained at the point on the dial to which the index had risen, and thus pointed to the number of pounds required to cause the fracture. This mode is, of course, rough and not very reliable, the results often being somewhat contradictory, therefore I cannot claim infallibility for it.

A Case of General Paralysis.

Dr. BOYD, at this stage, introduced to the society a patient suffering from general paralysis, and said—Observing from the notice of this meeting that my friend Dr. Duckworth Williams intended exhibiting some interesting pathological specimens relating to the state of the bones in general paralysis, or paresis as it has been more recently termed, and having at the St. George's and St. James's Dispensary a man with the premonitory symptoms of this disease, in which stage it is seldom seen, if ever, in asylums, I thought it might interest some of the members if I requested him to be present here to-night to be accompanied by his wife, who can answer any questions that any of the members may ask respecting her husband's illness. They have a family of four children, he is a tailor by trade, aged 38, of temperate habits, has worked sixteen years in one establishment in St. James's Street; his employer who called upon me respecting him gave him an excellent character, and stated that his shopmates had observed something wrong or strange about him of late. He came under my care on the 19th Nov. last, two months ago. The manner in which he came into the room, his unsteady gait, general tremor, then his slow, thick, and indistinct articulation, at once revealed to me the nature of his case, the first of the kind I had seen at the Dispensary, and I pointed it out to Mr. Jones, the resident surgeon, as a typical case of general paralysis commencing in the spinal cord, the mind not being much, if at all impaired. Mr. Jones told me afterwards that he was so shaky on his limbs that he hesitated about letting him go home alone. His pulse 78, skin cold, tongue clean; he felt unable for, and had given up, work. I recommended rest, told him to send some one, not to come himself to the Dispensary, to apply small blisters repeatedly

to his spine, from the nape downwards, and prescribed a mixture containing the $\frac{1}{3}$ of a grain of the bichloride of mercury to be taken twice daily. His wife attended afterwards at the Dispensary about once a week. From her I learned that about six years ago her husband received a sudden shock from hearing of the death of his mother suddenly at the railway station in the country, where he went to see her. He afterwards had an illness which lasted five or six days, but he has been nervous since. Three years afterwards his father died, he had apoplexy and hemiplegia of left side a year before his death, since then her husband has become more nervous, although still able to work. She said the blisters seemed to give him relief, and she continued to apply them to the spine; his appetite was good; some shopmates who called to see him at Kennington, where they had removed, thought him better. On the 16th instant he came to the Dispensary; he had wonderfully improved in walking. I omitted the bichloride solution and prescribed a mixture for a troublesome cough, of which he complained. I shall feel obliged for any suggestions that would be likely to lead to further amendment in this case from any gentleman present, after examining the case. At our meeting in these rooms two years ago, I had the honor of reading a paper, and endeavoured to show that it is not uncommon for general paralysis to commence in the spine, the mental faculties remaining unimpaired. Such cases do not occur in the usual routine of asylum patients; there the mental disorder has usually preceded the paralytic affection of the speech and limbs. Amongst professional men, however, especially of the law, this form of the disease is not uncommon. I can call to my recollection at least five fatal cases, three of them members of the legal profession. Some of them survived for years, after the first appearance of the disease, their mental faculties weakened, but not requiring removal from their homes. Very recently a man in an extensive business called upon me in the evening; he was rather abrupt and excited in his manners, but quite rational in his conversation; he appeared to me to have the pre-monitory symptoms of general paralysis, and amongst other things I suggested a blister to his nape. His wife told me afterwards that he had felt a numbness in one hand, and showed me a specimen of his writing, which was irregular and different from his usual style. He had been under treatment for some months for albuminuria. When I last saw him he was excited and obstinate; he persisted in going into his place of business; he quarrelled with his men, his pulse was high (96); face flushed. In a day or two afterwards he went to the country, where decided symptoms of mental derangement have appeared, almost simultaneously with those of general paralysis. Since the condition of the spinal cord in general paralysis has engaged the attention of foreign writers, it may probably be more attended to than hitherto in this country. I find in the *Journal of Mental Science*, page 446, for Oct. 1872, since Westphal's observations, the spinal cord of every patient in the Göttingen Asylum, who died from paralytic disease of the brain, has been examined in section, and it can be positively stated that granule cells could be shewn in most of the cases, if not in all. The pathognomonic symptoms of general paralysis clearly point to the spinal cord, and as the cerebro-spinal nerves preside over the nutritive functions, deterioration in the bones, as also gangrenous sloughs, are indications that the seat of the disease is in the spinal cord, as well as in the brain; being the exceptional example, hitherto amongst the insane, in which the symptoms during life are accounted for physiologically and pathologically in the post mortem room, according to my experience.

Dr. SHEPPARD examined the case brought in, and observed that he did not see anything exceptional about it, or anything to indicate that the paralysis had a special spinal origin. To his eye it was simply a case of ordinary general paralysis, in which the maniacal element was absent, and the fatuity exceedingly well marked. There was unequal dilatation of the pupils, stumbling speech, unsteady gait, and a blank, expressionless face. He could produce a dozen such cases, and he thought that the entire cerebral-spinal system was equally involved in the disease from the very first.

The Causation of General Paralysis.

Dr. MAUDSLEY said that it seemed to him that the results of the interesting discussion on the fragility of the bones in the insane might be summed up thus—first, that the ribs of anyone, sane or insane, might be broken if sufficient force were applied; secondly, that in long-standing insanity, such as dementia, and other chronic states, in which nutrition had suffered, softening of the ribs was frequently met with; thirdly, that in general paralysis of the insane, although it was hardly what would be called insanity of long standing, it was not very uncommon to find

softening of the ribs. Passing from this subject, he should like to take this opportunity of ascertaining, from the experienced gentlemen present, what opinion they had been led to form as to the most common cause of general paralysis. He had formed a very definite one—namely, that, in the majority of cases, sexual excesses were really the efficient cause. He had seen many cases in which, when a sufficiently close enquiry was made, this had proved to be the case. He might mention one. Some years ago he saw, in consultation, a married gentleman who was afflicted with this disease, and gave an opinion as to its nature and prognosis. In the course of conversation with the medical man, he asked whether there was not any suspicion of sexual excess, but there had been no evidence of it. Some time afterwards the same medical man brought another case to him, and, reverting to the question in the case of the former patient who was now dead, said, that after his death his wife had informed him that, during the whole period of their married life, which had lasted several years, he had not refrained for a single night, except at certain periods. He mentioned this case because it really illustrated what it is most important to bear in mind when examining into this kind of causation. There were many persons, some of whom would be described as patterns of moral rectitude, who never dreamed that there could be such a thing as sexual excess after marriage, and would almost regard it as an unholy suggestion. In making enquiries, therefore, it was necessary to pursue the matter closely, and not to be content with a general denial, which might, though honestly given, be worth nothing at all. Of course it was necessary not to mistake the effect for the cause. It was common enough to find an increased sexual desire at the beginning of general paralysis, which was followed soon by impotence. What he wished to direct attention to was not to such outbursts of excesses as were patent to all the world, but to that quiet, steady continuance of excess for months or years, by married people, which was apt to be thought no vice or no harm at all. He would by no means venture to say that sexual excess was the sole or entire cause of general paralysis; in some cases there might be no evidence of it, while in others, in which it had undoubtedly existed, it was a question whether other co-operating conditions were not an essential part of the cause—notably, for example, a certain sanguine and expansive temperament. But of the efficiency of sexual excesses, as an exciting cause, he entertained no doubt.

Dr. SHEPPARD said he had often had occasion to differ from the President, but he entirely agreed with him on this occasion, and fully endorsed the opinion which he (the President) had just expressed. He believed that the most fertile cause of general paralysis was undue indulgence of the sexual appetite; but, of course, it was very difficult to dissociate this cause from the excesses and general sensual indulgences which commonly accompanied it. It was difficult to make the friends of patients see this, and when wives were cautioned against being too loving towards their lords, they blushed assent to the advice, knowing their incapacity to carry it into effect. He had seen many cases where so marked an improvement in all the symptoms of general paralysis, after some months' residence in an Asylum, where no demand was made upon the procreative organs, as to justify the return of a patient to the outer world. But the poor fellow soon tumbled to pieces again under a legitimate indulgence which has the power of undermining, to a singular extent, all stability of nerve-element.

Dr. TUKE—My own experience leads me to an opinion the very reverse of that of our President. I have seen, probably, as many cases of general paralysis in the higher classes as most physicians, and I have not found undue sexual excess a pre-disposing cause—the victims of general paralysis are very frequently men of fine physique, and excessive sexual indulgence is, of course, more frequent with such men, but I have seen men of exemplary lives and subdued passions, as often suffer. The effect may be, and sometimes is, taken for the cause of the disease; general paralysis, although usually associated with want of power, is sometimes ushered in by excessive sexual desire. I have seen several instances of this, and Guislain mentions his having observed the same thing. In one case, a man of high intelligence and moral rectitude, this symptom was very distressing, and I ascertained that it had appeared for the first time synchronously with the brain symptoms.

Dr. SANKEY had generally found the subjects of general paresis were of strong sexual passion; he had also found this among women in many cases that were put down to paralysis; he should consider them cases of ataxy, but they were closely allied.

Dr. NIVEN (Bombay)—No one can say the natives of India are remarkable for continency, and yet, in my experience, I have not met with a single case of

general paralysis at the Asylum at Colaba; neither can I call to mind any cases occurring among the European soldiers. These facts, in my opinion, scarcely bear out the remarks as to the causation of the disease.

Dr. CHRISTIE—I can quite confirm the last speaker as to the rarity of the disease in the army of India. I do not recollect more than one case being sent home, and in that one there was an hereditary taint.

Dr. GREENWAY was inclined to agree as to the cause of the disease being sexual indulgence, and stated he had met with two cases in which the patients were men of 60 years and upwards.

After a vote of thanks to the Chairman the meeting adjourned.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION—(IRISH BRANCH).

A meeting of the Irish members of the above Association was held in the King and Queen's College of Physicians, Kildare Street, Dublin, on the 9th of October, "with the view of organising an Irish Branch of the Association, to hold stated meetings during the year, as in England and Scotland, and for the transaction of general business connected with the interests, more especially, of the Irish associates."

Dr. DUNCAN, of Finglas, presided.

Other members present—Dr. Lalor, Medical Superintendent, Richmond Hospital for Insane; Dr. Loney, Assistant Medical Officer, ditto; Dr. MacCabe, Resident Physician, Dundrum Government Asylum for Criminal Insane; Dr. John Eustace, Dr. H. H. Stewart, Dublin; Dr. Robert Stewart, Belfast, Hospital for the Insane, Hon. Secretary for Ireland; Dr. Patton, Farnham House, Finglas.

Letters of apology were read from the following gentlemen who were unable to attend:—Dr. Merriek, Cork; Dr. R. P. Gilston, Clonmel; Mr. J. A. Blake, Dr. West, Omagh; Dr. Daxon, Ennis; Dr. M'Kinstry, Armagh; and Dr. Eames, Letterkenny.

Dr. R. STEWART, Hon. Secretary, read the circular convening the meeting, and observed that at the annual meeting of the Association, held in Edinburgh, the question was mooted as to the advisability of having quarterly meetings in Ireland, as they had in England and Scotland. According to the rules, quarterly meetings were held for the discussion of scientific subjects, having relation to the speciality of their profession. In conference with Dr. Lalor, so long a respected member of their profession, they had agreed that they should at all events have a beginning, and for that purpose the present meeting had assembled. If for no other reason, they should have stated meetings in order that they should have an opportunity of becoming acquainted with each other, for although he had been for a period of 30 years, and upwards, engaged in the treatment of the insane, he knew very few of his brethren personally. If there were meetings of this sort from time to time, the members of the profession would be brought together in friendly intercourse, and by talking together and comparing notes, a very beneficial result would be produced, not merely on themselves individually, but for the good of the afflicted class committed to their charge. He had expected that the present meeting would be larger, but there was a sufficient number present to form the nucleus of an efficient society for the purpose he had indicated.

The CHAIRMAN also regretted that the meeting was not better attended, but it was called for an hour when most of their brethren in the city were busily engaged. No doubt they were late in Ireland in commencing quarterly meetings, but it was only recently that they were instituted in England, and still more recently in Scotland. So that, although they in Ireland were behind in the matter, they were not very long behind. He was quite satisfied that the proposed meetings would be a source of pleasure and profit, while he was also sure that the papers that would be read, and the subsequent discussions that would take place, would be highly creditable to the Association. They would find that, the meetings once established, a large number of the profession would join them.

Dr. LALOR suggested that a committee should be appointed to arrange the details. They should appoint one of their younger members to assist Dr. Stewart, as the duties would be considerably increased.

After some discussion, in the course of which all the gentlemen present warmly concurred in the desirability of having the proposed meetings,

It was moved by Dr. LALOR, seconded by Dr. EUSTACE, and resolved,—“That we, the members of the Irish Branch of the Medico-Psychological Association, agree to organise ourselves for the purpose of holding stated meetings for the discussion of

scientific and other questions connected with our speciality, in the same way as our brethren in England and Scotland have been in the habit of doing."

Dr. MACCABE moved that Dr. Leney be requested to act as Assistant Secretary.

Dr. PATTON seconded the motion, which was unanimously adopted.

Drs. Eustace, Lalor, Duncan, and MacCabe were appointed a committee to fix the first day of meeting, and to arrange for papers.

A vote of thanks, on the motion of Dr. R. STEWART, was passed to the King and Queen's College of Physicians for their kindness and courtesy in granting the use of the room for the meeting.

Dr. Eustace having been called to the second chair,

A vote of thanks was conveyed to Dr. Duncan for presiding and discharging the duties of Chairman so efficiently.

THE LIMERICK DISTRICT HOSPITAL FOR THE INSANE.

An inquiry before Dr. Nugent, the Senior Government Inspector in Lunacy, in reference to the conduct of the above establishment, has been lately instituted, and reported upon by him to the Lord Lieutenant; but inasmuch as his Excellency's decision has not reached us yet, we deem it only right to decline entering into any particulars in connection therewith at present, further than to observe that according to the reported proceedings of the inquiry given in the newspapers, *de die in diem*, the manner in which Dr. Nugent fulfilled the delicate and important duty devolved upon him was able and judicial; and also to express our great astonishment and regret that whilst this inquiry is *sub judice* an Anglo-Irish professional periodical should have so far forgotten fair play as to do all it could "to hound on the dogs of war" against the accused, so unhappily giving force to the saying that set an Irishman on the spit and another will be found to turn it.

Obituary.

JOHN HENRY SIMPSON, L.R.C.P.L., M.R.C.S. Eng., L.S.A., died at Clarendon, Jamaica, on January 30th, 1873, aged 31 years, of hydrophobia. He received his medical education at Charing Cross Hospital, of which school he was a distinguished student, carrying off several of the prizes and medals. For more than five years he acted as one of the Medical Officers to the Kent and Gloucester County Asylums; he was advised to travel for the benefit of his health, and on becoming completely restored, settled in Jamaica, having obtained a Colonial appointment in that Island. From a local paper we learn that some months before his death he was bitten on the thumb by a dog, and shortly after he cut or scratched the same thumb whilst making a *post-mortem* examination. The symptoms of hydrophobia set in on Monday, January 27th, and he died, after four days of great suffering, on Thursday, January 30th. It appears that the dog which inflicted the injury is still alive, and has never shown any symptoms of rabies. His untimely end, in the midst of a career of great promise, will be deeply regretted both in Jamaica and in England by the large number of friends to whom he had endeared himself by his sterling qualities and kindness of heart.

We regret having to announce the decease of EDWARD SMITH, M.B., B.A., T.C.D., the Resident Medical Superintendent of the Londonderry District Hospital for the Insane, to which he had been appointed in 1868, in succession to the late William F. Rogan, M.B., by the Duke of Abercorn, the Lord Lieutenant of Ireland. The deceased had been in office but four years at the time of his removal, which occurred on the 23rd of December last, and was only thirty-five years of age; the immediate cause of his death having arisen from an attack of acute rheumatism. Dr. Smith had given proof of great efficiency and kindness in the discharge of his duties.

Appointments.

ASHE, ISAAC, M.B., A.B., T.C.D., Visiting and Consulting Physician of the Letterkenny District Hospital for the Insane, has been appointed, by the Lord Lieutenant of Ireland, Resident Medical Superintendent of the District Institution at Londonderry, *vice* Edward Smith, M.B., deceased.

FLETCHER, ROBERT, V., L.R.C.P. Ed., M.R.C.S. Engl., Assistant Medical Officer of the Downpatrick District Hospital for the Insane, has been appointed Resident Medical Superintendent of the Waterford District Hospital for the Insane, *vice* MacCabe, promoted as below.

FRASER, J., M.B., C.M., has been appointed Medical Superintendent of the Fife and Kinross District Asylum, *vice* J. Batty Tuke, M.D., F.R.C.P.E., resigned.

GALTON, J. C., M.A., M.R.C.S.E., has been appointed Clinical Assistant to the West Riding Lunatic Asylum, Wakefield, *vice* Wood, resigned.

HETHERINGTON, CHARLES E., M.B., M.C.T.C.D., has been appointed Assistant Medical Officer of the Downpatrick District Hospital for the Insane, *vice* Fletcher, promoted as above.

MACCABE, F. X. F., M.R.C.S. Engl., L.K. and Q.C.P.I., Medical Superintendent of the Waterford District Hospital for the Insane, has been appointed, by the Lord Lieutenant of Ireland, Governor and Resident Physician of the Dundrum Establishment for the Criminal Insane, *vice* Wm. Corbet, M.D., deceased.

PEARSON, W., L.R.C.P. Ed., L.R.C.S. Ed., has been appointed Assistant Medical Officer to the Inverness District Lunatic Asylum.

POWELL, E., M.R.C.S.E., has been appointed Assistant Medical Officer to the North Wales Counties Lunatic Asylum, Denbigh, *vice* John Ellis.

SHAW, JAMES, M.D., Qu. Univ. Ireland, has been appointed Assistant Medical Officer of the Norfolk County Asylum, *vice* William Paynton, M.R.C.S., resigned.

LETTER FROM DR. DESPINE.

Marseille, 15 Xbre, 1872.

A MONSIEUR LE DOCTEUR CHRISTIE.

Monsieur et très honoré confrère,—Je viens de recevoir votre lettre qui me fait part de ma nomination de Membre Honoraire de l'Association Medico Psychologique, et je m'empresse de vous témoigner combien je suis flatté de l'honneur que m'ont fait les membres de cette savante société en voulant bien placer mon nom à côté du leur. Je vous remercie bien de m'avoir annoncé ce titre dont je serai toujours fier, et en vous priant d'exprimer mes sentiments de gratitude aux membres de l'association, je vous prie de recevoir l'assurance de mes sentiments respectueux.

Votre tout dévoué,

P. DESPINE.

NOTICE.—The Honorary Secretary desires to call the attention of members to the importance of introducing new members into the Association, and to Rule 3, which ordains that the recommendation must be in writing, and signed by two members of the Association, who have a personal knowledge of the candidate.

ERRATUM.—In the Review of the "West Riding Asylum Reports," in our last number, in the notice of Mr. Wilkie Burman's paper, for *fl-dr.* read *fl-oz.*

(Notices of Books received for review are unavoidably deferred until the next number.)

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VOL. XIX.

PART 1.—ORIGINAL ARTICLES.

Address on Idiocy.—By JOHN CHARLES BUCKNILL, M.D.,
F.R.S., Lord Chancellor's Visitor of Lunatics.

(Delivered at the Town Hall, Birmingham, on the 26th March, 1873, at the Annual Meeting of Governors of the Birmingham and Midland Counties Asylum for Idiots.)

MY LORD LEIGH AND GENTLEMEN,—Your presence here so far shews your interest in the subject on which I have had the honour to be called upon to address you, that I have confidence you will extend to me your patient attention while I enter into details which may not at first seem to be attractive except to medical men.

And, yet, I think, the study of mind, in any of its conditions and phases, must needs be interesting. If Grotius wrote truly that "there is nothing great in nature but man, and nothing great in man but mind," the stunted and abortive rudiments of mind may claim equally with the more painful, but also more picturesque subject of its ruin, to engage the earnest attention of thoughtful men.

I have to tell you a tale. Not, I trust, as Shakespeare says, "A tale told by an idiot full of sound and fury, signifying nothing," but, still, a tale of an idiot or of idiots. And I am warned by experience that I must trespass upon your patience so far as to describe what an idiot is.

On the occasion when it was decided by the Justices of the Peace for this County to establish the Asylum for Pauper Idiots, at Hatton, I well remember hearing an influential magistrate make the earnest inquiry—"Who can tell me what an idiot really is?"

I believe this question was not a vain and futile one, and that there are plenty of well-informed people who would have found it an exceedingly difficult one to answer well, and

although I do know what an idiot is, I fear I shall not myself find this question an easy one to answer in this place.

I may give you the definition of the old legal authorities, that an idiot is one who from his nativity hath been a fool or a madman, who has had no lucid intervals; cannot number 20; does not know the days of the week, or his own parents.

I may even describe or define an idiot by quotations from Shakespeare. The passage already quoted shews that he had observed in the idiot purposeless and furious noise instead of comprehensible speech.

In the "Merchant of Venice" he refers to "The portrait of a blinking idiot." Again, in "King Jolm," he refers to idiot laughter; and in "Titus Andronicus," to the manner in which an "Idiot holds his bauble for a God." Those of my audience who have observed idiots will admit how wonderfully the great Master of observation has herein touched so many salient points of true description.

Physiologically an idiot is a human being, who, from defect or disease of the brain at a period of life before the mind has become developed, has suffered an arrest of mental development to such an extent that he is incapable of the ordinary functions and duties of social existence. The time of attack may be before or after birth, sometimes so late as four or five years after, and thus the legal definition that idiocy is "*from nativity*," is not strictly correct.

The causes of idiocy are very frequently attributable to the faults or vices of the parents, either to their too great age, or to their ill health; but, above all, to their habits of intemperance.

The most trustworthy authority we possess on the causes of idiocy is contained in a report of Dr. S. G. Howe, the celebrated teacher of Laura Bridgman, and other Commissioners appointed by the Governor of Massachusetts, in 1848, to ascertain the cases of idiocy in that State. On this point the reporters observe—"By inspection of the tables it will be seen that out of 359 idiots, the condition of whose progenitors was ascertained, 99 were the children of drunkards. But this does not tell the whole story by any means. By drunkard is meant a person who is a notorious and habitual sot. Many persons who are habitually intemperate do not get this name even now; much less would they have done so 25 or 30 years ago, and many of the parents of the persons named in the Tables have been dead longer than that time. A quarter of a century ago a man

might go to his bed every night muddled and sleepy with the effects of alcohol, and still not be called an intemperate man. By pretty careful inquiry as to the number of idiots of the lowest class, whose parents were known to be temperate persons, it is found that *not one quarter* can be so considered."

Emphatically the stern text is true of idiots that "The fathers have eaten of sour grapes, and the teeth of the children are set on edge."

Before-birth idiocy is oftentimes caused by fright, care, or anxiety, ill health or accident happening to the mother.

After birth it is most frequently caused by falls on the head, by convulsions from teething, by eruptive fevers, whooping cough, but, above all, by bad air, bad nourishment, by cold, and by absence of the light of the sun, which produce rickets and scrofula in all its hideous forms, which produce *cretinism* in the damp and dark valleys of the Alps, and endemic idiocy, which is cretinism without goitre, in the damp, sunless courts and miserable homes of the lowest class of our town population.

But whatever the cause of idiocy, I beg you to remark that it is never dependent upon the idiot himself, and herein lies a reasonable ground for more complete pity than can be extended to many cases of lunacy which have been occasioned by the fault of the sufferer himself.

The idiot has never become so through any vices of his own, through any faults even of his own. He, at least, is always that which our fine old English synonym represents him to be—an Innocent. Not always, indeed, an innocent, in one sense of the term, innoxious and harmless, but certainly innocent of his own lamentable condition, Innocent also of any sin or crime to which that condition may lead, as that of the Shrieves Fool, mentioned by Parolles, in "All's Well that ends Well," "*He was whipped for getting the Shrieves-fool with child, a dumb Innocent who could not say him nay.*"

I cannot resist the temptation to trace, however briefly, the manner in which the perception has gradually dawned upon the public mind, that it is a duty to help these Innocents from the misery and degradation into which, by no fault of their own, they have been plunged, and from which they can never be raised, except by earnest, active, patient, and beneficent effort. To indicate, however imperfectly, some of the principles by which they may be trained into the likeness of humanity, and some of the means by which they may be

educated, led out of the slough of brutishness into which they were born.

It is a curious fact that the first idiot who attracted the attention of scientific men, was considered not to be an idiot but a savage man, "Un Humain Sauvage." Condillac, the French philosopher, had speculated upon the manner in which a statue would demean itself, if, by a miracle, it could be animated like the statue made by Pygmalion, the Grecian sculptor, which Venus turned into a beautiful woman. How the intelligence would awaken under the impressions of the senses, and the emotions would bloom under the sting of the desires. Soon afterwards the typical savage man, the savage of the Aveyron, as he was called, was found, an adult who had lived all his life in the forests, without contact with his kind. He was taken to Paris, and excited there intense curiosity, speculation, and interest. Pinel, the illustrious physician to the Bicêtre, it is true, pronounced him to be an idiot, but Itard, the physician to the Asylum for the Deaf and Dumb, energetically combated this conclusion, and for five years he gave unremitting pains to his education as a savage. At the end of that time Itard was convinced that Pinel had been correct in his opinion. He had immensely improved the wretched idiot, as we learn from the report of the French Academy, who expressed their astonishment that Itard had succeeded so far as he did, and remarked upon "the distance which separated his starting-point from that which he had reached, and by how many new and ingenious modes of teaching this lapse had been filled." Itard, however, gave up his task in disgust, with the remark, "Unfortunate! since my pains are lost, and my efforts fruitless, take yourself back to your forests and your primitive tastes. If your new wants make you dependent upon society, suffer the penalty of being useless, and go to the Bicêtre there to die in wretchedness."

This was written in the first year of the present century, and the poor savage of the Aveyron, the first educated idiot, seemed at that time likely to be the last. The labours and example of Itard were not, however, destined to be as barren as he anticipated, and the principles of training and treatment which he adopted with his poor savage still remain the true basis of the physiological education of imperfect minds. His example was subsequently followed, and his methods developed and perfected by M. Edouard Séguin, the first of all idiot teachers, whose treatise on idiocy and its treatment by the physiological method was and is the stan-

dard work on the subject. His methods have been extended and improved, but his principles remain the uncontroverted guides to practise even to the present day. M. Séguin was not a physician, although he was imbued with medical and physiological knowledge. He was, however, preceded by physicians almost as enthusiastic as himself, especially by M. Voisin, one of the physicians to the Bicêtre. In this great asylum, M. Ferrus had organized an Idiot School in 1828, in which the pupils were taught all that is most important in the teaching of the best idiot schools of the present day. Afterwards, in 1831, M. Falret established a school for female idiots in the Salpêtrière, the other great Parisian Asylum, and, nine years later, Messrs. Voisin and Leuret, physicians to the Bicêtre, organized the Idiot Schools in that great Asylum, which were so eloquently described in 1845 by Dr. Conolly in his letters to Sir John Forbes, which are published in the 19th volume of the "British and Foreign Medical Review."

It was in this school of the Bicêtre, where Séguin taught his idiots, and from which he has taught all the world the manner of his teaching. I think, however, that it was rather by reports of what was being done in Switzerland, than in Paris, that the stolid British mind was first moved.

Guggenbühl, also a medical man, in the pursuit of his practice said that he was moved to extreme pity by the sight of an old crétin, one of those miserable idiots with hideous swollen throats, who abound among the sunless valleys of the Alps. The sight, he says, "Fixed his vocation." "These stricken individuals of our race (he wrote), these brethren beaten down, are they not more worthy of our efforts than those races of animals which men strive to bring to perfection? It is not in vain formulas, but in charitable efforts that we must feel that divine love which Jesus Christ has taught us."

In 1839 Guggenbühl established by subscriptions, which were actively canvassed for in this country, an Asylum for Crétin Idiots on a mountain called the Abendberg (the Hill of the Evening), within a few miles of Interlachen. There he at first did good work, his idiot teaching being greatly assisted by the sanitary influence which the pure air of the mountain top exercised upon the peculiar form of idiocy with which he had to deal, and which was, to a great extent, caused by the noxious influence of the previous place of residence. The cause being removed, the tendency was that the effect should cease. Idiocy, from causes less certainly removable, cannot, to the same extent, admit of cure.

The maintenance of the Institution on the Abendberg needed subscriptions, and the effort to obtain these in England appears first to have greatly attracted the attention of English people to the work which was being done. The subject of Idiot Training had been advocated in an article by Dr. Poole, of Aberdeen, in the *Encyclopædia Edinensis*, in 1819, and subsequently by my friend, Dr. Scott, of Exeter, in 1847. In the year previous to the last date, however, the first Idiot Asylum had been established in this country by Miss White, of Bath. It was established in an ordinary gentleman's residence in Walcot Parade, in that city. The next Idiot Asylum was founded at Park House, Highgate, on the 26th of April, 1848, by Mrs. Plumbe and Dr. Andrew Reed, and this latter Asylum has developed into the magnificent Institution now so widely known as the Earswood Asylum for Idiots at Redhill, the foundation stone of which was laid in 1853 by the late Prince Consort. In January, 1850, Essex Hall, at Colchester, was opened as a branch of the original Institution at Highgate. It is now the Idiot Asylum for the Eastern Counties. The Idiot Asylum for the Western Counties was established in 1864. A County meeting was called at Exeter, at which a provisional committee of gentlemen was appointed, and the Earl of Devon having offered the use of a house and grounds at Starcross, as a temporary Asylum, the work was commenced at once in a purely tentative manner, very much like the manner in which the work at Dorridge Grove Asylum has been carried out hitherto, although, in the one case, the first moving impulse was derived from the county gentry in public meeting assembled, and in the other by the modest benevolence of two medical gentlemen, Dr. Bell Fletcher and Mr. Kimble. The Western Asylum will soon be provided with fitting buildings and grounds like the one for the Northern Counties, at Lancaster, and that for the Midland Counties, at Knowle. Thus we may expect to have within a short time adequate establishments for the education of the idiot in the Western, the Eastern, the Midland, and the Northern Counties, besides the great Institution in Surrey, which, perhaps, may be considered to belong to the metropolitan and Southern Counties.

Scotland also has not been behindhand in this great work of Christian charity, two asylums for idiots having been established in that country in 1863, the one at Baldovan, and the other at Larbert, near Falkirk. The latter is intended to be the National Asylum, and to accommodate 200 inmates.

I have not time to refer to the good work done in Germany,

under Saegert, nor in America, under Howe and others, but I cannot pass over without some further detail the early history of our own Institution at Knowle. This Institution, the exact name of which is the Dorridge Grove Idiot Asylum, was founded by the benevolence of Dr. Bell Fletcher and of Mr. Kemble, surgeon, of Knowle, who each placed one poor idiot therein to begin with. The date of the first license is July 3rd, 1866, but it was opened a few months before. The first license was for 20 idiot girls, but this was afterwards altered into a license to receive 12 girls and 12 boys.

Although it must not be supposed that this small and tentative Institution possesses the means and capabilities of efficiency which its benevolent founders and supporters would and do desire, and which, with the aid of public generosity, they are prepared soon to provide, I think it is but common justice that the public should know how much has been done here with small means. Moreover, such knowledge will guarantee the right application of larger resources.

On the 13th of this month I visited and carefully examined the Dorridge Grove Asylum, which, though by no means a chrysalis, is about to take its beautified transformation into the Midland Counties Asylum for Idiots.

In order that you may value my opinion, I think I may premise that, during the last thirty years, I have had the charge or the superintendence of a very large number of idiots and imbeciles, and that either in the discharge of official duty, or for the sake of professional information, I have repeatedly visited other Idiot Asylums—Earlswood, Essex Hall, Starcross, and Normansfield, the admirable Idiot Asylum for the more wealthy classes, which is conducted by Dr. Langdon Down, the former Superintendent of Earlswood. I think, therefore, that I may ask you to believe that I know much about Idiots and Idiot Asylums, and that I am able to form the opinion of a man conversant with the subject. The opinion impressed upon me by my visit to Dorridge Grove was most favourable. The little Institution is excellent, so far as it goes.

It appears to have been formed out of a row of three good cottages, with bright bow-windowed frontage overlooking a beautiful and wide landscape, and the rooms, though small, are very cheerful. I found it under the superintendence of an intelligent lady, Miss Stock, whose active kindness had endeared her to the awakening affections of the poor children whose gleams of enjoyment and fragments of usefulness in

this life, depend so immediately upon her unceasing care and tenderness. It was delightful to witness the bright smile of affection which greeted her from every one of the children. Even the girl who is the oldest inmate, and who is said to be affected with a pernicious temper, and who will bite and strike any other person, kissed the hand of Miss Stock with effusive love. In addition to the Superintendent there is a clever governess, Miss Farrar, also a head nurse and a staff of young nurses, who commence their own instruction and their duties at an early age, under the title of monitors. They are educated themselves at the same time that they learn the nature and the needs of the idiot children whom they nurse and train. The thing which struck me most forcibly was the happiness of all the children. This is the fact which has always struck me most, and delighted me most in all Idiot Asylums, and especially I remarked it as the characteristic feature of Dorridge Grove. Well knowing, as I do, what is the misery of a neglected idiot, I think this point cannot be too much dwelt upon. The misery of a neglected idiot is an awful thing to contemplate. The very word idiot means, according to some authorities, *solitary*, cut off from his kind, though others explain it to mean a *private person*, one incapable of public office. In point of fact, however, the neglected idiot is the most solitary of human beings, shut out by his infirmity from all feeling with his fellow-men—all sympathy; shut out also from all enjoyment of life, even animal enjoyment. Often he cannot use sight or hearing so as to distinguish objects or sounds. Often he cannot walk or stand. Often he is tortured with painful bodily infirmities. If the mental perceptions and emotions have in any way been developed, he is often still more tortured by malevolent or brutish passion. In a private house he is often an intolerable burthen, an incubus, a waking nightmare, and this Being in an Idiot Asylum becomes sociable, affectionate, and happy.

Let us think of that, and of the value of happiness in this life. Only be happy, my child, I have heard a good woman say to her peevish child; only be happy, all the rest will come. Make children happy, and they will not easily grow up wicked. I do not say—

“ Be happy, happy, happy still,
Let virtue follow if she will.”

But of this be sure, that if the happiness of a community,

even a community of idiots, be secured, the paths of goodness and of usefulness will not be left untrod.

If the greatest happiness of the greatest many is the highest aim of statesmanship, the happiness of the most wretched individuals ought to be the most constant object of philanthropic effort.

Dorridge Grove is a school of happiness, and a successful one. How is this effected?

First, by teaching the idiot the use of his senses and of his muscles. By teaching him to see and to hear, to touch and to taste; by teaching him to speak, and, as far as may be, to converse. By teaching him to sit, to stand, to walk, and to play; then by teaching him to love and to trust, and not to hate and to fear; by replacing dull inanity or sullen moroseness with sociable attachment to others; by training and framing all the conditions of body and mind, however imperfect body and mind may be, towards wholesome, useful, and agreeable activities, in place of chill and torpid inertness, or the dull ache of helpless discomfort; to bring him from that former state in which he lay,

“ Remote, unfriended, melancholy, slow,”

somewhat within the circle of bright and active human life and affection.

Maybe I have dwelt too much upon this prime consideration of the gift of happiness, and have not stopped by the way, as I ought to have done, to lay proper stress upon the paths of utility which so often lead towards it. In ordinary life it is easy to make men useful, but most difficult to make them happy; but, fortunately for idiots, the amount of usefulness to which they may attain is no measure of the degree of happiness which kind and skilful training is able to confer upon them. Happiness, however, unlike usefulness, is not a quality which readily allows itself to be measured or tabulated, though we can somehow roughly estimate the vast difference between a roomful of joyous though imbecile faces, and what one knows of the expression which the same features would wear in solitude and neglect. But I must tell you of some of the useful things which the idiots have been taught, and I must begin with the very earliest paths of knowledge. Some of them have been taught to see—not that an idiot is blind, but sometimes he has not learned to use his eyes. He is incapable of fixing his gaze, and so of taking in sensations of form and colour sufficiently perma-

ment to be converted into clear perceptions. The difficulty of overcoming this radical imperfection is often exceedingly great. Séguin adopted the method of placing the child in a dark room, with a luminous portion on which something was traced likely to be attractive. This portion was made to move, so as to fix and draw after it the hitherto wandering gaze. He also adopted that which would appear to me the more potent method—of attracting and fixing the wandering eye by his own steady gaze. Séguin in one instance tried for four months thus to fix the eye of an idiot by his own steady gaze. At length he succeeded all at once. The child gave a cry of surprise, and from that time, instead of passing his hand over him, as he had formerly done, to ascertain his identity, he looked upon him with a kind of curiosity as at a new thing. From that time he began to look and to see with perception. Once the eye has been thus brought under control, lessons in colour, form, size, and arrangement follow, and the great inlet of all knowledge of the outer world has been effectually opened. The sense of hearing is more simple, but not the less do idiots need to be taught to discriminate what they hear. Their faculty for appreciating tone and harmony is curious and common.

The largest and most simple sense—that of touch—requires constant and most careful training. Touch is caused, not alone by impressions made upon the surface of the body, but is intimately connected with the muscular system, by which the idea of extension is given, so that a child who cannot move its limbs cannot be said to know the outer world by touch. The simple touch of the skin often needs to be educated in the idiot, but the muscular touch almost always, and is one cause of the immense importance which the training of muscular power and precision exercises in the development of these feeble minds. You will easily understand how difficult it must be to teach a child who cannot reach with his arms or clutch with his hands, who cannot stand or walk.

These faculties are among the first which have to be taught, and I am happy to report that I have observed them being patiently, persistently, and successfully taught at Dorridge Grove.

In the excellent report of Mr. Kemble, the medical officer for last year, it is recorded that at the beginning of last year a boy and a girl, who could not stand without support, have now been taught to walk fairly well alone. Besides this, other

muscular exercises of more or less complexity, but of almost as much importance, have been taught. A low-class idiot cannot feed himself, or he does so like an animal. We have in our language no words to express this symptom of brutality, but the Germans have the terms *fressen* and *saugen*—to eat and to drink like a beast—and this is what low-class idiots do, cramming their food into their mouths with their hands, or devouring it without the aid of their hands. The poor savage of Aveyron, who went on all fours, was observed to put his chin into the pool or the brook, and suck the water into his mouth like an ox or a horse. The idiots at Dorridge Grove are taught to use knives and forks, and those who cannot attain to this art are taught to use a spoon. Moreover, they are taught to dress and to undress themselves, and, instead of being filthy, disgusting, and immodest in their habits and demeanour, they are taught to be cleanly, decent, and proper in their conduct.

Advancing from these elementary conditions of social life, I find, still following Mr. Kemble's report, that out of the fifteen inmates of Dorridge Grove, seven can now speak fairly, and one indistinctly; four can read fairly; two can read by spelling words, and one knows some of the letters; two can write in copy books; one can write copies on a slate, and three can form letters on slates. From these rudiments of education we have the certain knowledge, from the attainments which have been reached in other Idiot Asylums, that some of these idiots will eventually be taught to read and to write with understanding—that the wide doors of book knowledge will be opened.

As for the industrial lessons, I observe that six can wash and dress; four can make a bed; four can set dinner and tea table; seven can pick fruit, shell peas, &c.; while, as yet, eight can do nothing of the kind. "The improvement in this class consists in the increased aptitude of several of the children to do small things for themselves, and for some of the others. For instance a little girl eight years old makes herself really useful in the nursery, helping to dress and undress the children, and waiting upon the nurses in various ways."

With increased means and appliances these industrial lessons will be extended to simple arts and handicrafts. The manufacture of mats is an extensive one at Earlswood, and that of sash lines has been adopted at Starcross. The wash-house and laundry for girls, and the cultivation of the ground

for boys, will be established and developed into regular employments. All these simple industries deserve our most earnest attention, because they are attainable by so many. Some few idiots will, no doubt, manifest special aptitudes of an extraordinary and surprising power, but these are *show cases*, and must, from the nature of the case, be few and far between. We have many of us, no doubt, heard of the idiot at Earlswood who constructed a perfect model of a man of war. I have examined the marvellous model, and have conversed with the shipwright who, I have no doubt, was a congenital imbecile. But such constructive powers, combined with such congenital weakness of intellect, must needs be exceedingly rare, and I should certainly not advise the Governors of the Midland Counties Asylum to make their plans with any view to what we may call the higher education of idiot genius. It will be more wise to avoid exciting any expectations beyond those which probabilities warrant, and which sober common sense will justify. I well remember the time when the enthusiastic Guggenbühl brought question on his scientific reputation by the account which he gave of a speechless idiot who, on seeing a magnificent sunset, all at once exclaimed, "*Die Sonne, Die Sonne.*" The sun, the sun, and who from that time continued to communicate his ideas to those around him by speech.

I also remember the statement made by Mr. Pycroft, the medical officer of the Western Counties Asylum, that "In the year 1864 the first patient was admitted, but as he was adjudged by the medical officer and by the committee generally to be a clever boy of much more than average intellect, he was returned to his parents." These two cases illustrate two pitfalls of overstatement and mistake; unbridled enthusiasm, and the possible treatment of children as idiots who are not so. You may thoroughly depend upon it that there is nothing of this kind at Dorridge Grove, nor will be at the new Asylum; and I, for my part, prefer not to dwell much upon wonderful and exceptional cases. Granted that they sometimes exist, I believe that the real good effected is by no means so great as that in very common cases where the starting point has been lower. The measure of good effected, as the French Academy pointed out in Itards' case, depends upon "the distance which separated the starting point from that reached." To teach an idiot, who, to begin with, cannot walk, crams his food into his mouth with his hands, and bolts it, using his teeth mainly to

bite viciously anyone who comes near him, who never puts on clothes or takes them off except by tearing them; who has no more cleanliness and decency in his natural habits than an animal living in the fields, and incomparably less, therefore, than a dog or a cat which respects the cleanliness of the house; to teach such an idiot to walk, to work, and to play, to dig with a spade, or to kick a football, to feed himself with a knife and fork, to dress and undress himself, to wash, and behave in a cleanly and decent manner, to kiss his companion instead of biting him, to have the use even of a few words which he articulates and understands, even if he should not be able to read well, or to write a fair copy—I say that the difference between the starting point and the winning post, to me seems greater than when a weak-minded man learns to build the model of a ship.

When a higher starting point has been attained, a far more surprising result may, indeed, be secured. The helpless imbecile may be educated up to the point which renders it possible to introduce him into the social life of our age as an independent and efficient man. This culmination of so-called idiot education must, indeed, always be rare, but that it is sometimes reached there can be little doubt. My friend and literary collaborateur, Dr. Daniel Hack Tuke, in writing of Herr Saegert, of Berlin, says, “He assured us when we visited his school in 1853, that he had indubitable cases of idiocy in which the head was small and malformed, yet in which the results of education were so triumphant that they were ultimately able to mix with the world without being recognised as idiots.” “In one instance a young man underwent confirmation without the priest suspecting that he had been delivered from idiocy.” But perhaps the most remarkable illustration is contained in a letter which I have recently received from Dr. Langdon Down, and which he permits me to quote. He says in this letter, which is dated the 15th of the present month, “My experience at Normansfield has led me to believe more fully than ever the great benefits which may be conferred on idiots and imbeciles by systematic training in special institutions. I have had several patients from very good families, where no expense had been spared in their instruction, but whose progress had astonished their friends when they had been six months under training at Normansfield. If such advantage can be conferred on the wealthy, how much more the relative advantage on the poor. I have seen

the relative of a nobleman, living in all the luxury of a country house, so put aside by her sisters, senior as well as junior, that she never ventured on a remark, and at length lost speech. I have seen the same girl at Normansfield pass from monosyllables to thorough conversational language, amid the companionship and the sympathy of her peers. Several of my former patients at Earlswood are now self-relying as well as self-supporting. One called on me a short time since at Normansfield and dined with me. Another is now the canvassing agent of an insurance office, an office whose business is really money lending under the pretence of life insurance, and *his* business is to find out needy people in localities, a position requiring a little tact. Several are getting their livelihood as carpenters and shoemakers." These highest results, which have actually been obtained in favourable cases, justify hopes of success, which, without such experience, prudence would forbid us to entertain. Prudence I have before advocated in aim and in statement, but there is another quality which must go to the successful education of the idiot, and that is *enthusiasm*. These qualities may seem antagonistic, but they are not necessarily so, and, depend upon it, that without a warm glow of enthusiasm in his work, the teacher of the idiot will find his task dull, barren, and unprofitable. In all fields of labour where moral influence tells with great power, if there is no enthusiasm there will be no high degree of success, and I have been assured by the most successful teachers of idiots that the higher their enthusiasm, and the more ambitious their aim, the greater has been their success, frequently to their own wondering surprise. There is certainly no institution in which the dull routine of a self-satisfied pedagogue will be more surely barren of satisfactory results than in a school for idiots.

With these remarks I shall close my narrative, and I have nothing more to add beyond an earnest appeal for your sympathy and support. On this point and in this place I think I may be very brief. The wise benevolence of the people of Birmingham is too well known to permit me to feel justified in making at any length an appeal for this new charity. The many admirable institutions in your town so plainly manifest your readiness to relieve the distress of the wretched that it seems only requisite to make fully known to you the need of help for those who have been the most miserable and neglected of human beings. If you

think of the constant, patient, self-denying labour which is demanded from those into whose hands the practical work of idiot education falls, you will not, I think, be disinclined to find some portion of the means by which this work is carried on. When you think of the idiot rescued from the slough of wretchedness and brutishness, and made a happy and sociable human being, you will not, I think, for want of pecuniary support, allow the institution to languish which has been founded by one of your most estimable townsmen, and which is occupied, as I am informed, to the extent of two-thirds of its accommodation, by idiots from your own streets. When you think of the narrow home of the artizan or small trader, which is rendered intolerable by the presence of an untrained idiot child; when you think of the waste of time—which is waste of sustenance to the working man—involved in the most unsatisfactory care of a single idiot in a small home, you will not, I think, be disinclined to support an institution which will relieve such homes from the *incubus* with which they are cursed. You who rejoice in the glorious possession of manly strength and mental vigour will not withhold the throb of sympathy and the hand of help from those whose condition, before our time, was without help and without hope. The men of Birmingham—the men of steel—will not steel their hearts against such a claim on their charity, nor permit that the institution which has been founded to effect this good work shall be unable to discharge its full mission of beneficence for want of funds.

The Use of Digitalis in Maniacal Excitement. By W. JULIUS MICKLE, M.D., Medical Superintendent, Grove Hall Asylum, Bow.

Though many writers have advocated the use of digitalis in various forms of insanity—such as acute, paralytic, or epileptic mania—yet there appears to be great diversity of opinion as to its efficacy, great variety in the methods of administering it, and a wide range in the quantities prescribed. While one has been content to order five to ten minims of the tincture three or four times a day, another has given, in similar cases, single doses of half-an-ounce of the same preparation.

Having used a variety of medicines for the alleviation of restlessness, agitation, quarrelsome irritability, noisy and threatening language, or impulsive violence, as exhibited in

certain forms of insanity, I was struck by the effects produced on such symptoms in several instances by digitalis. A considerable number of cases under care, in which one or more of the above-mentioned symptoms existed to an extreme degree, have been subjected to the foxglove treatment, and the benefit derived therefrom has been sufficiently gratifying to encourage the further use of this calmative. It may be mentioned that in none of the cases treated by digitalis have other means of securing a favourable result been neglected. Their general management has been of the character usually adopted with other patients suffering from similar symptoms, or with the same patients, in preceding or subsequent attacks, when they were not placed under digitalis treatment. Outdoor exercise and full diet have been freely allowed, and means have been adopted to avoid irritation and to distract the mind from morbid to healthy objects of attention. Nor is any attempt made to attach extreme importance to the use of this or any drug in the treatment of insanity. While venturing an opinion that digitalis is an important auxiliary for the control of certain symptoms, and is, therefore, of real benefit, it is not forgotten that some authorities have questioned the wisdom of checking the outward expressions of cerebral excitement. It will also be noticed that in a majority of the cases mentioned below the digitalis treatment bore but little reference to their cure, and was employed for the mitigation of distressing, exhausting, or dangerous symptoms in chronic and, too often, incurable affections. A minority of cases belonged to the recent curable forms of insanity.

Tincture of digitalis (B. P.) has been the preparation almost exclusively used, and of this the average dose has been thirty minims three times a day.

Among the cases treated by digitalis were many of *chronic mania*, wherein the course of the disease was chequered by *paroxysms or exacerbations of excitement*, in which the patients became agitated, restless, noisy, filthy, blasphemous, irritable, quarrelsome, threatening, destructive, violent, or impulsive, enraged by delusions, or exasperated to frenzy by vivid hallucinations. These symptoms were variously combined in different cases. In some of them the benefit derived from digitalis was great; in others, moderate; and in a third set, slight or doubtful. In the first set of cases, where the benefit resulting from treatment was great, the length of time during which the drug was taken varied from 7 to 70 days—average,

26½ days; in the second (moderate benefit), from 9 to 21 days—average, 19 days; and in the third, from 3 to 21 days—average, 10 days. These numbers refer to the length of each separate unbroken period of administration. Several patients were under digitalis on two or more such distinct and separate occasions. The great relative difference in duration of many of the periods of treatment was partly due to the circumstance that in some patients the paroxysms were habitually short and of frequent occurrence, while in others the paroxysms were more persistent and protracted, but were separated by longer intervals of time. In the hope of preventing the frequently recurring outbursts in the former class, wherein maniacal paroxysms were numerous, but short in duration, many of them were kept steadily under the influence of the drug for weeks or months; while in some of the latter, whose paroxysmal excitement was less frequent, there was no obvious therapeutical or experimental necessity for so prolonged an administration of the agent. Most of those above-mentioned as suffering from paroxysmal maniacal outbursts took half a drachm of the tincture three times a day, a few had ℥xl three times, and one or two, ℥xlv to ℥lx twice a day.

In others of the cases of *chronic mania* treated by digitalis the *excitement* was more diffused and uniform, *was continuous or subcontinuous*, and underwent only moderate exacerbations. In them were variously combined such symptoms as incessant restless agitation, noisy or mischievous excitement, threatening or assertive language, insubordinate, violent, impulsive, or destructive acts, hallucinations of hearing, delusions of personal exaltation, or of injury, annoyance, or persecution. The separate occasions on which digitalis was taken varied in length from 8 to 74 days, and the dose, usually ℥xxx three times a day, was in one case ℥xl, and in another ℥lx, twice daily. The continuous or subcontinuous character of the maniacal excitement of these patients contrasted with the paroxysmal nature of the furor and other symptoms of the chronic maniacs mentioned in the preceding paragraph.

More or less similar symptoms and treatment are noted in a few instances of chronic melancholia and dementia with great excitement or destructive impulse. The symptoms treated in the first stage of general paralysis were those of acute maniacal excitement with threatening language and dangerous impulses; and in the second stage, either paroxysms or exacerbations of noisy furor, with or without vivid hallucinations; or continuous chronic maniacal excite-

ment, characterised by restlessness and destructiveness, or by the incessant jabbering of an incoherent jargon of words. Concerning a few cases of acute or subacute mania, it need only be stated that they were treated for separate periods of from 7 to 30 days, and that the doses prescribed were about the same as those already mentioned.

In all, a considerable number of patients were treated by digitalis, and the condition of many of these was minutely noted and fully recorded from day to day. In the statistics which follow I have excluded administrations of which the records are incomplete, or in which, for a variety of reasons, the drug was not satisfactorily tested. The general results, however, in the cases omitted coincided with those obtained in the smaller number included in this short paper. The list deemed eligible for my purposes comprises forty-one individual patients, who were fully treated on sixty-six separate occasions; some being treated once, others twice, and others several times. The sixty-six trials were distributed thus:—

Chronic mania with great excitement,	25 persons,	on	44 occasions.	
Melancholia and dementia	5	"	8	"
General paralysis	5	"	6	"
Acute and subacute mania	5	"	8	"
Total	- 41	"	66	"

The *results* of the sixty-six trials are added in general terms and in a tabular form. The first two columns include instances in which digitalis was decidedly beneficial, though in varying degree, and comprise 77 per cent. of the whole number.

Form of Insanity, with Great Excitement, &c.	Degree of Benefit from Digitalis.		
	Great Benefit.	Moderate Benefit.	Doubtful or no Benefit.
Chronic mania	18	16	10
Chronic melancholia and dementia	2	3	3
General paralysis	2	3	1
Acute and subacute mania	1	6	1
Total	23	28	15

Chronic mania is the only form in the Table of which the cases accurately observed are sufficient in number for the purposes of this enquiry, and attention will therefore be confined to them. The general effects of digitalis treatment had been previously watched in a number of patients, especially general paralytics.

A majority of the tabulated cases, indeed, fall under the head of chronic mania, and, in relation to the treatment, these may be subdivided for convenience into the two classes already mentioned, namely:—

I.—Those with paroxysmal excitement or impulse, and

II.—Those with subcontinuous or continuous excitement.

On tabulating the result of digitalis treatment, according as it was decisively, comparatively, or doubtfully beneficial, a marked difference is revealed between the two classes into which the cases of chronic mania are thus provisionally divided.

Treated by Digitalis.	Benefit from Digitalis.		
	Great.	Moderate.	Questionable.
Chronic mania with paroxysmal excitement	16	8	9
Chronic mania with subcontinuous excitement	2	8	1

It is apparent at a glance that the class more decisively benefited by digitalis while under care, was that consisting of varieties of chronic mania with paroxysmal excitement or impulse. Nor is this statement made without recognising the fallacies that may attend conclusions based on the apparent effects of treatment on such cases. The striking results obtained in a few earlier cases led to a more special extension of the digitalis treatment to the class in question. Various forms of maniacal excitement in general paralytics were also alleviated, and acute or sub-acute mania, and chronic mania with nearly continual excitement, were usually moderated thereby. In some instances it was noticed that when symptoms had been controlled for a time by digitalis, after which its use had been omitted, the later course of the affection was milder, as if the nervous power was recuperated during the period of quietude enforced by the drug.

Short details of a few of the cases of chronic paroxysmal mania treated by foxglove are added here, and it has been preferred to exemplify the failures, as well as the complete or partial successes, in the use of this agent. Observations made on the pulse, in these and similar cases, are appended.

CASE I.—A tall, thin, rather pallid woman, aged 63. Had been insane for eighteen months, and was the subject of chronic mania. She had frequent and prolonged paroxysms of a loathsome form, in which the intellect and moral sense seemed equally perturbed, and in which she kept giving loud and often rhythmical utterance to the foulest obscenity and blasphemy. She also became noisy and restless at night, but the nocturnal symptoms were alleviated by chloral hydrate. Thirty minims of tincture of digitalis were ordered to be taken three times a day during one of her attacks when the obscenity had become incessant and extreme. She grew quieter after using the drug for several days, and some anorexia and slight gastric disturbance supervened. Subsequently, the foxglove was ordered to be taken only when an outburst of obscenity seemed to prelude the full development of her former attacks. A single dose often cut short the paroxysms in a few minutes, but did not always exert so immediate a control, and in the latter event the dose was repeated in an hour or two. Again and again I had the opportunity of witnessing its marvellously calmative effect, by means of which she was kept in a state of almost complete quietude for several months. When the use of the medicine was omitted, the threatening paroxysm did not subside spontaneously, but gathered strength. The pulse-average usually rose above 100 during excitement; continued at an average of 95 when she was under the effect, but not yet under the control, of the digitalis; and sank to an average of 79 when she was quieted thereby; the average normal pulse during the intermissions when she was quiet and without medicine being 75.

CASE II.—Chronic mania with paroxysmal excitement. A healthy and fairly nourished male, aged 32. Insanity followed intemperance and cranial injury, and is of four years' duration, three of which he has passed in this asylum. He exhibits hallucinations of hearing, and fancies that imaginary persons malign him. His memory is defective, and he becomes confused and incoherent in conversation. At times, paroxysmal excitement occurs, during which he is extremely noisy and impulsive, apparently seeing and hearing his

imaginary traducers, yelling at them in reply, and gesticulating wildly. These paroxysms were wont to recur frequently, and, without treatment, usually lasted some days or a week. While suffering a severe attack, about a year ago, he was placed on thirty minims of tincture of digitalis three times a day, and so decided and rapid was the resulting benefit that the administration was continued for ten weeks, during which time excitement was very much diminished in frequency and degree. The constant use of the medicine was then omitted. Paroxysms of the former character are always rapidly checked by foxglove, and on four subsequent occasions he has been kept under its influence for periods varying from eleven to twenty-five days, and with results as happy as on the first occasion of its use. His normal pulse is soft and averages 64; when he is excited the average is 79; and when quieted by digitalis, $71\frac{1}{2}$. The heart sounds are natural, the apex beat is felt a little lower and more to the left than is usual. The medicine has never given rise to any gastric disturbance.

CASE III.—Chronic mania with paroxysmal excitement in a powerful muscular soldier, aged 31 years. When first placed under digitalis treatment his residence here was of five months, and his insanity of two years' duration. His delusions are wild, disconnected, and extravagant, relating principally to his person, prowess, and adventures. He displays exacerbations of maniacal excitement, in which he becomes restless, quarrelsome, impulsive, noisily abusive and threatening, uttering fantastic delusions of ill-treatment, and volunteering to annihilate the objects of his rage. This continues for several days if untreated. During a severe exacerbation he was directed to take half a drachm of tincture of digitalis three times a day, and so decisively did it keep the excitement modified and reduced to mere loquacity, that its use was steadily persevered in for nine weeks. But this improvement was not maintained after the omission of foxglove. The maniacal paroxysms recurred with such violence that in a fortnight I was fain to return to the former treatment, which again rapidly reduced excitement, so that on the next day he was quiet, and continued moderately calm during the second period of foxglove administration—six weeks. Excitement returned two days subsequently to the omission of the drug on the second occasion. The heart is healthy, and no digestive disorder has been caused by the treatment.

CASE IV.—Female, aged 24. Is thin, her skin and com-

plexion are delicate; her digestive and menstrual functions healthy. Insanity has existed four and a half years, and there is now chronic mania with paroxysms of great excitement. In the intervals between these she is quiet and industrious. When the maniacal paroxysms are coming on, she grows restless and agitated, the pupils are usually rather wider than natural, the pulse beats more than one hundred in the minute, the throbbing of the carotids occasionally becomes prominent, the head is sometimes slightly heated, and she talks loudly and constantly to herself. It is also when excitement is brewing that a strange peculiarity grows into bold relief, for she then talks aloud to and of herself in the second person; and if an attempt is made to engage her in conversation she does not make direct answer, but addresses herself in her replies. For example; on one occasion, when the paroxysmal excitement was developing while the patient was under my immediate notice, she was addressing herself in terms such as these:—"You are eccentric, Clara." "You are a little insane, my wench." "No, the doctor doesn't think you will do murder." "You are harmless," and so on. Question: "To whom do you speak?" Answer: "You speak to yourself, Clara." "Almighty God, dear, put it into your head." "It's God, Clara." A moment more, and she had burst into song. In exultant tones she began the lines—

"All things bright and beautiful,
All things wise and wonderful,"

and, borne away on the full tide of delirious excitement, she was soon alternately singing and shouting, or praying loudly with earnestness and pathos, the meanwhile incessantly stalking up and down with measured step and inflated mien.

When she is not under treatment, paroxysms such as this, and of several hours' duration, are apt to occur every day for weeks together. On several occasions it was found that digitalis was decisively calmative when used steadily for periods varying from eight to eighteen days, in doses of mxxx. to mxxlv. twice or three times a day, as required; and these doses were required most frequently at 6.30 and 9 a.m., as the paroxysms were chiefly matinal. During other periods the medicine was only given occasionally, being ordered for existing or threatened outbursts, and repeated if necessary. The benefit derived was unequivocal; excitement usually subsided after the first dose, and rarely withstood the influence

of the second. She was decidedly much worse when the digitalis was omitted for sake of experiment.

Average pulse (a.m.) when in the paroxysms and not under treatment...	106.
" " " " not yet quieted by digitalis	99.
" " when the paroxysms are moderated by digitalis	93.
" " " " aborted by digitalis...	88.
" " normal, inter-paroxysmal	86.

CASE V.—Chronic paroxysmal mania in a man aged 37 years, who is tall, well built, fairly nourished, and in good general health. Insanity has existed ten years, and he has passed most of this period in an asylum. Hallucinations and delusions are evident. He hears voices abusing him at night, and fancies himself the unwilling host of some strange creature which has gained access to his viscera, and which he asks to have excised. Paroxysms of excitement occur by day or by night, and on these occasions he shouts for hours together, uttering a tissue of obscene, blasphemous, and threatening words, and grows impulsively violent to those about him. Thirty minims of tincture of digitalis taken three times a day for nine weeks, kept him in a state of comparative quietude during the time, checking every outburst, and he continued somewhat better after the cessation of treatment.

Instances could be multiplied wherein the paroxysmal recurring excitement of chronic mania was *decisively* relieved by digitalis, but the five just detailed will suffice.

In the next two cases of chronic mania with paroxysmal excitement the degree of benefit was *moderate*.

CASE VI.—Fairly nourished and healthy male, aged 34. Ordinarily, he is quiet, and works in the ward. Is incoherent in conversation, and expresses a variety of delusions; such as, that he is the owner of this place and of the tower, that he was imposed on in his regiment, is annoyed by those about him, and persecuted by women. Under the influence of these, or similar, delusions, often vaguely expressed, excitement and negative feeling become wrought to an excessive pitch, and though at first merely restless and agitated, he finally shouts, screams, or acts impulsively towards attendants and patients. Tincture of digitalis was prescribed for him in doses of mxxx . three times a day, and though it did not altogether abolish the symptoms, yet it kept them subdued during the five weeks of its administration. At the expiration of this time the appetite had become slightly affected, and the medicine was therefore omitted. Similar benefit was

derived on a subsequent occasion. The second sound of the heart is accentuated. At the close of the latter period of treatment the pulse was 48 and intermittent, the patient was very quiet, and the stomach unaffected. The intermittency of pulse continued for three days after the medicine was stopped. The morning pulse during the intermissions of excitement averages 75, and when he is kept quiet by digitalis the average is 73.

CASE VII.—A well-knit, muscular man, of lively and intelligent appearance, who has been insane a year and a half. *Æt.* 28. He suffers from chronic mania with vivid hallucinations of hearing, and, formerly, of sight. Though coherent in ordinary conversation, he becomes excited and confused on the subject of his delusions and hallucinations. He hears imaginary persons mocking at and maligning him, particularly a band of associates, who, headed by his arch-enemy, fiendishly torment him day and night. He shouts in reply, alternately expostulating and vituperating, and at times is so wrought up by exasperation that he becomes frenzied and wildly destructive, smashing the windows through which the voices of his persecutors appear to come. Half a drachm of tincture of digitalis taken three times a day was of doubtful value on one occasion; on a second, it kept the symptoms constantly moderated while the patient took it steadily for four weeks. Three days after the omission of the digitalis he broke a number of windows in impulsive fury, and at the end of a fortnight the medicine was resumed for seventeen days, in consequence of another severe outburst. The heart sounds are healthy, and anorexia was noticed on one day only.

Average pulse (a.m.) when moderately excited	78.
" " kept quiet by digitalis	63 & 70.
" " inter-paroxysmal	74.

Two cases are added in illustration of those in which the benefit derived from digitalis in chronic paroxysmal mania was doubtful, slight, or nil.

CASE VIII.—One was that of a man 50 years of age, who had been insane eighteen years. Usually he was quiet, was somewhat confused in conversation, and displayed various absurd delusions. Paroxysmal excitement frequently occurred, and generally lasted about one week, during which his dress was disordered, and his conduct obstinate and irritably impulsive. Hallucinations of sight and hearing were then vivid, and he was wont to become extremely noisy,

and would, if allowed, stand in one spot for hours, looking at the sun, gesticulating and shouting wildly, threatening and denouncing imaginary objects of rage. Doses of \mathfrak{mxxx} . tr. digitalis, four times a day, were prescribed at the outset of a severe paroxysm, but five days elapsed before quietude was restored, and during this period of excitement the pulse averaged 100, whereas, after he grew calm the average was 80. It cannot be said that any benefit resulted from the use of digitalis by this patient.

CASE IX.—Another case in which the effect of the drug did not seem to be beneficial, was that of a female aged 48, whose insanity was of sixteen months' duration, who had chronic mania, with exacerbations of quasi-hysterical excitement, during which there was great emotional disturbance, with mischievous conduct, restlessness, sleeplessness, etc. Tincture of digitalis, in doses of $\mathfrak{m xv}$. every four hours, was taken for twenty days, within which period she improved, relapsed, and again grew better. The doses were perhaps too small for a fair test.

Many other instances might be given to exemplify the various effects of digitalis when taken by those who suffer from recurrent paroxysmal excitement in the course of chronic mania. The limited space at disposal will preclude the introduction of cases illustrative of the effects obtained in chronic mania when the excitement was continuous, or nearly so.

The *pulse* was studied for long periods in many of the cases treated by digitalis. The general results may be mentioned. The figures are all *averages*, and usually refer to the morning pulse. The pulse-numbers said to be associated with benefit from the drug are the averages of those noted as soon as benefit was clearly produced. The "normal pulse" frequently mentioned was, in each case, the average of a number of days when the particular patient was quiet—or comparatively quiet, and not taking medicine.

In most cases of chronic *paroxysmal* mania the pulse rises considerably during the paroxysmal excitement; in a few it rises only to 80, 90, or 100; and in some it is unchanged, or even low,—unchanged or low, that is, at the moment when counted, which is necessarily one of less extreme excitement. Now digitalis, when it checks the paroxysms, is found to reduce the high pulse associated with them. Thus, in one patient the pulse sank from 135 to 110, and finally to 90, on three successive days while digitalis was exerting a decisive

control, and on a similar occasion the pulse fell from 100 to 88, and to 72, also on three successive days. In a second patient the pulse during the paroxysms averaged more than 100; digitalis reduced it to an average of 79, and quieted the patient. The normal pulse was 75. In a third, the standard pulse with excitement was 106; the average, immediately after excitement was quenched by digitalis, was 88. Again, in one case the pulse of excitement was reduced, when the paroxysms were controlled, from an average of 97 to one of 75; and in another from 115 to 82.

In cases of paroxysmal excitement benefited by digitalis, wherein the pulse of excitement was only slightly above the "normal pulse;" in one it was reduced from the average of 79 during excitement, to 71, which was the average of the pulse counted immediately after each paroxysm was quenched by the medicine; while that of another patient fell, from 78 during excitement, to 63, the normal pulse being 74.

In *subcontinuous* maniacal excitement, the pulse is occasionally very high, usually moderately or slightly high, and not unfrequently low. Whatever the pulse-frequency might be, the usual tendency of digitalis was to lessen the number of beats in the cases of this form treated by it. Thus, in several instances before me, the reduction of pulse coincidently with reduction of excitement by digitalis was from 100 to 97; from 100 to 85, and finally to 82; from 73 to 65; and from 59 to 39. These figures are, of course, the averages of numerous observations in each instance.

The pulse was not, however, necessarily or always retarded under digitalis in every case.

With every desire to avoid hasty theorising one could not resist the speculation that, in the cases benefited by digitalis, maniacal symptoms were associated with disorder of cerebral circulation (whether originating in local arterial spasm or relaxation), which modified the nutrition of the convolitional mass, and that the method of operation of digitalis was either by giving tone to the heart's action, so as to overcome the tendency to local vascular stasis and congestion, or by acting more directly on the peripheral arterioles—intracranial or other—and thus immediately influencing the cerebral circulation.

I have attempted to formulate the relations noticed in different varieties of cases as existing between the general symptoms, the pulse, and the effects of digitalis. It is matter of regret that, owing to the difficulty of using the sphygmo-

graph in most of the cases, the relation just mentioned is expressed as regards only one quality of the pulse—namely, its frequency. Each number is the average of several or numerous observations. In the first four sets of cases excitement was paroxysmal, in the last three it was more continuous.

(1.) In cases of chronic mania, with paroxysms of extreme maniacal excitement, wherein the pulse ranged very high (from 100 to 140) during the paroxysms, and the paroxysms were decisively relieved by digitalis; coincidentally with this relief to excitement the high pulse associated with the paroxysms was reduced towards the normal pulse-frequency usual to the patient during the intermissions. Thus, in several cases:—

The high pulse of paroxysmal excitement in five cases was reduced by digitalis to averages of	}	79, the "normal" pulse of the same patient being	75
		88, " "	86
		95, " "	86
		78, " "	75
		81, " "	79

(2.) In cases of paroxysmal excitement associated with a high pulse, and therefore similar to those mentioned in (1), but wherein excitement continued more or less in spite of the digitalis given, reduction of the pulse-frequency was usually effected, and it often sank to about midway between the high pulse of an untreated paroxysm and the normal pulse of the particular patient during the intermissions.

No.	Average pulse in untreated paroxysms.	Average pulse when paroxysms were only partially controlled by digitalis.	Normal pulse of same patients. (Average.)
1	Above 100	95	75
2	106	99	86
3	" 100	97	75
4	112	89½	79
5	" 100	98	89

The lowering of pulse, therefore, varied in different cases. In one other patient the pulse continued very high for a time,

notwithstanding the excitement was partially reduced by full doses of digitalis.

(3.) Patients who had paroxysmal excitement in the course of chronic mania, in whom the frequency of the pulse during excitement was higher than the normal rate, and yet not very high; when their symptoms were decisively relieved by digitalis, the pulse of excitement was reduced towards or below the normal rate coincidentally with benefit being obtained.

For example, in several cases—

Pulse of excitement reduced by digitalis to an average of		Average normal pulse of same patient.	
(1.)	71½ ... ..	...	64
(2.)	73 ... ..	...	75
(3.)	63 ... ..	...	74

(4.) In cases wherein paroxysms of excitement and the pulse associated therewith were of the character described in (3); when certain paroxysms were not fully controlled, though partially benefited by digitalis, the pulse was reduced to a frequency intermediate between that of an untreated paroxysm and that of the normal pulse. The phenomena, therefore, are similar to those described in (2), *mutatis mutandis*.

(5.) In the subcontinuous excitement (with or without a degree of exacerbation) of chronic or sub-acute mania or general paralysis, in which the pulse of excitement ruled high; when decided benefit resulted from digitalis, the pulse of excitement was reduced coincidentally with benefit being derived.

Average pulse of excitement when not under treatment.	Excitement relieved by digitalis. Average pulse of same patients reduced to
100	97.7
100	85
92	82 (74 if nauseated.)

(6.) In several cases of active, nearly continual, excitement, with low or average "normal" pulse, which rose but little in consequence of excitement, benefit was derived from digitalis, and the pulse was coincidentally lowered towards or

below the normal rate : for example, to 72 (40, if nauseated) ; to 65 ; to 55 ; to 35, in different patients.

(7.) Decided reduction of the pulse from the use of digitalis was not always attended with *decided* benefit to sub-continuous excitement, for in several such instances, wherein the "normal" pulse and the pulse of excitement were both comparatively low, and the latter was greatly reduced by digitalis, the excitement was not quenched, though it was modified.

Reduction of pulse by digitalis, without decided benefit, to average of		Average normal pulse of same patient.					
(I.)	39.	...	...	...	...	...	59.
(II.)	45.	...	...	...	...	...	65.
(III.)	55.	...	...	...	...	...	65.
(IV.)	62.	..	...	...	...	...	70.

In a few cases where digitalis was not calmative until it caused sickness, reduction of the pulse was moderate, slight, or nil, prior to the emetic effect. When vomiting was caused by foxglove, the pulse was much abated as a rule, but in some patients, whose pulses rose very high during excitement, its lowering, associated with emesis, was moderate or even slight.

This leads to some notice of the gastric disturbance occasionally caused by digitalis. Anorexia, nausea, or vomiting were now and then produced, and the tongue was apt to be moist and pale, with a slightly creamy or dirty surface. In some of these cases excitement was quenched, in others it was moderated, in one unaffected, previous to decided gastric disturbance ensuing. In every case the excitement was quenched when vomiting occurred, but this effect on excitement was only temporary in some. Eight patients in all had decided gastric disturbance, to the extent of emesis, etc. The doses producing this result and the point of time in the treatment at which it occurred, are appended.

In most of the patients, however, not the slightest disorder of digestion occurred, and although one or two lost weight while under the treatment, several, on the other hand, gained considerably.

Symptoms of great excitement.	Dose of tincture of digitalis causing decided gastric disorder.	Point of time when digitalis caused decided gastric disorder.
Exacerbational.....	℥ xl three times a day.	After 3 days' treatment.
Subcontinuous	℥ xlv twice a day.	„ 4 „ „
Subcontinuous	℥ xxx three times a day.	„ 11 „ „
Paroxysmal	℥ xxx „ „	„ 2 „ „
Paroxysmal	℥ xxx „ „	„ 7 „ „
Subcontinuous	℥ xxx „ „	„ 74 „ „
Subcontinuous	℥ xxx „ „	„ 28 „ „
Paroxysmal	℥ xxx „ „	„ 16 „ „

The cases have been tabulated, so as to show in each, the sex, age, form and duration of insanity; general character of the symptoms treated; the number of separate occasions on which treatment was adopted, and the length of each; the doses administered, and effect produced. In giving the duration of insanity, of course it is not implied that the particular form of it mentioned had existed throughout. Many had suffered from other, and different, mental symptoms at earlier periods of their insane history.

Digitalis is undoubtedly a powerful medicine, and in these cases it was preferred not to push the treatment; and, indeed, large or increasing doses were carefully avoided. No matter how violent their frenzy, it was never deemed judicious to give to the maniacs under care the heroic doses again and again recorded as having been given in delirium tremens, and by which many epileptics were tortured a generation ago.

Comparatively small doses were found to exert an effect different from that of larger ones, and to produce, or tend to, a calmative and tonic influence on both cerebral and cardiac agitation. It is believed this is conformable with the view now usually entertained as to the different effects of small and of large amounts of digitalis.

Any unpleasant gastric symptom in the above cases was interpreted as a sign that beneficial effect was being replaced by detrimental action, and that total or partial omission of the treatment was authorised. Any marked alteration of cardiac rhythm or sounds, supervening while digitalis was being taken, was felt to justify immediate cessation of its use. Cardiac contra-indications were, however, extremely rare.

Particulars of some Cases of Chronic Mania, Treated by Digitalis.

Sex.	Age.	Duration of Insanity.	General Character of Symptoms Treated by Digitalis.	Separate periods of Treatment by Digitalis	Length of each period.	Doses of Tincture of Digitalis, B. P.	Degree of Benefit resulting from Treatment.
Male	34	9 years	Paroxysmal excitement: noisy: impulsive: extravagant delusions	1	5 weeks	℞ xxx., 3 times a day	Moderate
Male	32	4 years	Ditto ditto ditto	2	2 weeks	" "	Decided
"	"	"	Paroxysmal excitement: noisy and impulsive, marked hallucinations	1	10 weeks	" "	"
"	"	"	Ditto ditto ditto	2	25 days	" "	"
"	"	"	Ditto ditto ditto	3	11 days	" "	"
"	"	"	Ditto ditto ditto	4	20 days	" "	"
"	"	"	Ditto ditto ditto	5	13 days	" "	"
Male	37	10 years	Paroxysmal excitement: noisy: irrational: hallucinations, and delusions	1	9 weeks	" "	"
Male	30	2 years	Paroxysmal excitement: noisy: threatening: extravagant delusions	1	9 weeks	" "	"
Male	22	6 months	Ditto ditto ditto	2	6 weeks	" "	"
Female	63	18 months	Paroxysmal excitement: noisy: restless: mischievous, &c.	1	26 days	" "	"
			Paroxysmal excitement: excessively noisy and obscene	1	1 week, then P.R.N. for 3 months.	" "	"
Female	41	9 months	Paroxysmal excitement: noisy: restless: abusive, &c.	1	12 days	" "	"
"	"	11 months	Ditto ditto ditto	2	12 days	" "	"
"	"	13 months	Ditto ditto ditto	3	4 days	" "	"
Female	24	4½ years	Paroxysmal excitement: loud singing: very restless, &c.	1	8 days	" "	Doubtful
"	"	"	Ditto ditto ditto	2	18 days	℞ xxx. to xlv., twice or three times a day	Decided
"	"	5 years	Ditto ditto ditto	3	10 days, then P.R.N.	" "	"
Male	23	2 years	Paroxysmal excitement: noisy: impulsive, &c.	1	4 weeks	℞ xxx., 3 times a day	Moderate
Male	20	1 year	Paroxysmal excitement: mischievous: insubordinate: destructive, &c.	1	27 days	" "	"
Male	28	16 months	Exacerbations of fury and violence: hallucinations, &c.	1	10 days	" "	Doubtful
"	"	18 months	Ditto ditto ditto	2	4 weeks	" "	Moderate
"	"	20 months	Ditto ditto ditto	3	17 days	" "	"
Male	41	11 years	Paroxysmal excitement: noisy: threatening: mischievous	1	12 days	" "	"

Particulars of some Cases of Chronic Mania, Treated by Digitalis—(continued).

Sex.	Age.	Duration of Insanity.	General Character of Symptoms Treated by Digitalis.	Separate periods of Treatment by Digitalis	Length of each period.	Doses of Tincture by Digitalis, B. P.	Degree of Benefit resulting from Treatment.
Male	41	11 years	Paroxysmal excitement: noisy: threatening: mischievous	2	9 days	ʒj xxx, 3 times a day	Moderate
Male	30	6 years	Paroxysmal excitement: noisy: threatening: foul language	1	13 days	"	"
Male	22	8 months	Paroxysmal excitement: impulsive: violent: absurd delusions	1	3 weeks	"	Doubtful
Male	39	3 years	Paroxysmal excitement: noisy: incoherent, &c.	2	16 days	"	"
Male	25	3 years	Ditto ditto	1	6 days	"	"
Female	35	2 years	Paroxysmal homicidal impulse under hallucinations ..	1	5 days	"	"
Male	50	18 years	Paroxysmal excitement: noisy: loquacious: irritable, &c.	1	3 days	"	"
Female	48	16 months	Paroxysmal excitement: noisy: incoherent: hallucinations	1	5 days	ʒj xxx, 4 times a day	"
Male	24	6 to 15 mos.	Exacerbations of emotional excitement	1	20 days	ʒj xv, every 4 hours	"
"	"	"	Subcontinuous excitement: noisy: insubordinate, with exalted delusions	1	70 days	ʒj xxx, 3 times a day	Decided
"	"	"	Ditto ditto	2	17 days	"	Moderate
"	"	"	Ditto ditto	3	14 days	"	Decided
Male	29	3 years	Ditto ditto	4	17 days	"	Moderate
Male	35	6 years	Subcontinuous excitement: noisy: quarrelsome, &c.	1	28 days	ʒj xxv, 3 times a day	"
Male	39	5 to 6 years	Subcontinuous excitement: noisy: irritable, violent, &c.	1	74 days	ʒj xxv, 3 times a day	"
"	"	"	Constant impulsive attempts to escape: irritable: occasionally violent	1	11 days	ʒj xl, 3 times a day	"
"	"	"	Ditto ditto	2	18 days	ʒj xxx, 3 times a day	"
Male	29	16 months	Ditto ditto	3	17 days	"	"
Female	56	14 months	Subcontinuous excitement: full of delusions and complaints of being poisoned, &c.	1	18 days	"	"
"	"	"	Continuous excitement: noisy: restless: excessively mischievous	1	8 days	ʒi, twice a day	None
CHRONIC MELANCHOLIA AND DEMENTIA.							
Female	49	11 months	Melancholia, with exacerbations of great anguish and agitation	1	7 days	ʒj xl. (later xx.) 3 times a day	Moderate

Female	47	9 months	Melancholia, with continual anguished agitation and irritability.....	1	11 days	np. xxx., 3 times a day	Decided
Male	21	10 months	Dementia, with exacerbations of destructive impulse and excitement.....	1	38 days	np. xxv., 3 times a day	Moderate
Male	31	6 years	Dementia, with paroxysmal excitement.....	1	23 days	np. xxx., 3 times a day	"
Male	36	"	Ditto ditto.....	2	14 days	" "	Doubtful
"	"	12 years	Dementia, with destructive impulse, &c.....	1	31 days	" "	"
"	"	"	Ditto ditto.....	2	80 days	" "	"
"	"	"	Ditto ditto.....	3	6 days	" "	"
GENERAL PARALYSIS.							
Female	27	5 months	Paroxysmal outbursts of noisy and destructive excitement.....	1	2 days	np. xxx., 3 times a day	Decided
"	40	6 months	Ditto ditto.....	2	2 days	" "	"
"	40	2 years	Great restlessness in 2nd stage, approaching 3rd.....	1	17 days	np. xlv. (later xxx.), 3 times a day	Moderate
Male	56	2 months	Continual maniacal excitement : incessantly jabbering	1	14 days	np. xx., every 3 hours	"
Male	38	6 months	Chronic excitement, with exacerbations.....	1	12 days	np. xxx., 3 times a day	"
Male	38	7 months	Excitement from exalted delusions, in 1st stage.....	1	5 days	" "	Doubtful
ACUTE MANIA.							
Female	25	1 month	Noisy : restless : incoherent : sleepless, &c.....	1	28 days	np. xxx., 3 times a day	Moderate
Male	33	5 days	Noisy : restless : violent, &c.....	1	8 days	" "	"
"	33	1 month	Ditto ditto.....	2	11 days	" "	"
"	33	1 month	Subacute : noisy : restless : dirty : mischievous : absurd delusions.....	1	28 days	" "	Decided
Male	28	7 days	Subacute : great restlessness : noisy : incoherent jabbering, &c.....	1	7 days	" "	Moderate
"	28	21 days	Ditto ditto.....	2	7 days	" "	"
Male	28	5 days	Maniacal fury, with desperately violent acts.....	1	10 days	np. xl., 3 times a day	Doubtful
Male	46	2½ months	Excited : restless : emotional agitation : sleepless, &c.....	1	29 days	np. xx., 3 times a day.	Moderate
K. Br. and Hyos, H.S.S.							

Consciousness and "Unconscious Cerebration."—By the Rev. W. G. DAVIES, B.D., Chaplain J. C. Asylum, Abergavenny.

Is consciousness something distinct from the intellectual operations named perceiving, conceiving, reasoning, recollecting, imagining; or do these operations ever take place in the absence of consciousness? In order to answer this vital question it is necessary that consciousness should be examined with a microscopic nicety, rarely, as we take it, attained to since Reid explored this field of science. When we consider that, for forty years, Reid, with an enthusiastic admiration for that inductive method which the genius of Newton and others illuminated with such brilliancy, questioned Nature, Nature in man, as to the character of perception, and decided that the objects disclosed by it were not mentally possessed; investigators are bound, for their own credit's sake, to show beyond doubt that Reid is in error before they flippantly accuse him of being singularly wanting in penetration. Yet the conclusion which is forced upon us by the present aspect of psychology and cerebral physiology, not to mention metaphysic, is to the effect either that Reid was singularly wanting in analytical ability, or that the living race of psychologists must be going far astray on a most vital point. We have lately been forced to believe that Reid is on the right road; yet, sooth to say, during many years objects have been to us, as it would seem to psychologists in general, a most fertile source of perplexity and confusion. It is only very lately we have succeeded in realising the fact that the object, or the known, is not an element of the knowing; that knowing is not knowing *plus* known, but knowing purely and simply, a single fact, not a double one; not a synthesis of consciousness and object, but consciousness only, that and nothing more.

To Reid must be awarded the honour of seeing more clearly than any other enquirer this all-important fact of psychology. Hamilton, although deeply in sympathy with Reid in most respects, thought nevertheless that he went too far in shutting objects out of the mind. In opposition to Hamilton, we feel convinced that no system, either of psychology or of cerebral physiology, can be built on an intelligible and abiding basis till it is unreservedly acknowledged that

knowing, in no instance, includes the known as an essential part of itself. We go even farther than Reid in this respect, for he is evidently at fault, and is holding a doctrine inconsistent with his main one, that knowing does not embrace the known, when he states that consciousness is a special operation of the mind revealing to us such mental acts as perception, reasoning, and the rest, as if these were objects known. Consciousness we hold, in common with the more recent psychologists, to be a general term embracing the various kinds of knowing, but—and in this we differ widely from them—never constituting the object or known.*

What is knowing? Before replying to this question, we must be made well aware that knowing is for us, as intelligences, the Beginning, it underlies everything, our own existence; all other existence. It is impossible, therefore, to analyse it into simpler elements, for it is itself the simple, the absolute starting point; it cannot consequently be defined. Bearing this much well in mind, let it be understood that when we say knowing is this or that, a revelation, for instance, we are only substituting one equivalent term for another, and saying, in effect, that knowing is knowing. This is all then we profess to do in stating that knowing is a revelation. As such, it reveals itself, and this is absolutely essential to its revealing aught else. But mark! when it reveals other things, it does not put us mentally in possession of these other things; for, in such act of knowing, we are made mental proprietors of absolutely nothing but the knowing. For instance, one kind of knowing discloses to us the existence of the non-ego, but we are entirely restricted to the disclosure; the non-ego revealed forms no part whatever of the furniture of the revealing mind. Were it asked how could the moon be made to exist to the earth, the answer must be, the earth must be endowed with an intelligence that would enable it to be conscious of the existence of the moon. Now the earth, in such a case, would possess nothing more than the consciousness of the moon's existence; it would not, in addition to this, also possess the object known, or the moon.

Then, with regard to these intellectual operations, if we are

* Of course, knowing reveals itself to itself, which is to say, it knows itself, and thus may be thought to be an object to itself. We do not deny this. What we deny is that the object when revealed as *not-knowing* is, nevertheless, knowing. To hold this is to give the lie to the only foundation of certitude—knowing, in its very final revealing, as the underlying fact of all facts.

conscious of them as objects to be distinguished from the consciousness, it must, nevertheless, be admitted that they exist *ad nos* only through the knowing of them, and that knowing is nothing but knowing. But does consciousness reveal the independent existence of these intellectual operations; and is not consciousness veracious in what it reveals?

First, does consciousness reveal the independent existence of these intellectual operations? It seems to us as clear as noon-day that it does not. Knowing, consciousness, only exists in the various forms called perception (intellection *plus* sensation), conception, reasoning, recollecting, imagining, &c. Consciousness is the general designation for all these kinds of knowing, the class of which they form the divisions. Knowing of any kind, being a revelation, must have form, shape, or quality in which to reveal itself. It is simply impossible for us to have consciousness denuded of all quality. These intellectual operations are therefore the different modes in which consciousness exists for us.

This investigation here enters upon a stage which renders it necessary to discriminate between Mind-conscious and Mind-unconscious. Both states of mind only exist for us in so far as they are *known* to do so. But the one state, Mind-conscious, without consciousness, under its various forms of perception, conception, &c., is nothing. It exists only as knowing, and without knowing Mind-conscious exists not. The other state, Mind-unconscious, exists as the *known*, and is revealed by those branches of knowing named anatomy, physiology, &c. In fact, the one is the *knowing* Mind, the other the *known* Mind. A complete psychology consists of the facts of the *knowing* Mind, the facts of the *known* Mind, together with the inferences following from the comparing together of these two classes of facts. Now the intellectual operations above mentioned, we reiterate, are revealed as pertaining exclusively to Mind-conscious; and of the mere consciousness of such intellectual operations as conjectured to be distinguishable from the acts themselves we positively find no trace; it would be knowing stripped of all quality, which would render it completely unknowable. We feel compelled, then, to return to the question: Does knowing reveal the independent existence of the intellectual operations? a decisively negative answer.

Secondly, is knowing veracious in what it reveals? It must, on consideration, be very evident that unless there be radical veracity in knowing there can be no absolute truth,

no exact, no positive science. In ultimate analysis, even though we plunge deep as the nebulous or the atomic theory, we must confess that knowing is, of all facts, the underlying one. Deeper than knowing we cannot positively dive. And now the fundamental fact of knowing is this:—

Any attempt either to establish or to overthrow its veracity must take that veracity for granted. For the endeavour to establish it begs the very veracity it seeks to establish, and the endeavour to overthrow it, the veracity it seeks to overthrow. The integrity of consciousness, therefore, must be taken for granted in every *exhaustive* search after truth.

Now, as there can be no question that these intellectual operations are never revealed as separate from consciousness; and since, moreover, this revealing cannot be deemed mendacious without involving self-annihilating doubt, we have no alternative but to conclude that for each kind of knowing, perception (intellection *plus* sensation), reasoning, &c., there can be but one seat, that is, as we shall show more articulately in the sequel, the sensory ganglia for sensation, sense-consciousness; the cerebrum for intellectual consciousness or ideation.*

It is held by the majority of the later metaphysicians that what, in any case, is immediately known is a modification of consciousness, a mental object. In fact, the *tertium quid* of the older psychologists has been transformed into the *solum quid*; and by the more recent metaphysicians it is maintained that this has a distinguishable aspect in, but not a separable existence from, consciousness; that it is consciousness in its objective aspect. But consciousness thoroughly repudiates any such alliance between itself and the known. What consciousness clearly and emphatically declares is, that the object is never identical with itself, is never possessed by Mind-conscious at all. But even were the view here rejected correct, since the object is declared to be inseparable from the consciousness, there can be but one seat involved—not one for the knowing, another for the known.

Not long ago a work, entitled “Subject and Object as connected with our Double Brain,” was reviewed in this Journal; and in that work, the author, holding in its crudest form the opinion that there is a subject and an object in all thought,

* In an article in this Journal, July, 1869, entitled “The Perceptive Centres and their Localisation,” we have entered at some length into this subject. We wish it to be understood, however, that we desire certain points in that article to be modified in harmony with the later opinion entertained in this contribution.

attempts to make out that the right hemisphere of the brain is concerned with the former, the left with the latter; and that for the production of ideas, the two hemispheres have to act in union, the left being the seat of ideas regarded as objects, the right, the seat of the contemplation of these ideas. Here we have brought physiologically to an amusing climax that crude doctrine of the time of Berkeley, which supposes the separability of subject and object in thought. This author, however, is not the only one who has been led astray by the prevailing opinion as to the relation in which objects stand to knowing.

Dr. Carpenter, for instance, holding that the sensorium is the sole seat of consciousness, believes that ideation, the function of the grey matter of the cerebral hemispheres, is not a mode of consciousness at all, and that it habitually takes place without exciting a consciousness of it in the sensory ganglia below. He, too, then holds that there is one seat for the object, and another for the consciousness of the object. But, unfortunately for the success of his hypothesis, knowing, our only outlet to Being, knowing, for us, the Beginning, reveals that the consciousness, in this case, is all that exists; that "the intellectual operations" and "consciousness of the intellectual operations" are simply two names for one and the same thing.

To sum up this head: these intellectual operations only exist as certain kinds of knowing, and knowing is a single fact, not a double one; not knowing *plus* the known. This being the case, the effect of making the sensorium the seat of the consciousness of the intellectual operations is to make it the seat of these operations also, and thus to dispense with the functional action of the cerebral centres altogether, and to assign to these latter the humble office of merely exciting the sensorium to display thought and emotion. In short, the result of not seeing that knowing is nothing but knowing, not the known as well, is to obscure the whole field of psychology, and thereby so to mislead the anatomists as to make them hunt for the seat of a nonentity. When it is clearly understood that knowing cannot exist without quality, or as a bare contemplation of an object, but must present some form, as perception, reasoning, &c., there will be a better prospect than there has yet been of discovering the functions of the brain.

It is now time to ask, is knowing co-extensive with mind,

and are there not mental results invariably occurring without being attended with any display of knowing? According to the Law of Evolution, which we consider to be the highest utterance won from the oracle, knowing, in these days, Mind is the substratum of consciousness, Mind-unconscious precedes Mind-conscious; but what Mind is apart from nervous organization we know not, and have not the means of knowing. This, however, we do know, that to say Mind is matter is about as true as to say matter is Mind. Let us state the point in the following syllogistic form, and the absurdity of the charge brought by some well meaning persons, who have not given their whole time and attention to the subject, against those whose sole aim is the truth, becomes very apparent:—

Matter is the extended and solid,
Mind is matter—therefore
Mind is the extended and solid.

Who among the realists, or all save the idealists, hold an opinion in any way approaching to this? Mind, in that sense in which it is regarded as pre-consciously acting in Nature, is coeval with matter. Nature is not matter alone, not inert, dead, statical, matter, but matter endowed with Mind; matter being the inferior, subordinate, passive element; Mind being the superior, subordinating, active element. If the horse carries the rider, or the ship the mariner, yet it is the rider who guides the horse, the mariner the ship. In short, as it seems, the tendency of modern science, more especially physiological science, as Canon Kingsley has shown, is to return to an early spontaneous belief, and to look upon Nature as living, not dead; as in fact saturated with a forming, dominating Mind.

Although, then, Mind, as forming part of Nature, is not synonymous with consciousness, but is that, which, as certain grades of evolution are reached, displays sensational, intellectual, moral consciousness; still it never carries on the intellectual functions mentioned above without giving birth to consciousness. Dr. Carpenter thinks otherwise, and, among others, has won over to his own way of thinking, Dr. Bastian,* and Miss Francis Power Cobbe.

But, if we hold the opposite view, it becomes necessary that we should satisfactorily account for those mental results which

* "Consciousness," "Journal of Mental Science," January, 1870.

undeniably do take place without involving consciousness. In discussing this point we have decided upon selecting for criticism Miss Cobbe's fascinating exposition, in "Macmillan's Magazine," Nov., 1870, of Dr. Carpenter's doctrine.

Speaking of the "Unconscious Brain," Miss Cobbe remarks:—

"It not only remembers as much as the conscious self can recall, but often much more."

Memory, or the power of retaining so as again to reproduce past states of consciousness, is evidently a force-providing process. All mental activity leading to consciousness is the result of chemical reaction between the blood and the brain.*

But the mental activity which necessarily precedes this and provides for it, is of a different character. Between the two there is all the difference which exists between production and expenditure, between charging and discharging, the one is a nutritive, the other, a wasting activity. Now it is a law well known to physiologists, that when the discharging function of an organ has been carried on till the force is well spent, a cessation of such activity is needed, and that then the charging activity identically replaces what has been expended, but with a tendency, in a well practised, healthy organ, to enlarge its capacity for disintegrating action. Thus a large amount of latent thought, or thinking power, is continually being organized in the well trained brain ready, when a copious supply of good blood is at hand, to reveal itself when the demand is made upon it. Now to state, or even hint, that this *production* of mental power or latent memory is identical, in all save consciousness, with the *expenditure* of mental power or active memory is, we conceive, wholly unjustified by the facts of the case.

"It can understand (?) what words or things are sought to be remembered, and hunt them up through some recondite process known (?) only to itself, till it discovers and pounces on them."

As Dr. Carpenter bases his hypothesis mainly on the fact here stated, it will be well to yield to it a larger share of attention than to the rest of the operations credited by Miss

* Let it be understood that we incline to Dr. Frankland's theory rather than to Liebig's. We do not think that thought necessitates the oxidation of the Brain-cells, but simply their *activity*, which seems to involve the oxidation of the blood supplied to them. Of course we recognise the fact that the functional action of the Brain-cells occasions wear and tear, and that this must be repaired by the Nutritive process.

Cobbe to the "Unconscious Brain." With this intention, we shall give, as it appeared in the April number of "The Contemporary Review," Dr. Carpenter's latest version of his doctrine:—

"When a chain of association," he remarks, "has once been formed, the two Terminal Ideas may come into communication without the conscious intermediation of those which originally linked them together; so that the original chain having been composed of A B C D, A may *directly* excite D, without B and C coming into the mind at all."

Now it occurred to us to put this so-called fact to the test; but, before we state the result, let us settle the real meaning of the words "when a chain of associations has been formed." This is accomplished when, for instance, a piece of poetry has been completely committed to memory; we are then aware that number one link has called up number two, and so on throughout the whole length of the chain. But if a piece of poetry is not completely committed to memory, but is simply carefully perused twice or three times by a person possessing only an average memory, will the words and phrases that can be recalled retain the order in which they occur in the poem? With the object of discovering this point, we have selected for experiment a poem with which we have long been familiar, "The Charge of the Light Brigade," and having read it carefully through three times and then shut the book, we have written down the lines exactly in the order in which they occurred to our recollection. The following is the result:—"Forward the Light Brigade. O the wild charge they made. All the world wondered. Some one had blundered. Cannon to the right of them, Cannon to the left of them, Cannon in front of them, Volleyed and thundered. O the wild charge they made. Into the mouth of hell, rode the six hundred. When will their glory fade. Into the valley of death. Noble six hundred. Theirs but to do and die. Theirs not to reason why. Flashed all their sabres bare. Cannon behind them." Now, although we have often perused this poem, and carefully read it three times immediately before trying this experiment, yet the result, as will be readily seen from comparing it with the original, does not tally at all with Dr. Carpenter's statement. Let others try similar experiments, and we confidently expect that like results will follow. Evidently a perfect chain of association involves a completed process of retention; and a

completed process of retention is ready, at any time, to be recalled into consciousness.

When we are at a loss for a name and make every effort to recall it, but unsuccessfully; and that name afterwards spontaneously flashes into consciousness, such an event can be satisfactorily accounted for by the great physiological law of production to which reference has already been made. The disintegrating activity involved in hunting for the name has made an increased demand upon the nutritive process or production, extra force has been generated, this flashes out of latency into consciousness, and lo! the missing name. If "Unconscious Cerebration," in the sense of expenditure, is made to account for the fact that the schoolboy who can just manage with great effort to repeat fifty lines of Virgil before retiring to rest, can repeat them fluently in the morning, we are placed in this difficulty, namely, how to make a cask from which the water runs out as fast as it runs in, fuller in the morning than it was the previous night. So intelligent a man and so able a physiologist as Dr. Carpenter, must see the reasonableness of what we are here urging, if he has not done so already, only he is so hampered by an untenable hypothesis that he does not clearly state whether by "Unconscious Cerebration" he does not mean both integrating and disintegrating mental processes. Let him, therefore, ponder well over the fact that the integrating process is invariably preparatory to the display of consciousness, that the disintegrating process never takes place without such display.

"It can fancy the most beautiful pictures, and also the most terrible ones, and weave ten thousand fables with inexhaustible invention."

Miss Cobbe here alludes to dreaming, and dreaming, say what you will, involves consciousness, and consciousness involves a process of expenditure. Some parts of the brain being active, while others are dormant, the vagaries and delusions of dreams naturally follow. Were one to grind a barrel-organ, out of the barrel of which many of the projecting pieces had been removed, a result may be imagined not wholly wanting in analogy to what happens in dreaming.

"It can perform the exceedingly difficult task of mental arrangement and logical division of subjects."

This is evidently a process of production. That which is not, or is only imperfectly prepared for, in the brain, becomes massed *en force* after the plan traced by the prior discharging

process. How can dissipation of energy produce such a result?

"It can transact all the mechanical business of walking, reading, writing, sewing, playing, &c., &c."

What can? "The Unconscious Brain." The brain here must mean the motory ganglia, and these, it is well known, by long practice, get to perform such actions as the above without the continual superintendence of the higher centres which had to set them going, and continue directing them, till automatic proficiency had been attained. As the boy who was engaged to open and shut the valve of a steam-engine ingeniously contrived, when he wanted to play, to make a string perform the work, so the motory ganglia, when trained to do so, work away automatically with astonishing precision. But what have we here? not production but expenditure. The automatic actions of the motory apparatus clearly involve a disintegrating process, an expending of energy.

"It can tell the hour in the middle of the night without a time-piece."

We can easily imagine that a person who, before retiring to rest, has been anxious to awake at a certain hour should, by that anxiety, divert the stream of nutritive agency strongly towards the very cells which would incline him to awake about the time desired.

In all cases of restored and increased mental capacity, then, it is indispensable to bear in mind that the nutritive agency must be at work. To suppose that mental operations, such as are displayed in consciousness, take place without consciousness, *and with no other difference*, implies that such an amount of dissipating action goes on that the leak must equal or exceed the influx.

We now call attention to the fact that two of the modes of activity classed by Miss Cobbe under the head of "Unconscious Cerebration," namely, dreaming and the automatic movements of the motory centres, are quite distinct in character from the remaining four, and therefore should not be brought under the same class. To distinguish clearly production from expenditure, of mental energy, and to point out the part which each has to perform in the mental economy, is, we opine, most essential to the attainment of an intelligible and consistent system of cerebral physiology. But that a deficiency in this respect evidently exists in Dr. Carpenter's doctrine is, we think, fully shown by the fact that a talented lady like Miss Cobbe should give such an exposition of it as that which has here been examined.

We now proceed to a more minute examination of Dr. Carpenter's opinion that the sensorium is the seat of all consciousness. In the April number of the "Contemporary Review" he states his doctrine in the following words:—

"An examination of the Anatomical relation of the Cerebrum to the Sensorium, taken in connection with the fact ascertained by experiment, that no injury to the substance of the Cerebrum itself calls forth pain,* seems to justify the Physiological inference that we only become conscious of the Ideational changes of which the Cerebrum is the instrument, through the transmission of the impressions of those changes to the Sensory tract at its base. This doctrine has so extensive a Psychological bearing that I may be excused for entering into a somewhat detailed explanation of it. Every anatomist knows that the arrangement of the nervous elements in the Cerebrum is so far exceptional that the 'grey matter' which constitutes its *active* portion is disposed on its surface, forming the 'cortical layer,' the dispositions of which in 'convolutions' allows it to come into that direct relation with a vast expanse of capillary blood vessels which is necessary for its functional activity. On the other hand, the 'medullary' interior of the brain-substance has exactly the same fibrous structure as the nerve-trunks; and though this was very imperfectly known before the microscope came into use, the resemblance was sufficient to cause that very sagacious Anatomist, Reil, to name the radiating fibres which connect the cortical substance of the Cerebrum with the Sensory tract, the nerves of the *Internal Senses*. Now, as Comparative Anatomy seems distinctly to teach, this Sensory tract is the instrument whereby we are rendered conscious of external impressions, and the transmission of the 'nervous modifications' thus excited in the Sensorium to the cortical substance of the Cerebrum through the *ascending* fibres furnishes the instrumentality whereby Sensations call up Ideas—there seems equal reason for believing that when Ideational changes in the Cerebrum give rise to Sensations they do so by transmitting back to the Sensory tract through the *descending* fibres some nervous modifications which those changes involve, thus producing in the Sensorium *the same physical condition*, whatever may be its nature, *as that through which the Sensation was originally excited.*"

There are, in this passage, several points which demand the closest examination. These points may be elicited by the following questions:—

1.—Are the primary sensations generally under the command of the will? 2.—Is there, between the sensory ganglia and the cerebrum, a class of *sensory* nerves, we know not what

* We cannot comprehend why Dr. Carpenter should cite this fact as telling in favour of his hypothesis; for the Corpora Quadrigemina—a portion of the sensorium—are also, as we are informed by Dr. Maudsley, insensible to pain when their own substance only is injured by experiment.

else to call them, such as Sir Charles Bell never thought of, namely, "the descending fibres," the office of which is conjectured to be the conveyance of messages from the cerebrum to the sensorium, with the end of exciting, in the latter, consciousness of the operations performed by the former? 3.—Is it not impossible for the sensorium to be occupied, at one and the same moment, with sensations which exclude each other?

1.—Are primary sensations generally under the command of the will? As a rule, we cannot, by the excitation of the Intellectual Centres, cause the sensory ganglia to be engaged with their respective sensations. The great mass of men and women will confidently declare that they cannot, by an effort of the will, see in the dark, feel vinegar to be sweet, hear with their ears blocked up, feel cold on the application of heat to any part of the body, or realize hunger immediately after a full meal.* Notwithstanding this general incapacity of the will to excite the sensorium into activity, yet Dr. Carpenter believes that the "descending fibres" exist for no other purpose. Dr. Tuke also, we perceive from his able and interesting treatise lately published, lays great stress on the influence which the mind exerts over the body, which, being interpreted, seems to mean the influence which the will is capable of exercising over the sensory ganglia, for of course the motory ganglia will be allowed to be under its command. Now, as we have already shown, the cases must be extremely rare in which the sensorium has even the appearance of being excited into activity by the "internal senses of Reil:" and in these rare instances it seems more probable, as will be shown below, that the vivid sensation called up is a secondary or remembered one, and that the seat of remembered sensation is the cerebrum.

2.—Is there between the sensory ganglia and the cerebrum a class of *sensory* nerves, namely, "the descending fibres,"

* Every one will readily allow that there is a considerable difference between the perceptions of the mind when a man feels the pains of heat or the pleasure of moderate warmth, and when he afterwards recalls to his memory this sensation or anticipates it by his imagination. These faculties may mimic or copy the perceptions of the senses; but they never can reach entirely the force and vivacity of the original sentiments. The utmost we say of them, even when they operate with the greatest vigour, is that they represent their object in so lively a manner that we could *almost* say we feel or see it. But except the mind be disordered by disease or madness, they never can arrive at such a pitch of vivacity as to render these perceptions altogether indistinguishable. All the colours of poetry, however splendid, can never paint natural objects in such a manner as to make the description be taken for a *reallandscape*. The most *lively* thought is still inferior to the *dullest* sensation. —Hume's *Essay on "The Origin of Ideas."*

whose office it is to excite, in the sensorium, a consciousness of what is occurring in the High Court above? We are not aware that the anatomists mention the existence of any *efferent sensory* nerves; therefore we conclude that they are only imagined by Dr. Carpenter to exist, because his hypothesis demands the postulation of some such sensory medium of communication between the cerebrum and the sensorium.

"If the doctrine here advocated be correct," says Dr. Carpenter, "the Anatomical and Physiological relation of the Sensorium to the cortical substance of the Cerebrum and to the Retina are *exactly the same*; so that, as no modification produced in the Retina can affect our consciousness save by the transmission of a change along the Optic Nerve, which excites a certain physical action in the Sensorium, so no Ideational modification of the Cerebrum can affect our consciousness, save by the transmission of a change along the nerves of the 'Internal senses,' which excites an analogous physical action in the Sensorium."

To make the analogy here mentioned less, as it seems to us, a case of "a river in Monmouth and a river in Macedon," it should be shown that there are between the retina and the sensorium three kinds of nerves, the in-bearing and the out-bearing sensory, and the motory. But how this supposition can be made plausible in view of the great Nerve-system of the Cranio-spinal-axis, we fail to perceive. Is Sir Charles Bell's discovery subject to exceptions in the medullary region of the cerebrum?

3.—Is it not impossible for the sensorium, at one and the same moment, to be occupied with sensations which exclude each other? This is a question of vital importance, one which demands the closest attention. But it requires, in the first place, to be explained. Sensations exclude each other when it is impossible for a sense-centre to be engaged, say, as to the very same cells, with two modes of action which cannot co-exist. The very same cells in the visual sense-centre cannot, at one and the same moment, see brown and yellow; or, again, two visual sensations being felt as occupying space cannot, at one and the same moment, be felt as filling an identical locality in the field of vision. Then again, if the whole field of vision is occupied by certain sensations, as it invariably is during the light when the eyes are open, it cannot be occupied by other sensations without the displacement of the former.

Now attend to this fact: it is quite common, in broad day-

light, with the eyes open, and therefore with the whole of the visual sense-centre engaged in the performance of its peculiar function, to have the features of an absent friend vividly occurring to our memory. Is this remembrance of our friend's features located in the sensorium? We cannot understand how that can be; for, as has been shown, the whole of the visual sense-centre is preoccupied in the performance of its own proper function. Since, therefore, it is impossible for the sensorium, at one and the same moment, to be occupied with sensations which exclude each other; and since, when the whole of the visual sense-centre is engaged with *this* primary sensation, it cannot also be engaged with *that* unrelated secondary or remembered sensation, for the one kind of action involved would exclude the other—it necessarily follows that we must seek, for the remembrance of a sensation, some other seat than the one pertaining to a primary sensation. It has also come to our notice that while repeating aloud such a proposition as twice four are eight, we are also able mentally to repeat—twice five are ten. What is to be gathered from this fact? That the motory centres must be entirely engaged with the former of these propositions, and that the seat of the latter must therefore be exclusively mental.

From these, and other data laid down during the course of this examination, we conclude that it is not true to say the cerebrum must re-act downwards upon the sensorium as the condition of our becoming “conscious either of the formation of ideas or of any intellectual process of which these may be the subjects.”* We have shown that these ideas and intellectual processes exist for us only as modes of consciousness, and that this consciousness, while necessitating, as its prior condition, production of energy, which seems adequately to account for all those mental results that the hypothesis of “Unconscious Cerebration” is imagined to explain—necessitates as its co-instantaneous condition, the expenditure of energy.

But we have also spoken about the necessity of secondary sensation having a seat separate from that engaged with primary sensation. Which, then, is probably the seat of the former? Remembered sensation we conclude to be the ground-work of ideation. Thought, intellection, must have form, shape, or quality. The fundamental quality of thought we believe to be secondary or remembered sensation. When we have a primary sensation, say of a welcome face, this

* Carpenter's “Principles of Human Physiology,” 7th Ed. Functions of the Sensory Ganglia. Functions of the Cerebrum.

primary sensation being much more vivid than the secondary one which results from it, the latter is, like starlight during sunlight, obscured. But let the primary sensation be absent, then the resulting secondary sensation is clearly realised as forming the basis of our thinking, that without which cogitation does not exist, it being universally felt that the groundwork of ideation is a kind of faint sensation. See the quotation from Hume given above.

That the sensorium, as the process of evolution advances in the animal scale, ejects remembered sensation, retaining primary sensation only, and causing the former to migrate to a higher seat, the perceptive centres, seems to us more than probable. The fact that the higher Invertebrata, although wanting the cerebrum, yet manifest astonishing instinctive intelligence, does not, we think, warrant the conclusion that the sensorium must be the seat of all consciousness, even in those animals which possess a highly-developed brain. If we may be allowed a conjecture on this subject, we should say, that since such insects as the bee and the ant have no cerebrum, the groundwork of their instinctive intelligence must be merged in primary sensation. But that in the human brain it is different; for therein it seems that while the sensory ganglia are wholly occupied with primary sensation, the ideational centres may also be co-instantaneously engaged with secondary sensation, and its various evolutions. Whereas then the higher Invertebrata appear to manifest intelligence in connexion only with primary sensation, and that in fixed grooves or instinctively; Man, on the contrary, possessing a highly developed cerebrum, thinks through the medium of his secondary sensations, and consequently enjoys much more freedom, power, and variety of thought.

We feel bound, then, to come to the conclusion, in opposition to Dr. Carpenter, that the addition of the cerebral hemispheres in the Vertebrated series *does*, to a certain extent, limit the endowments of the sensory ganglia. What was once a terminus of some importance, becomes now simply a considerable station on the line; and we certainly fail to see that this idea, as Dr. Carpenter holds, is contrary to all analogy. For, as we take it, where the sensory ganglia are not yet evolved in the animal scale, still the nervous system must be rudimentally sensori-motor; and where the cerebrum is not yet evolved in the same scale, still the nervous system must be rudimentally ideo-motor, which is to say that what is rudimentary in a lower centre is evolved into a higher form

wherever a separate seat is also evolved for it. We consider it unphilosophical, and contrary, indeed, to the analogy of Nature, to draw a hard and fast line between proximate higher and lower grades of evolution. For this reason and others, therefore, we conclude that what exists in the sensorium as rudimentary intelligence, in brains devoid of a cerebrum, no longer exists in the sensorium as such when a cerebrum is superadded in order to admit of the intelligence assuming a more developed form, namely, intellectual and emotional *consciousness* or *knowing*.

This paper contains, among other things, the answer we feel compelled to return to Dr. Carpenter's question in "The Contemporary Review," namely, "Does not all Psychological as well as Physiological probability point to the identity of the sensorial instrumentality through which we become conscious (1) of a *present* impression, and (2) of a remembered sensation?"—and the answer is a negative one.

The Madmen of the Greek Theatre. By J. R. GASQUET, M.B.

V.—THE MAD HERCULES.

(Continued from vol. xix. p. 53.)

The *Mad Hercules* is not one of the best of Euripides' tragedies; but it has a particular interest for us, because it is the only one extant in which madness is personified, and introduced on the stage. This had been already done by Æschylus, in his version of the story of the Bacchæ, and was adopted by Euripides amongst the terrifying effects borrowed from the elder dramatist for this play.

The early part of the play does not concern us, and its argument may be briefly summed up. Hercules has completed the last of his labours, and has returned to Thebes to find his wife, Megara, and his three children, in the power of his enemy, Lycus, who was about to put them to death; to deliver them, and to slay Lycus, is an easy task for the hero, who remains within the palace, while a chorus of Theban elders chant an ode of triumph for his final victory. This is interrupted by the appearance on the stage of Iris, the "Handmaid of the Gods," who leads the terrible spectre of Madness, *Λίσσα*. Iris explains that they come with no hostile designs against Thebes, but only to carry out the

purposes of Hera (Juno) against Hercules. Finding that he has safely passed through all the labours imposed on him by Eurystheus, she has resolved that he shall slay his children, as a final and most terrible trial, which may teach him the power of the queen of heaven. Iris urges Madness to the task, for which that "Maiden of noble race, daughter of Heaven and of Night," shows considerable reluctance, alleging that she delights not in chastising those who have done her no ill.

At last she takes the sun to witness that she is acting unwillingly, only at the command of Hera; and she then exclaims, "Lo! now he tosses his head at the beginning of his madness, and speechless rolls his distorted cruel eyes, and he breathes not soberly, as a bull that is eager for the fray; he groans fearfully, calling upon the Furies of Tartarus."* She then bids Iris return to Olympus, and herself goes into the palace to complete her work; "to whirl him faster in the dance, and to urge him on with fear."

After a short interval, during which the chorus hear sounds which make them fear that Hercules is pursuing his children, and finally trying to pull down the house about his head, a servant enters, and gives them an account of the catastrophe, which (according to a rule seldom infringed in Greek tragedy) could not be performed in the presence of the audience. He tells them how the hero prepared a sacrifice of purification for the uncleanness he had incurred by slaying Lycus; his putative father, Amphitryon, his wife, and children stood by; and the preliminary rites had been performed when "Almena's son, as he was about to take a brand up from the hearth, and dip it in the lustral water, stood silently, until his children, marvelling at his delay, raised their eyes. He was not the same man he had been, but vacant, with distorted eyes, and eyeballs strained so that the blood-shot roots were visible, and the slaver ran down on his well-bearded chin.

"He laughed as one struck with madness, and said, Father, why should I kindle the purifying fire, and have double work, before slaying Eurystheus; when I bring his head hither, I will then cleanse my hands on account of the dead. Who will give me my bow; who my club? I will go to Mycenæ; I must take levers and crowbars, to overturn with the curved

* Vv. 867—870.—The "rolling the distorted eyes" (*διασπρόφους ελίσσει γοργωπόνους κόρας*) has already been noted, it will be remembered, in the *Orestes* and the *Bacchæ*.

iron those dwellings of the Cyclops'. Then he moved, and although he had no chariot, he said he had mounted into it, and began to urge his steeds as if he had his goad in his hand. There was both laughter and fear amongst the servants; and, while they looked at one another, some one asked, 'Is our lord mocking us, or is he mad?' Meanwhile he strode up and down the house, and rushing into the midst of us, said he had reached the city of Nisus,* although he had gone into his own house. Then, as if he were there, he laid on the ground, and prepared a meal; but presently going on he said he had come to the wooded plains of the Isthmus. There he stripped, laying aside his garments, and strove, but with no real adversary, proclaiming himself victor, though to no spectators. Presently, threatening Eurystheus the while with terrible vengeance, he reached, in his imagination,† Mycenæ. But his father, touching him on his mighty hands, spake thus:—'Son, what ails thee? what manner of journey is this? has the slaughter of these dead, whom thou hast killed to-day, driven thee mad?' But he, fancying that it was the father of Eurystheus, who touched his hand as a suppliant, repulses him, and prepares his ready bow and arrows for his own children, thinking to slay those of Eurystheus; and they, terrified, fled different ways, one to the skirts of his wretched mother, another to the shadow of the pillar, while another escaped, like a bird, under the altar. Their mother cried out:—'Father, what art thou doing: wilt thou slay thy sons?'—the old man and the crowd of servants cried out too. But he chasing the boy round the pillar (a terrible pursuit!) when at last he faced him, struck him in the liver, and the child, falling and moistening the stone columns with his blood, breathed his last; while his father shouted for joy, and proclaimed aloud—'this one at any rate of Eurystheus' brood, has paid me the penalty of his father's hatred.'

"Then he bent his bow against that other child, who had fled to the altar-steps, thinking to be hid; but the poor boy stopped him, by falling at his father's feet, and, stretching out his hand to his chin and neck, cried aloud, 'My dearest father, slay me not. I am thine own, thy very son, thou wilt not be killing a child of Eurystheus.' But he, rolling his cruel-looking Gorgon's eyes, as the child stood too near for the reach of his murderous bow, raised his club high above

* "He pretended that in his journey from Thebes to Mycenæ he had already reached Megara."—Paley.

† τῶ λóγῳ

his head, like one smiting the hot iron, let it fall on the yellow-haired head of the boy, and brake the bones. Having slain this second child, he proceeds to sacrifice yet a third victim; but the wretched mother had already carried off the boy into the house, and closed the doors. He then, as if at the very walls of Mycenæ, digs under the doors, prizes them open; and, breaking down the doorposts, slays his wife and child with one arrow. Thence he hurries to destroy the old man; but a form appeared, as it seemed to beholders, Pallas, waving in her hand a pointed spear, and cast a stone at the breast of Hercules, which checked him in his furious slaughter, and threw him into a sleep; and he fell on the ground, striking his back against the pillar, which lay broken against the altar-steps. We, then, returning from our flight, helped the old man to bind him to the pillar with ropes, so that, when he awoke from his sleep, he might add nothing more to the deeds he had done.”*

The door of the room here opens, and shows the dead bodies and Hercules bound to the pillar, at the back of the stage. Amphitryon enters, and beseeches the chorus to moderate their lamentations, lest they should rouse the hero, in the same strain as we have seen Electra do in the *Orestes*. At length he awakes, and exclaims, in much perplexity:—

“ Ah †

I live indeed, and see, as I am wont,
The air and earth; and these rays of the sun;
And yet I have been toss'd in tempest dread
And in some storm of mind; my fever'd breath
Comes laboured and uneven from my chest.”

He asks for an explanation of his being bound by cords, and of the ruin he sees around him, and Amphitryon breaks to him, as gently as he can, the fearful news. There is no return of insanity, but his shame and despair are such that he contemplates suicide, as did Ajax under the like misfortunes; when Theseus, whom he has lately delivered from Hades, enters, and shows his gratitude to his deliverer by urging him to play the man:—“Thou hast spoken the words of any ordinary man. Does Hercules say this, who hath endured so much; the benefactor of men and their mighty friend?” The hero yields at last to the affectionate entreaties of Theseus, saying, “I had already thought, even in my

* Vv. 922—1016.

† The interjection used here, *εἰς*, is the same as that put into the mouth of *Orestes*, when his fit of violence was past.

sufferings, I might be accused of some cowardice if I abandoned the light; for whoso knows not how to bear misfortunes being a mortal, he cannot stand against an enemy's weapon. I will bravely await death." He consents to accompany his friend to Athens, the city of Pallas, who delivered him from his frenzy, whither Amphitryon is to follow him, after bringing his wife and children.

To my mind, the conclusion is the most excellent part of this play. With the example of the suicide of Ajax, celebrated by the two elder tragedians, before him, Euripides had the courage to oppose the feeling of his age, which was in favour of suicide. Plato and Aristotle but followed him in pointing out that the endurance of the troubles of life is an evidence of true courage, while to escape from them by death is a flagrant instance of cowardice. With what scorn would these old Greeks have quoted the latest euphemism for suicide of our age of softness—*euthanasia*—as exactly expressing that flight from the sufferings of life which seemed to them so grave a want of manliness.

As for the delineation of insanity in this play, I think my readers will agree with me that it is inferior to any of those we have gone through together. The whole story is indeed simply and naturally told; but there is an inconsistency between the earlier and later parts of the narrative—the imaginary journey to Mycenæ, with the halts at Megara and Corinth, being evidently a description of a case of ordinary mania with systematic delusions, while the scene of blind fury that follows is as obviously copied from a different form of insanity. Again, we are not led up to this attack of homicidal madness by anything in the previous character of the hero, as we were in the cases of Ajax, Pentheus, or Agaze, or by remorse for any deed done, as with Orestes; so that the episode seems out of harmony with all the earlier part of the play.

Some of my readers may be glad to know how Lyssa was put on the stage; and Mr. Paley* has collected some information, from which it would appear that as a Chthonian or Titanian power, the genius of Madness was probably clad in black garments, and wore a mask of the terrible sort. It would seem that her head was entwined with snakes like an Erinnys, and she is described as riding in a car. She resembled outwardly, therefore, one of the Eumenides, from whom she was distinguished by her office—since these in-

flicted madness as a punishment for moral guilt, while Lyssa was a servant of the gods, and did their bidding upon the men they sought to chastise.

I have now completed my account of those extant tragedies in which insanity is a prominent feature; and in my next and last paper I propose to describe the only comedy which introduces the antics of a madman, and then to give some idea of the many lost plays which we know must have put madmen on the stage.

The Morbid Psychology of Criminals. By DAVID NICOLSON, M.B., Senior Assistant-Surgeon, Convict Prisons Department, H.M. Civil Service.

“Faults in the life breed errors in the brain,
And these reciprocally those again;
The mind and conduct mutually imprint
And stamp their image in each other's mint;
Each sire and dam of an infernal race,
Begetting and conceiving all that's base.”

COWPER.

The inner world of prison life is one of the best fields for the study of psychological questions, speculative as well as practical. If the circumstances are somewhat exceptional, they have the special advantage of being uniform in their application; and this uniformity represents a standard to which individual minds, or particular groups of mind, bear a relation, and at which they may be tested. Imprisonment is the very antithesis of social usage, an involuntary servitude taking the place of the liberty of the subject, and it is surely a matter of no little interest to watch how social beings, varying in moral and intellectual status, bear themselves under confinement and a complete change in their circumstances and surroundings.

The psychological range submitted to us among the inmates of a prison may be held to comprise two distinct types of mind, which stretch towards each other, and join in the middle. These two types mark the extremes of the range, and serve to distinguish what I would call the *accidental criminal* on the one hand, from the *habitual and thorough criminal* on the other. It will be understood that the application of the term “accidental” is not to be made to the *crimes* of the individuals, but that the word is used relatively in order to distinguish criminals, who, at the age of maturity,

and in the course of an otherwise reputable life, become so, perhaps heedlessly, or from circumstances which arise more or less external to themselves, from criminals who, if they have not been born to crime as an inheritance, have been reared up in it, and have adopted it as their trade and vocation in life.

The Accidental Criminal.—What mental status are we to assign to him in relation to his past and his present? With certain intermediate modifications it is embraced in the picture which naturally arises to us when we reflect on the condition of an ordinary and respectable member of society, under circumstances of utter disgrace and imprisonment. "I should go mad!" is the exclamation made use of when anyone looks at the same time upon this picture and upon that; and were it not for the modifications introduced in the course of transition, and during an actual self-experience, there would be grave risks of the prophecy coming true. We have to remember that the criminal act is very frequently but the climax of a series of false steps in life, minor trippings, as it were, on the highway of morals, which, taken individually, mean little or nothing to the easy-minded traveller, but which, by accumulation, indicate a serious loss of ground, whose recovery is attempted by a giant stride, miscalculated and fatal. The apprehensive doubts arising in his thoughts from time to time have been explained away, and his mind has become in a measure accustomed to the burden, and forgetful of its presence. The climax is reached and a wretched consciousness of his position reveals itself; but the lapse of time during the process of trial and the colouring supplied to his case by his own imagination and the plausible theories of his counsel have served to relieve the original moral gloominess of the picture and to render bearable at least the dread associations of imprisonment.

The mind of the accidental criminal then, differing little or nothing from that of the ordinary run of mortals, takes its place at the higher end of the psychical range among prisoners. Despite some falling off in moral tone, we cannot but recognise in such a mind, intelligent and fairly educated, the existence of that structural delicacy which renders it liable to give way under strain in the midst of novel and disgraceful associations. But it is well known that when brought to the test we can pull through actual dangers and trials, which anticipation has led us to believe would be destructive to us; and the immediate contact with difficulties

seems to raise up in us new powers whereby the expected calamity is averted. And so it is with the case we are considering. Owing to the presence of this sustaining energy and a supply of hopefulness in a mind not barren of resources, the accidental criminal is comparatively free from insane manifestations.

The Habitual Criminal: Criminal-mindedness.—The lower end of the mental range among the imprisoned is that held by the considerable group of thorough and habitual criminals—men and women whose whole life-history bears the impress of crime and tells of a fearful falling away from the dignity and prerogative of humanity. Of the thorough criminal may it truly be said—

“The multiplying villainies of nature
Do swarm upon him.”

He possesses an unmistakable *physique*, with rough and irregular outline and a massiveness in the seats of animal expression. His physiognomy is distinctive and seems to be a very embodiment of grossness and unworthiness. His repeated crimes tell us that the social instincts and sympathies have almost no place in his nature, and we cannot therefore expect much in the way of moral sentiment. He is not touched by a sense of his position; for he seems incapable of realising in himself the different moral results that follow upon good and evil actions. Darwin* has defined a moral being to be “one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them.” This cannot be reckoned a very severe or searching test of moral principle, and yet it would be a very difficult matter to find a satisfactory application of it in many individuals of the thoroughly criminal type.

The lying propensity and the persistency of malevolence are strong features in the real criminal. Ever ready to deceive, it is often necessary to use a circuitous course in questioning him; and if he conceives a hatred of anyone he nourishes it for a great length of time very often without exhibiting or expressing it, but allowing it to lie dormant until an opportunity for revenge presents itself. Dull in comprehension and with meagre reflective powers, there is little chance of awakening in him any interest in the usual pursuits of life. His characteristic volitions seem to be but so many emotional outbursts. The active powers of his mind

* “Descent of Man,” vol. i., p. 88.

are expended for the most part in the directions prompted by mere selfishness.

Criminal-mindedness (the manifestation of the thoroughly criminal mind) is the very lowest form of mental sanity among prisoners, and it is supported by an appearance of motive and self-interest just sufficient to prevent it falling within the range of insanity. Indeed, so low are its intellectual and moral indications that when we come to speculate upon it as a mode of mind, apart from its circumstantial associations, we are at a loss to find a place for it within the normal psychological sphere of ordinary life. As its phenomena betoken the operation of influences more or less peculiar to itself, we are compelled to fall back upon one of two alternatives in our attempts to indicate its location. We must either lower, as it were, the normal platform of mind to such a level that criminal-mindedness may find a place thereon, or we must recognise criminal-mindedness as a species of mental unsoundness, by increasing at some risk the upward comprehensiveness of the term insanity. We certainly are not prepared to accept what has been called the "brainular" theory of crime, whereby the responsibility of individuals for their actions is virtually cast aside. Upon this theory it is maintained that "as it is not the function of a sound and healthy brain to give rise to any other than healthy manifestations, so no error of judgment can ever arise but as the result of a defective condition of that organ."

This is all very well as a theory, but where would it lead us if we attempted any general application of such a guiding principle in practice? Who is there that would not come under observation for committing "errors of judgment?" And if such commissions imply cerebral defect, a universal system of treatment (not in the form of punishment) must be adopted. And if those "errors" assume a criminal aspect it would surely be wrong in principle to submit their authors to punishment while minor delinquents received treatment instead. The graver the "error of judgment," the more serious the cerebral defect on which it depends, and as a consequence the agent is less responsible and requires the adoption of mild principles of treatment. Where is *motive* in such a theory? In judging at this point between crime and insanity we are conscious of a fineness of distinction in connection with a matter implying widely different consequences; and it is out of this difficulty that what has been termed the "*border-land*" has taken its rise. In this border-land we

have a veritable common ground whereon crime and insanity mingle freely. Not that it is altogether made use of from the criminal side, for I believe that numbers of the insane step well across it in many of their passionate and vicious acts.

The risk of the Habitual Criminal's mind giving way lies not in its sensitiveness, as in the case of the Accidental Criminal; but rather in its contiguity by original defective development. When a prisoner of this sort has not learnt to adapt himself to the inconveniences of his confinement, he is very impatient of the restraint, and is apt to get into trouble. His mind becomes restless and turbulent, and having no resources or side paths into which its energies may be directed it seems to prey upon itself and lapse into unsoundness.

Now, I would not have it understood that the *thorough criminal*, whom I have tried briefly to describe in his most marked form, is constantly being come across even in a convict prison. There are *habitual* criminals who are not *thorough* criminals in the full sense of the term. These men may conduct themselves properly, and their self-control, if not prompted by their own better feelings and motives, is maintained under the influence of the fear of punishment.

Ranging between the two extremes with which we have been dealing, there are criminals of all shades, with more or less marked inclination or tendency to the one end or the other.

Of all questions that arise in connection with our practical work among criminals in prison, none give more trouble, or require such an exercise of discretion, as those having reference to their mental condition. We have to do with a peculiar class of individuals in whom, whatever may be their tendency to mental derangement, there exist strong motives to deception; and the responsibility in forming a decision repeats itself in each separate case. There is, too, such a possible conflict of interests in the surroundings. We have, first of all, the prisoner himself, the subject of investigation; secondly, the executive authorities, acting in the interests of society, and answerable to the public; thirdly, the medical officer with whom lies the decision; and, fourthly, there is the group of watchful bystanders formed by the prisoner's fellows. In proportion as there is doubtfulness as to the genuine character of a case, these interests are out of harmony with each other.

It will readily be conceived that a strange variety of character and disposition is to be found among prisoners both apart from, and in connection with, the circumstances in

which they are placed. The large proportion of them undergo their sentence in a quiet, straight-forward sort of way, without exciting notice. Of the rest, some are rebellious, violent, and intractable; others, of a plausible turn, are constantly scheming and dodging; and others are simple-minded and liable to be made the dupes of their fellows. A good story is told of one of this last sort, an Irishman, whom I knew at Portland. Sitting in his shut cell one day he was told by a waggish fellow prisoner in passing by that he had to put his bare feet out under for the doctor's inspection. Pat, in his innocence did so, and was waiting patiently, when a warder in his rounds came across the protruding extremities, and pushing them back, perhaps, with more force than ceremony, demanded what he meant. In confident tones Pat asserted that they were put out "for the doctor's inspection!"

Sometimes a prisoner engaged at public works is so careless, stupid, and unteachable that he has to be removed from an occupation simple enough in itself, but in which there is involved risk to himself or others. Such sluggish minds are unable to realise the presence of danger, or to conceive what must be done in order to avert it.

At times cases of more peculiar interest such as the following crop up:—While in temporary medical charge of Portland prison, I had one day to examine a prisoner with a view to punishment for having set fire to some material in his cell. This man, who rejoiced in the name of "Samuel Johnson," was about 40 years of age, of strong physical frame, and had large, ruddy, but inexpressive features. I began by asking his name, and he repeated my question in a lisping, simple sort of tone. My first thought, as I had never seen him before, was that he meant to be impertinent. But I found that he did the same with all my questions (except that he answered "eighteen" to my query as to his age). I tried him with snatches of French, Latin, &c., and he followed the run of syllables in each case, without forming the words. He followed up my questions as an echo, with passive and unchanged countenance. When I *told* him to do anything, as to put out his tongue, he did it. On making inquiry, I found, from the warder in charge of him, that he had been working hard for about four years in one of the able-bodied parties, and had conducted himself in the same way, doing what he was told, but repeating questions. He had also during a previous conviction been treated as an imbecile. I was not able to get a complete history of him; but before he

left the prison he came to me with colic one day, and answered several questions which I put to him. Of course, such a case is very suggestive of feigning, but motive is necessary to feigning, and there appeared to be none here. This was the only occasion he had come under observation for strange conduct, for he did his work well, and showed no desire to evade it, and he underwent the ordinary discipline. The form of eccentricity, whether feigned or not, and its persistence, are remarkable. I believed that the case was real, and after being kept under observation for a few days, he was sent to his labour.

Criminal Neuroses.—I have shown* that diseases of the brain and nervous system cause over 9 per cent. of the deaths occurring in the convict prisons of England, and that they rank second among the causes of mortality among prisoners. Judging from this, I think, we are apt to form an erroneous impression as to the frequency of the occurrence of purely nervous diseases in criminals. In an article on the "Hereditary Nature of Crime," in the "Journal of Mental Science," for January, 1870, the late Mr. Bruce Thomson, of Perth Prison, gives it among his conclusions "that the number of physical diseases are less than the psychical," and "that the diseases and causes of death among prisoners are chiefly of the nervous system." Notwithstanding the respect I have for the opinions of this experienced observer, I feel assured that the position occupied by nervous diseases in prisoners is here overstated; or, perhaps, I should say rather that the statement is one that will not apply in anything like its fulness to the relative proportion of those diseases in the English Government prisons, containing more than ten times the number of inmates. And this, apart from any impressions of my own, may be seen by a reference to the hospital statistics given in the Prison Blue Books.

If we take into consideration the fact that among criminals we have, as it were, a condensation of nearly all the predisposing and exciting causes of nervous and psychological disorders, viz., heredity, drunkenness, irregularities and excesses, self-abuse, mental strain, &c., the wonder is that these derangements are not of more frequent occurrence.

Simple nervousness is by no means prominent among criminals. They are comparatively free from that agitation and tremulousness which are so apt to arise under circum-

* "Statistics of Mortality among Prisoners."—"Brit. and For. Med. Chir. Rev.," for July, 1872.

stances involving suspense and painful foreboding. The prisoner lying with the knowledge of a probable flogging on the morrow, instead of giving way to restlessness and anxiety, maintains a calm and stolid behaviour, and when the time comes he approaches the "triangles" with surprising coolness and self-possession. This is probably due in great measure to the bluntness of their moral sense. They possess certainly an excitability of temper which partakes of the character of nervousness—an irascibility which comes readily to the surface and gives rise to muscular and general movements of the body. But speaking more of the disorders that necessitate treatment, it will be found that there is no remarkable proportion of such nervous affections as paralysis, neuralgia, hysteria, &c. These certainly are met with from time to time, but they do not seem to attract notice by any frequency of occurrence. Hypochondriasis is a complaint which might readily be encouraged in prisons, but as a rule prisoners are not credited with much in this direction. Undoubtedly they frequently show an anxiety about their bodily state and fancy themselves to be the subjects of various diseases. But notions of this sort are not persistent, and do not run on to morbidity. If the doctor makes a careful examination, and is able to tell the prisoner that he is in good health and must not worry himself, he is not difficult to satisfy. One of the Fenian prisoners who was the subject of hypochondriacal emotions gave much trouble in connection with his treatment. He fancied all sorts of things about the condition of his body, and had persistent delusions as to the route taken by the food in his viscera, and started some extraordinary theories about his system of respiration, using very extravagant and high-flown technical language. He asserted that he had a "deffluxion," and that he believed that science dictated a cure by the reversal of the economy of nature, and this would be effected by his standing upon his head. I am not aware that he ever resorted to the practical application of the proposed remedy. He was of a very obstinate disposition, and so intractable that he even fell out with his brother Fenians.

Epilepsy in prison is always enveloped in such an atmosphere of suspicion that it is almost impossible to estimate its relative frequency. One seldom, if ever, comes across an epileptic in the advanced and utterly helpless stage. Some prison epileptics somehow seem to have just a sufficient number of fits to keep them on the list. *Epilepsy* is often so

well feigned that it is only by accident that the imposture is detected. Epilepsy in prisoners is almost invariably accompanied by strong convulsions, and I have remarked that the *petit mal* does not show itself. This may be explained to some extent by supposing that the slighter attacks come and go, leaving the prisoner quite unconscious of their visitation. It might be so, if at the time we happened to be in his cell. But when he is at work with tools, and under the eye of a warder, even the milder, less convulsive seizures could scarcely pass over without betraying themselves. Besides, I have not found that the *petit mal* presents itself in combination with the graver malady in the case of prisoners—in whom it would seem that the seizures occur on the principle of the whole “fit” or none.

Criminal Idiosyncrasy.—In treating of a body of individuals such as we meet with in prison, there are some characteristics of temperament and mental constitution which it is necessary for us to keep in view. This necessity arises from the fact that they are characteristics which cause us to modify our estimate of certain evidences of disposition owing to their occurrence in individuals of a particular class. In other words, we can witness in prisoners, almost without surprise, conduct which in ordinary life would be unexplainable under the usual regulative laws of mind. Singularity in prison becomes insanity in the outer world; and this is the necessary result of that defective psychical tone in the criminal which compelled us to lower the platform of mind for his reception. Possibly enough, the singularity of criminals in prison may not be exhibited in the same way amid the ordinary relationships of life. But without entering into this question, I wish to call attention to two forms under which the idiosyncrasy of criminals more especially makes itself manifest during their stay in prison. They form, as we shall see hereafter, the first stage or groundwork upon which rest the more marked psychoses of prisoners, and I shall speak of them under the headings of Emotional Display and Simple Perverted Ideation.

Emotional Display.—Apart from other evidence, we have, in the guilt which leads to their imprisonment, abundant *a posteriori* grounds for accepting the proposition that in criminals there is manifested a preponderance, more or less marked, of some inferior and usually subordinate faculty of the mind; and certain of the emotional states of feeling, as passion and resentment, afford the most prominent and

perhaps the simplest (in point of analysis) illustrations of its existence. Now this predominance of emotions over the higher mental qualities involved in intelligence and volition may be due to an absolute excess of the impulsive and more animal propensities; or it may simply be relative and due to a defective or impaired condition of those higher subordinating qualities. The significance implied in this relationship between the two sets of mental operations will be rendered more apparent later on when they come to be mixed up in a generally distracted condition of mind. One of the most conspicuous features in prisoners who force themselves into notice by their bad behaviour is their tendency to break out into violent and impulsive bursts of passion and destructiveness. They are seized with paroxysms of fury, and are for the time quite lost in utter heedlessness and devilment.

In looking for the *rationale* of such conduct we must remember that under ordinary circumstances, when two men fall out and vent their angry feelings on each other, the nerve force generated by the emotion is expended, first, in noisy argument, growing into personal abuse; then, its action becoming more violent, the whole body shares in the influence, and is thrown into gesticulatory movements of a threatening character, which finally become aggravated into actions involving personal violence and injury. But when the two men stand to each other in the relation of prisoner and warder (or other prison official) the case is modified. The enraged prisoner, smarting under a real or fancied grievance, may not have an opportunity of venting his feelings upon the object of his resentment, who is probably armed or protected. He is, instead, after some denunciatory expletives, shut up in his cell with the liberated nerve-force in high current—"boiling over," in fact, with rage. Here, the offending individual being out of his sight and power, and no adequate resistance being offered, an explosion takes place, and the result is that there is a more or less complete smashing of everything destructible within his reach. The direction which this destructive emotional force takes is, therefore, to some extent a matter of accident and circumstance.

The impotent rage of childhood is in like manner expended upon the favourite doll, whose form, though inanimate, offers, especially in the representative visual organs, advantageous and quasi-vulnerable points of attack. The unreasonableness, however, in the child-like act of the adult prisoner consists in the fact that no inner appreciative harm is done to the

object ; nay, by tearing up his clothes and smashing his cell furniture he submits himself to present inconvenience, to say nothing of the punishment that has to follow upon the destruction of property. The highest gratification to which such a display could give rise would probably result from a momentary personification of the stool or other article into the form of the offending warder during the process of destruction.

(*To be continued.*)

Sir James Hannen on Testamentary Capacity.

An important case—"Boughton v. Knight"—in which a will was opposed on the ground of the testator's insanity, has recently occupied the Court of Probate for fourteen days. Without entering into the details of so long a case, we print the summing up of Sir James Hannen, so far as it bears upon the general question of testamentary capacity. After a few introductory remarks, he proceeded as follows:—

The sole question in this case which you have to determine is, in the language of record, whether Mr. John Knight, when he made his will, on the 27th January, 1869, was of sound mind, memory, and understanding. In one sense the first phrase "sound mind" covers the whole subject ; but emphasis is laid upon two particular functions of the mind which must be sound in order to create a capacity for the making of a will, for there must be memory to recall the several persons who may be supposed to be in such a position as to become the fitting objects of the testator's bounty. Above all, there must be understanding, to comprehend their relations to himself and their claims upon him. But, as I say, for convenience, the phrase "sound mind" may be adopted, and it is the one which I shall make use of throughout the rest of my observations.

Now you will naturally expect from me, if not a definition, at least an explanation of what is the legal meaning of those words, "a sound mind ;" and it will be my duty to give you such assistance as I am able, either from my own reflections upon the subject, or by the aid of what has been said by learned Judges whose duty it has been to consider this important question before me. But I am afraid that, even with their aid, I can give you but little help, because, though their opinions may guide you a certain distance on the road you have to travel, yet where the real difficulty begins—if difficulty there be in this case—there you will have to find or make a way for yourselves. But I must commence, I think, by telling you what a "sound mind" does not mean. It does not mean a perfectly balanced mind. If it

did, which of us would be competent to make a will? Such a mind would be free from the influence of prejudice, passion, and pride. But the law does not say a man is incapacitated from making a will because he proposes to make a disposition of his property which may be the result of capricious, of frivolous, of mean, or even of bad motives. We do not sit here to correct injustice in that respect. Our duty is limited to this—to take care that that, and that only, which is the true expression of a man's real mind shall have effect given to it as his will. In fact, this question of justice and fairness in the making of wills, in a vast majority of cases, depends upon such nice and fine considerations that we cannot form, or even fancy that we can form, a just estimate of them. Accordingly, by the law of England, every man is left free to make choice of the persons upon whom he will bestow his property after death, entirely unfettered as to the selection which he may think fit to make. He may wholly or partially disinherit his children, and leave his property to strangers, to gratify his spite, or to charities to gratify his pride; and we must respect, or rather I should say we must give effect to, his will, however much we may condemn the course which he has pursued. In this respect the law of England differs from the law of other countries. It is thought better to risk the chance of an abuse of the power arising than altogether to deprive men of the power of making such selections as their knowledge of the characters, of the past history and future prospects of their children or other relatives may demand; and we must remember that we are here to administer the English law, and we must not attempt to correct its application in a particular case by knowingly deviating from it.

I have said that we have to take care that effect is given to the expression of the true mind of the testator, and that, of course, involves a consideration of what is the amount and quality of intellect which is requisite to constitute testamentary capacity.

I desire particularly, now and throughout the consideration which you will have to give to this case, to impress upon your minds that, in my opinion, this is eminently a practical question—one in which the good sense of men of the world is called into action, and that it does not depend either upon scientific or legal definitions. It is a question of degree, which is to be solved in each particular case by those gentlemen who fulfil the office which you now have imposed upon you; and I should like, for accuracy's sake, to quote the very words of Lord Cranworth to which I referred in the observations which I had to make on a former occasion, and from which Sir John Karslake in his opening speech quoted a passage. In the case of "*Boys v. Rossborough*," in the House of Lords, Lord Cranworth made use of these words: "On the first head, the difficulty to be grappled with arises from the circumstance that the question is almost always one of degree. There is no difficulty in the case of a raving madman, or of a drivelling idiot, in saying that he is not a person capable of dispos-

ing of property ; but between such an extreme case and that of a man of perfectly sound and vigorous understanding, there is every shade of intellect—every degree of mental capacity. There is no possibility of mistaking midnight for noon, but at what precise moment twilight becomes darkness is hard to determine.”

In considering the question, therefore, of degree, large allowance must be made for the difference of individual character. Eccentricities, as they are commonly called, of manner, of habits of life, of amusements, of dress, and so on, must be disregarded. If a man has not contracted the ties of domestic life, or, if unhappily, they have been severed, a wide deviation from the ordinary type may be expected, and if a man's tastes induce him to withdraw himself from intercourse with friends and neighbours, a still wider departure from the ordinary type must be expected ; we must not easily assume that because a man indulges his humours in unaccustomed ways, that he is therefore of unsound mind. We must apply some other test than this, of whether or not the man is very different from other men. Now the test which is usually applied, and which in almost every case is found sufficient, is this—was the man labouring under delusions ? If he laboured under delusions, then to some extent his mind must be unsound.

But though we have thus narrowed the ground, we have not got free altogether from difficulty, because the question still arises, what is a delusion ? On this subject an eminent judge, who formerly sat in the Court, the jurisdiction of which is now exercised here, has quoted with approbation a definition of delusion which I will read to you.—Sir John Nicoll, in the famous case of “*Dew v. Clark*,” as to which I shall have to say a word to you by-and-bye, says: “One of the Counsel”—that Counsel was Dr. Lushington, who afterwards had to consider similar questions—“accurately expressed it, it is only the belief of facts which no rational person would have believed that is insane delusion.” Gentlemen, in one sense, that is arguing in a circle ; for, in fact, it is only to say that that man is not rational who believes what no rational man would believe ; but for practical purposes it is a sufficient definition of a delusion, for this reason, that you must remember that the tribunal that is to determine this question, whether judge or juryman, must, of necessity, take his own mind as the standard whereby to measure the degree of intellect possessed by another man. You must not arbitrarily take your own mind as the measure, in this sense, that you should say, I do not believe such and such a thing ; therefore, the man who believes it is insane. Nay, more ; you must not say, I should not have believed such and such a thing ; therefore, the man who did believe it is insane. But you must of necessity put to yourself this question, and answer it. Can I understand how any man in possession of his senses could have believed such and such a thing ? And if the answer you would have to give is, “I cannot understand it ;” then it is of the necessity of the case that you should say that that man is not sane. Sir John Nicoll in a previous

passage has given what appears to me to be a more logical and precise definition of what a delusion is. He says, "The true criterion is, where there is a delusion of mind there is insanity; that is, when persons believe things to exist which exist only, or at least in a degree exist only, in their own imagination, and of the non-existence of which neither argument nor proof can convince them, they are of unsound mind." I believe you will find that that test applied will solve most, if not all, the difficulties which arise in investigations of this kind.

Now, gentlemen, of course there is no difficulty in dealing with cases of delusion of the grosser kind of which we have experiences in this court. Take the case, which has been referred to, of *Mrs. Thwaites*. If a woman believes that she is one person of the Trinity, and that the gentleman to whom she leaves the bulk of her property is another person of the Trinity, what more need be said? But a very different question, no doubt, arises where the nature of the delusion which is said to exist is this, when it is alleged that a totally false, unfounded, unreasonable—because unreasoning—estimate of another person's character is formed. That is necessarily a more difficult question. It is unfortunately not a thing unknown, that parents—and, I should say in justice to women, it is particularly the case rather with fathers than with mothers—that they may take unduly harsh views of the characters of their children, sons especially. That is not unknown. But there is a limit beyond which you can feel that it ceases to be a question of harsh, unreasonable judgment of character, and that the repulsion which a father exhibits towards one or more of his children must proceed from some mental defect in himself. It is so contrary to the whole current of human nature that a man should not only form a harsh judgment of his children, but that he should put that into practice so as to do them mischief or to deprive them of advantages which most men desire, above all things, to confer upon their children. I say there is a point at which, taken by itself, such repulsion and aversion becomes evidence of unsoundness of mind. Fortunately it is rare. It is almost unexampled that such a delusion consisting solely of aversion to children is manifested without other signs which may be relied on to assist you in forming an opinion on that particular point. There are usually other aberrations of the mind which afford an index as to the character of the treatment of the children. Perhaps the nearest approach to a case in which there was nothing but the dislike on the part of a parent to his child on which to proceed was the case of "*Dew v. Clark*." There were indeed some minor things which were adverted to by the Judge in giving his judgment, but he passes over these, as it was natural he should do, lightly; as, for instance, there was in that case the fact that the gentleman who had practised medical electricity attached extraordinary importance to that means of cure in medical practice. He conceived that it might be applied to every purpose, among the rest even to the

assisting of women in child-birth. But those were passed over, not indeed cast aside altogether, but passed over by the Judge as not being the basis of his judgment. What he did rely on was a long, persistent course of dislike of his only child, an only daughter, who, upon the testimony of everybody else who knew her, was worthy of all love and admiration, for whom indeed the father no doubt entertained, so far as his nature would allow him, the warmest affection; but it broke out into these extraordinary forms, namely, that he desired that that child's mind should be subject entirely to his own; that she should make her nature known to him, and confess her faults, as, of course, a human being can only do to his Maker; and because the child did not fulfil his desires and hopes in that respect, he treated her as a reprobate, as an outcast. In her youth he treated her with great cruelty. He beat her; he used unaccustomed forms of punishment, and he continued through her life to treat her as though she were the worst, instead of, apparently, one of the best of women. In the end he left her indeed a sum of money sufficient to save her from actual want, if she had needed it, for she did not need it. She was well married to a person perfectly able to support her; and therefore the argument might have been used in that case, that he was content to leave her to the fortune which she had secured by a happy marriage. He was not content to leave her so. He did leave her, as I say, a sum of money which would have been sufficient, in case of her husband falling into poverty, to save her from actual want; and, moreover, he left his property not to strangers—not to charities—but he left his property to two of his nephews. He was a man who throughout his life had presented to those who met him only in the ordinary way of business, or in the ordinary intercourse of life, the appearance of a rational man. He had worked his way up from a low beginning. He had educated himself as a medical man, going to the hospitals, and learning all that could be learnt there, and he amassed a very large fortune—at least, a large fortune, considering what his commencement was—a fortune of some £25,000 or £30,000, by the practice of his profession. Yet upon the ground which I have mentioned, that the dislike which he had conceived for this child reached such a point, that it could only be ascribed to mental unsoundness; that will so made in favour of the nephews was set aside, and the law was left to distribute his property without reference to his will.

Now I say usually you have the assistance of other things, besides the bare fact of a father conceiving a dislike for his child, by which to estimate whether that dislike was rational or irrational; and in this case, of course it has been contended that you have other criteria by which to judge of Mr. Knight's treatment of his children in his lifetime, and his treatment of them by his will after his death. You are entitled, indeed you are bound not to consider this case with reference to any particular act, or rather you are not to confine your attention to a particular act, namely, that of making the will. You are not to

confine your attention to the particular time of making the will, but you are to consider Mr. Knight's life as a whole with the view of determining whether, in January, 1869, when he made that will, he was of sound mind.

I shall take this opportunity of correcting an error, which you indeed would not be misled by, because you heard my words; but I observe that in the shorthand report of what I said in answer to an observation made by one of you gentlemen in the course of the cause, a mistake has been made, which it is right I should correct; because, of course, everything that falls from me has its weight, and I am responsible for my words to another court which can control me if I am wrong in the direction I give you. Therefore, I beg to correct the words that have been put into my mouth, when I say that if a man be mad admittedly in 1870, and his conduct is the same in 1868 as it was in 1870, when he was, as we will assume, admittedly mad, you have the materials from which you may infer the condition of his mind in the interval. I have been reported to say "from which you *must* infer the condition of his mind." That is of course what I did not say.

Now, gentlemen, I think I can give you assistance by referring to what has been said on this subject in another department of the law. Some years ago, the question of what amount of mental soundness was necessary in order to give rise to responsibility for crime was considered in the case of "Macnaghten," who shot Mr. Drummond under the impression that he was Sir Robert Peel, and the opinion of all the Judges was taken upon the subject; and though the question is admittedly a somewhat different one in a criminal case to what it is here, yet I shall explain to you, presently, in what that difference consists; and there is, as you may easily see, an analogy which may be of use to us in considering the point now before us. There, Chief Justice Tindal, in expressing the opinion of all the Judges (one of them a very eminent Judge, who delivered an opinion of his own, but it did not in any way differ from the other Judges), says: "It must be proved that at the time of committing the act, the party accused was labouring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong." Now that, in my opinion, affords as nearly as it is possible, a general *formula* that is applicable to all cases in which this question arises, not exactly in those terms, but in the manner in which I am about to explain to you. It is essential, to constitute responsibility for crime, that a man shall understand the nature and quality of the thing he is doing, or that he shall not be able to distinguish in the act he is doing right from wrong. Now a very little degree of intelligence is sufficient to enable a man to judge of the quality and nature of the act he is doing when he kills another; a very little degree of intelligence is sufficient to enable a man to know whether he is doing right

or wrong when he puts an end to the life of another; and accordingly he is responsible for crime committed if he possesses that amount of intelligence. Take the other cases that have been suggested. Serjeant Parry, with the skill which characterises all that he does as an advocate, endeavoured to alarm your mind, as it were, against taking a view hostile to him, by representing that if you come to the conclusion that Mr. Knight was of unsound mind in January, 1869, you undo all the important transactions of his life. In the first place, it is obvious that the same question which is now put to you on behalf of the plaintiff in this case would be put to any jury who had to determine the question with reference to any other act of his life, namely, whether at the time the act was done he was of sufficient capacity to understand the nature of the act he was doing. But in addition to that, take, for instance, the question of marriage. The question of marriage is always left in precisely the same terms as I have said to you it seems to me it should be left in almost every case. When the validity of the marriage is disputed on the ground that one or other of the parties was of unsound mind, the question is, was he or she capable of understanding the nature of the contract which he or she was entering into? So it would be with regard to contracts of buying or selling; and, to make use of an illustration—a very interesting one given us by the learned Serjeant—take the case of the unhappy man who, being confined in a lunatic asylum, and with delusions in his mind, was called to give evidence. First of all the Judge had to consider, was he capable of understanding the nature and character of the act he was called upon to do when he swore to tell the truth? Was he capable of understanding the nature of the obligation imposed upon him by that oath? If he was, then he was of sufficient capacity to give evidence as a witness. But, gentlemen, whatever degree of mental soundness is required for any one of these things, responsibility for crime, capacity to marry, capacity to contract, capacity to give evidence as a witness, I tell you, without fear of contradiction, that the highest degree of all, if degrees there be, is required in order to constitute capacity to make a testamentary disposition. Because you will easily see it involves a larger and a wider survey of facts and things than any one of these matters to which I have called your attention. Every man, I suppose, must be conscious that in an inmost chamber of his mind there resides a power which makes use of the senses as its instruments, which makes use of all the other faculties. The senses minister to it in this manner: they bring, by their separate entrances, a knowledge of things and persons in the external world. The faculty of memory calls up pictures of things that are past; the imagination composes pictures and the fancy creates them, and all pass in review before this power, I care not what you call it, that criticises them and judges them, and it has moreover this quality which distinguishes it from every other faculty of the mind, the possession of which indeed distinguishes man from every

other living thing, and makes it true in a certain sense that he is made in the image of God. It is this faculty, the faculty of judging himself; and, when that faculty is disordered, it may safely be said that his mind is unsound.

Now, gentlemen, I wish to call your attention to a case which has been frequently adverted to in the course of this cause. It is the case of "*Banks v. Goodfellow*," a judgment of the Court of Queen's Bench, at a time when I had the honour of being a member of it. I was, therefore, a party to the judgment; but everybody, or rather, I should say, all the members of the legal profession who hear me, will, of course, recognise the eloquent language of the great Judge who presides over that Court, the present Lord Chief Justice. But I was a party to the judgment, and, of course, while bound by it, I am bound by it only in the sense in which I understand its words. I think there can be no room for misconception as to their meaning, but I must explain to you the scope and bearing of it. That was a case in which a man who had, indeed, been subject to delusions before and after he made his will, was not shown to be either under the influence of those delusions at the time, nor, on the other hand, was he shown to be so free from them that if he had been asked questions upon the subject he would not have manifested that they existed in his mind. But he made a will, by which he left his property to his niece, who had lived with him for years and years, and to whom he had always expressed his intention of leaving his property, and to whom, in the ordinary sense of the word, it was his duty to leave the property, or it was his duty to take care of her after his death. It was left to the jury to say whether he made that will free from the influence of any of the delusions he was shewn to have had before and after, and the jury found that that will which I have described to you was made free from the influence of the delusions under which he suffered, and it was held that, under those circumstances, the jury finding the fact in that way, that finding could not be set aside. I will not, of course, trouble you with reading the whole of the judgment, which, however, I may say, would well reward the trouble of reading it by laymen as well as by professional men, but I shall pick out passages to shew you how carefully guarded against misapprehension this decision is. I shall have occasion by-and-bye to call your attention to instances in it which I think it has been sought to apply incorrectly in the argument which has been addressed to you. Now, at one passage of the judgment, the Lord Chief Justice says this: "No doubt, when the fact that the testator has been subject to any insane delusion is established, a will should be regarded with great distrust, and every presumption should in the first instance be made against it. When insane delusion has once been shewn to have existed, it may be difficult to say whether the mental disorder may not possibly have extended beyond the particular form or instance in which it has manifested itself. It may be equally difficult to say how far the delusion may not have in-

fluenced the testator in the particular disposal of his property. And the presumption against a will made under such circumstances becomes additionally strong when the will is, to use the term of the civilians, an inofficious one—that is to say, one in which natural affection and the claims of near relationship have been disregarded.” But, in an earlier passage in the judgment, the Lord Chief Justice lays down with, I think I may say, singular accuracy, as well as beauty of language, what is essential to the constitution of testamentary capacity. Sir John Karslake anticipated me in many of the passages I should have read to you. I shall not read all he read, but I shall select this passage as containing the very kernel and essence of the judgment. “It is essential to the exercise of such a power” (that is the power of making a will) “that a testator should understand the nature of the act and its effects; shall understand the extent of the property of which he is disposing; shall be able to comprehend and appreciate the claims to which he ought to give effect; and, with a view to the latter object, that no disorder of the mind shall poison his affections, pervert his sense of right, or prevent the exercise of the natural faculties; that no insane delusion shall influence his will in disposing of his property, and bring about a disposal of it, which, if the mind had been sound, would not have been made. Here, then, we have the measure of the degrees of mental power which should be insisted on. If the human instincts and affections, or the moral sense, become perverted by mental disease: if insane suspicion or aversion take the place of natural affection; if reason and judgment are lost, and the mind becomes a prey to insane delusions calculated to interfere with and disturb its functions, and to lead to a testamentary disposition due only to their baneful influence in such a case, it is obvious that the condition of the testamentary power fails, and that a will made under such circumstances ought not to stand.” Gentlemen, I have no fear, when rightly understood, of that case being misapplied.

The consideration of the amount and quality of intellect which is requisite to constitute testamentary capacity is, according to Sir James Hannen, eminently a practical question—one in which the good sense of men of the world is called into action, and which does not depend either upon scientific or legal definitions. In accordance with this theory, he makes small account of scientific testimony in cases of disputed will, looking down upon it with undisguised contempt from the serene altitude to which he has lately climbed. It makes no difference to him that the impairment of testamentary capacity which he has to investigate, if it exist, is result of *disease*, which runs a certain course, has certain definite mental and bodily symptoms, and affects the mind generally in a definite way. The mischievous consequence of studying the disease in a thousand cases, and so becoming

familiar with its nature and its bearing on the mental faculties, would be to destroy that good sense which is the appanage of men of the world and judges. It is the absurdest thing in the world for the astronomer to pretend that he knows anything more about the stars than any man of common sense who has got eyes to see; and it is nothing more than a foolish astronomical crotchet to hold that the earth moves round the sun, when twelve men of the world can see plainly that the sun goes round the earth. The common sense of the vulgar is the highest authority on all matters of science, mathematics, and philosophy; uncommon ignorance of a scientific question is a primal condition of the exercise of common sense upon it; and if common prejudice be added, then the judgment is infallible. The proof that it is so is that the final appeal of every fool who is worsted in argument is to common sense—*In hoc signo vinces.*

Sir James Hannen further tells the jury that each of them must, in order to determine what is an insane delusion, put to himself this question, and answer it. Can I understand how any man in possession of his senses could have believed such and such a thing? And if the answer you would have to give is, I cannot understand it; then it is of the necessity of the case that you should say that that man is not sane. He quotes from Sir John Nicoll what he calls a more logical and precise definition of what a delusion is:—"The true criterion is, where there is a delusion of mind there is insanity; that is, when persons believe things to exist which exist only, or at least in a degree exist only, in their imagination, and of the non-existence of which neither argument nor proof can convince them, they are of unsound mind." "You will find," he says, "that that test applied will solve most, if not all, the difficulties which arise in investigations of this kind." The discovery is so simple and satisfactory that one is surprised the world should not have hit upon it sooner. The test whereby to determine what is an insane delusion is not whether it is of a kind which has been observed in thousands of insane persons, has a character of insanity about it, and is associated with other mental and physical symptoms which mark a definite form of disease running through a definite course, but it is whether each of twelve men, who have been gathered together in a box from behind their counters, can understand how any man in possession of his senses could have believed it. When Lord Lindsay affirms that Home can, under spiritual influences, rise in the air, float bodily out

of one window of a room, and float bodily in at another window, and cannot be convinced by argument to the contrary, he is evidently in a parlous state, though he knows it not. Let him avoid the Probate Court, where common sense has undergone its incarnation, lest a worse thing than a belief in Home befall him. "Every one must, I suppose, be conscious," says Sir J. Hannen, "that in an inmost chamber of the mind there resides a power which makes use of the senses as its instruments, which makes use of all the other faculties. . . . It is this faculty, the faculty of judging himself; and when that faculty is disordered, it may safely be said that his mind is unsound."

After endeavouring to assist and guide the jury by setting forth to them the English criterion of responsibility in criminal cases, which other nations are so foolish as to think monstrous and absurd—although Sir James Hannen has plainly not lost his admiration of it with his change of judicial place—he takes the case of the unhappy man who, being confined in a lunatic asylum, and with delusion in his mind, was called to give evidence. The Judge had to consider, "whether he was capable of understanding the nature and character of the act that he was called upon to do when he swore to tell the truth? Was he capable of understanding the nature of the obligation imposed upon him by that oath? If he was, then he was of sufficient capacity to give evidence as a witness." It would be of no consequence, seemingly, that he might entertain the most extraordinary delusions with regard to the person against whom, or the events in regard to which, he was giving evidence, and that, while understanding fully the obligation of his oath, and resolved sincerely to speak the truth, he might yet testify to what he thoroughly but insanely believed to be true; that would be a misfortune to the man against whom his testimony weighed, which he must bear for the sake of a great legal principle. "But whatever degree of mental soundness is required for any one of these things, responsibility for crime, capacity to marry, capacity to contract, capacity to give evidence as a witness, I tell you, without fear of contradiction, that the highest degree of all, if degrees there be, is required in order to constitute capacity to make a testamentary disposition." This is an amendment, it is to be presumed, upon the opinion which has hitherto prevailed, or at any rate which used at one time to prevail, and has frequently been acted upon in courts of justice—namely, that a will, which a man might

take abundance of time to consider, which he might plan and frame at his leisure, and which he might take the opportunity of his most favourable mental state to execute, required a less degree of mental soundness than did responsibility for crime. Sir J. Hannen, however, proclaims, "without fear of contradiction," that it is a harder matter to make a will than to commit a crime, and that it makes more demand upon the mental resources of a mind not so strong and healthy as it should be, to dispose by will of a few acres of land or a few thousands in the funds to children or other persons, than to weigh the reasons for and against yielding to an insane impulse to homicide, and to exercise the volition to do or not to do it. We certainly shall not venture to contradict a learned Judge who, after the manner of the Emperor replying haughtily to a correction of his grammar—*Ego sum Rex Romanus et supra grammaticam*, might answer us—*Ego sum Judex et supra scientiam*; nor shall we make any more comments upon "the summing-up" in this case of "*Boughton v. Knight*?" Our readers would, perhaps, were they to go through it, be inclined to call it a summing-up of one side of the case only; certainly one cannot help seeing that it reads excellently as an advocate's speech for the defendant; but they would no doubt endorse, as we do, the conclusion arrived at by the Judge, and concurred in by the jury, as to the character of the testator's will.

It is a thousand pities, however, that we are as far from any uniformity of principle in the Probate Court as ever. In this case the will was set aside, not because it had been made under the influence of actual delusions, but because there was evidence that there existed a disorder of mind which had apparently poisoned the testator's affections, perverted his moral sense, and engendered suspicion and aversion; and because the testamentary dispositions were presumed to be made under the baneful influence of these morbid feelings. "If a man is," Sir J. Hannen says, "early in life, and at frequently recurring intervals through his life, subject to the delusion of supposing that those about him are actuated by sinister motives towards him, and that they intend to vex and harass him, and accomplish their wishes which are hostile to him, and that is the state of his mind, it is obvious that must have a bearing on the question whether he is capable of judging what person he shall give his property to, and to what extent he shall make them partakers of that which he possesses." The testator was presumed to be in this state,

and so his will was invalidated, notwithstanding that it had been drawn up by a respectable lawyer who was a stranger to him, carefully worded by the testator "so that there might not be a peg to hang a doubt upon," and witnessed by the manager and a clerk of the bank with which he had dealings; and notwithstanding that these gentlemen testified to so complete an absence of any trace of mental disorder in his conversation, manner, appearance, and conduct, that they had never even suspected he was insane. Moreover, there was nothing distinctly irrational, nothing by itself sounding of insanity, in the disposition of the will: it was such a one as a man in his perfect senses might have made. The testator had personal property to the amount of about £62,000, and an estate of about £1,500 a year: to his brother he left £10,000; to one of his three sons, against whom he was not without cause of complaint, the interest of £10,000; to another he left £8,000; and to the third, £7,000; to a sister £1,500; and some small legacies to others; the rest of the personal property and the estate he left to Sir C. R. Boughton, the owner of an adjoining estate and a distant relative, on the ground that he did not wish the estate to be sold. The will might be unjust, but there was no pretence for saying that he did not understand perfectly the nature of the act which he was doing. What then becomes of the value of the possession of such knowledge as a test of sufficient capacity? But he certainly had cruelly flogged his sons while they were young, had behaved harshly to them afterwards, and had manifested great suspicion and distrust of them throughout his life; and there was conclusive evidence given that he had lived and acted in an extraordinary way, and had imagined that people watched him and suspected him of having committed theft. His sons, his other relatives, and all who had to do business with him, had, however, always treated him as a perfectly sane man. There was no evidence that he cherished any insane delusion with regard to his sons, unless his entire judgment of them was delusion: he disliked, if he did not hate them, and thought them scoundrels or fools, who were determined to annoy him, because they did not think as he thought, nor feel as he felt, nor act as he would have had them act. The will was not the offspring of actual insane delusion, but it was presumably the offspring of perverted feelings springing from a disordered mind.

A few weeks before the trial of this case, the trial of a very similar case, "*Gregory v. Davis*," took place in the Probate

Court. The testator had left £90,000 mainly to two or three charities, and had not left anything whatever to his sister, to whom he had never shown any natural affection, and who opposed the will on the ground of his insanity. He had lived a strange, misanthropical, solitary life in poor lodgings, and evidence was given by the lodging-house keepers and others, of peculiarities which had led them to think him decidedly insane. He fancied that persons who were perfect strangers to him were designing to injure him. He would stand at the window muttering unintelligibly to himself, and gesticulating for hours; would walk up and down the room cursing and using such expressions as "Cut the Devils down;" would not meet anyone on the stairs if he could possibly avoid it, and if he did so, shrank anxiously back against the wall from fear of being touched; and would usually stand while he took his food, which on some occasions he threw on to the fire and down the water-closet, and which he suspected to be poisoned. The medical man, who had attended his brother on his deathbed, testified to the great difficulty which he had experienced in convincing the testator that his brother was dead, although an inquest had been held and a *post-mortem* examination made; and after his brother's death the testator tore up some of his own good clothes, and wore his brother's old shirts, after having torn off the neck and one wristband of each. These were the things testified to by servants and lodging-house keepers, who were the only people who had opportunities of observing his daily life. On the other hand, the lawyer who made his will testified to the testator's full comprehension of the nature of his property and of the dispositions which he wished to make, and persons who had conversed with him casually in the streets or elsewhere gave evidence that they had not observed anything insane either in his manner or conversation. The case was tried without a jury, and Sir James Hannen decided for the will, making light of, or entirely disregarding, the evidence of the lodging-house keepers and servants, who were the only persons able to speak to the testator's habits when he was under no sort of restraint, and laying great stress upon the testimony of the gentleman who drew up the will, and of the casual acquaintances who had not observed any insanity.

In the case of "*Boughton v. Knight*" exactly the opposite course was taken. The testimonies of the lawyer who drew up the will, and of those who had merely a business acquaintance with the testator, were rejected as of no account,

while respect was paid to the evidence of servants who could speak of the testator's real life when free from the restraint imposed upon him by the presence of strangers. "Without going through them," said the Judge, "the evidence on behalf of the defendants was of that class of people from whom the plaintiff did not—I presume because he could not—select even one, namely, the servants, who were, from this gentleman's unhappy condition, the only persons who were able to give an account of his inner life." Serjeant Parry dismissed them with contempt, and called them "these wretched servants. Was there anything with the exception of the one woman, Mrs. Fairbank, to justify that statement?" Of the evidence of those who never saw anything odd or strange in Mr. Knight's behaviour or conduct, namely, the solicitor and agent of the testator, the manager of the bank, the clerk of the bank, Sir C. Boughton, the medical man who attended him, Dr. Fuller, of London, whom he had consulted, and others, Sir J. Hannen said—"That may be so, but that does not exactly prove that he was not at other times and with other persons guilty of conduct which cannot be considered as sane?" Assuredly not; but why was an exactly opposite principle applied to the evidence in "*Gregory v. Davis*?"

Having made ourselves acquainted with the evidence in both these cases, we entertain no manner of doubt that both testators were of unsound mind, and, furthermore, that they both laboured under exactly the same kind of insanity—a mania of persecution. In fact, this was an opinion which we gave and supported in a report upon each case before the trial. If the one was insane, unquestionably the other was so also, and in the same way; and we cannot help thinking that if one will was to be upset the other ought to have been upset too. A great deal, however, might be said in support of the opinion that neither of them ought to have been invalidated; the question really being whether both testators, though not of sound mind, were not competent to make their wills. Looking to the different issues in the two cases, and to the different ways in which exactly the same sort of testimony was treated by the judge according as he was arguing for the will or arguing against it, we find ourselves entirely without guidance: on what principle judicial decisions in the Probate Court are founded is a question which we ask ourselves in vain. Two cases running as nearly parallel as it is possible for two cases to do, so far as mental

symptoms were concerned, have occurred within a few weeks of each other ; opposite decisions have been come to, and we are unable to gather from them by what legal principle or by what principle of any kind they have been inspired. After all, there may be some danger in becoming too independent of "scientific and legal definitions," and in estimating too highly "the good sense of men of the world:" scientific and legal experience counts for something in the progress of the world ; the good sense of one age, moreover, has sometimes been the laughing-stock of the next ; and when all has been said, there is certainly some advantage, if not in the recognition of general principles, at any rate in an approach to uniformity of practice in courts of justice.

"Eugene Aram," a Psychological Study. By J. H. BALFOUR BROWNE, ESQ.

The spiritual history of a man is never without interest to his fellows. How a great man lived and moved and had his being ; how he met and faced this cunning, cheating world ; how he bore himself to his fellows, and how he accomplished the work that lay to his hand ; these are matters which are full of deep interest, of true pathos to men who are amongst their fellows ; to men who are striving to live justly and honestly in this present world. Each other life that we come to know and feel with, has not lived for itself, but for us. Other men have suffered that we may be free from pain. The victory of another may be ours through the magic of sympathy. There is a deep perennial truth in this matter of vicarious suffering. We find it illustrated in the sacrifices of all religions, and in the central doctrine of Christianity itself. It is in this aspect that hero-worship is excellent. "We may make our lives divine," and the way to succeed in that endeavour is by means of a thorough knowledge of, a deep and noble sympathy with, that which is divine in our fellow men. The examples such men leave are indeed noble benefactions to the race. A Peabody bequest is a small thing in comparison with the living records of a life well spent. That being so, the value of biography can be understood, and if the infinite significance of a true life of a real man is appreciated, the sorrow which must be felt on account of the rarity of such works cannot but be great. True there is no lack of so-called "Biographies," but these fall far short of the re-

quirements of the perfect record of a life. In these, for the most part, we find not the life of a man but a number of the circumstances which he lived through. How these modified him, how he moulded the iron of circumstance, for the most part, we hear not.

The true function of dramatic art in its highest aspect seems to be to present us with a living biography. The difficulty which is felt by all writers of lives is to bring the subject of their memoir really before their readers, to create in the mind of the reader the vivid impression that it was a real man who did these deeds—who spoke those words—who felt those emotions; it is, indeed, the work of the highest artist thus to make words body forth the whole vital being of a man. Various expedients are adopted with a view to the attainment of this end. Portraits of the man are given that the eye may help the mind; descriptions of the house he lived in, of the scenes amongst which he moved are given, because it is known that a man is sometimes known by his surroundings, and rightly so, as surroundings become vital if choice or thought has entered into them; but all these, except in the hands of the greatest masters, fail to make us know the man and feel with him. That, of a truth, is the end of biography. In the drama, on the other hand, we are assisted in our realization of character by the circumstance that in it a human being has, as it were, clothed himself with emotions. A man is there before us who appears to suffer or to laugh, and the more thoroughly he can enter into the emotion the less we feel that it is really acting, the higher is his art, and the more excellent is the moral effect upon ourselves. In that way a great actor is a biographer; but the biographer not so much of a man who lived in passions, in emotions, and in will, as of the passions, the emotions, and the volitions which lived through a man. In that way, too, a great actor is a teacher who, by his art, raises us to a higher life; and surely that is true of all art; it is a translation of a man to heaven without tasting of death, it is the sublation of our worldly wants, our petty desires, our selfish greeds, and the exaltation of our nobler nature, of our higher wants, of our excellent aspirations. If that is not a translation like to that of Enoch and Elias we know not what is. But this is effected through our sympathy—our sympathy with the noble and the good, and our loathing of the wicked and the base. Not simply for amusement were plays written, not simply to while away empty, lazy hours did such men as Shakespeare live; but for

far other and sterner purpose did they exist. He came, as all great men do, as a teacher, and it is just in that quality of teaching that he excels all other men. But if plays were not written with a view to the pleasure of the people, if all art is really in a deep sense didactic, it follows that plays should not be acted simply for the delectation of the audience, but for the benefit of each one who witnesses them. This fact has, to a great extent, been lost sight of in these days, and he who claims a higher function for dramatic art, in these days of Burlesque, than the production of laughter is apt only to excite the ridicule of the too risible world. That it has a higher function we cannot, however, doubt, and are prepared to assert in the face of the broadest grin and in spite of the most ironical cachinnation. That the drama is biographical in the sense we have pointed out seems to us certain. But one thing is to be remembered, and that is that it is only episodically biographical. Biography must trace the growth of a disposition through its various moods; the drama, on the other hand, traces the growth and progress of a mood in a disposition. The whole life of a man is the raw material of the biographer; a small portion of the life of a man, cut out from the rest by the prevalence of certain phases of being, separated from the rest by the emotional connection and association of certain events, is the field of the dramatist. Thus it is episodic biography, but at the same time it is truly biographical. An episode is not understood unless that from which it is a digression is appreciated. The passion of a man is only intelligible in relation to his whole character, consequently the dramatist has these two difficulties to deal with. He has to enable his readers to understand the disposition of the man, and yet he has to dwell almost exclusively on the one emotion, or series of emotions, without allowing his audience to lose sight of the real character of the person who is thus affected. The difficulty of this is, of course, great; and many who have attempted it have fallen miserably short of perfection.

The author of "Eugene Aram," which is at present being acted at the Lyceum Theatre, seems to us to have failed in many respects, and yet it is on the whole a very clever failure. It is a play written for a single actor, and that actor is Mr. Irving. Indeed, throughout it is almost a monologue spoken by Eugene Aram; and the other characters of the play are little more than the figures in a tableau. In this particular there is either an utter failure to perceive the true requisites

of dramatic art, or an utter want of power of real dramatic creation. Perhaps the absurd exigencies of the modern stage may be Mr. Wills' excuse. But we have graver fault to find with his work. We cannot approve of the choice of the murder perpetrated by Eugene Aram as the subject of a drama. Lord Lytton is in part to blame. He in his younger days chose to write a novel, in which he made considerable use of the story of Eugene Aram, a schoolmaster of Knaresborough, who in 1759 was hung in chains in Knaresborough Forest, after having been found guilty of the murder of Daniel Clarke, which had taken place fourteen years before. The story of this murder, which differed from others very little, was remembered by men on account of the supposed acquirements of the murderer, and through the exceeding ingenuity of his defence, which is said to have been pronounced a work of consummate ability by no less an authority than Archdeacon Paley. There were no redeeming circumstances connected with the murder. It seems to have been perpetrated with a view to obtaining a larger share of the proceeds of a robbery in which he, the murdered man, and a flax-dresser of Knaresborough—Richard Houseman—had been implicated; and, perhaps, with a view of escaping the suspicion of being connected with the robbery through the mysterious disappearance of the man Clarke, who would naturally, under such circumstances, be regarded as the guilty person. Lord Lytton could scarcely make a hero of such a man, and although there is a great deal of ingenuity in his book, it is certainly one of the feeblest he ever wrote.

Mr. Wills is even less historically accurate than Lord Lytton. But the choice of the subject necessitated inaccuracy. No dramatist could make a good play out of such a crime. To affect the audience simply with disgust and loathing is to fail of all real dramatic effect. The nobler sentiments, the better sympathies must be stirred within the audience, the play of emotion must be as varied on the stage as in the world, where the tears of joy and tears of woe are mingled on the same cheek, otherwise the play resembles Whistler's studies in black and grey, which fall so far short of artistic excellence. Consequently both Lord Lytton and Mr. Wills have had to modify facts. The former made grinding, debasing poverty, the reason of the crime; the latter makes revenge for a foul wrong, mad indignation at a wicked and shameful act, unreasoning hatred of a diabolical wrong doer, the cause of the tragedy.

Both authors, however, deal with the murderer's history at the date of the discovery of the crime, and not at the period of its commission. This method reminds one of the clap-trap of M. Gérôme's picture of Calvary, where the shadows of the three crosses lie in the foreground of the picture, but the crucifixion is itself outside the artist's view. The dark lead-blue clouds hang over Jerusalem; the people who had journeyed to see the death of Jesus, and the thieves, are wending their way back to the city through the gloomy valley. All these have fallen under the artist's notice, all these are there, but the crucifixion is not. Nothing of it is seen but the shadows of the crosses flung by the lurid light of a sky big with storm. Still people who did not know the province of art praised the picture. "You felt that it was there," they said; and so in this play you feel from the presence of the remorse of Eugene Aram that the crime has been committed, that the passions which led to it have been felt, but there is nothing to tell you so but the shadows.

Mr. Wills' play seems to us to represent something which the author scarcely intended, and for which he therefore cannot have the credit. In Mr. Irving's hands Eugene Aram is a madman. In some parts Mr. Irving is too stagy even to allow us to think that he represents anything real, and we are the more inclined to regret this because in many parts he shows unmistakable dramatic power, and a careful reticence both with regard to voice and action, which augurs well for his future success. But thinking highly, as we do, of his careful play of features, his calm and clear, although sometimes drawling utterance, and his thorough intelligence, we cannot but deplore such stagy staggering as that which he indulges in before the mirror at the end of the second act, and such blatant rant as he gives way to when describing his murder to Ruth, and when he is himself at the point of death. A good actor, as Mr. Irving in some passages proves himself to be, and a man with his capacity to become a much better actor, ought to avoid the clap-trap expedients of second-rate provincial actors, who choose "Maria Martin, or the Murder of the Red Barn" for their benefit night, and attract rustics who encore the "Combat Scene" from "Macbeth."

Mr. Wills meant to make Eugene Aram a sane man under the influence of remorse; he has succeeded in making him an insane man, or no man at all. The glaring inconsistencies of the play are explicable only on the supposition that Eugene Aram is mad. The first scene represents a gardener making

wreaths and bouquets in Parson Meadows' garden, in preparation for the marriage of the parson's daughter Ruth to Eugene Aram, the village schoolmaster. A stranger, Houseman, asks the gardener for a pick and spade, and induces him to allow his son to take these tools to St. Robert's Cave. Parson Meadows, on discovering that Houseman, who passes under an assumed name, is interested in mineralogy—an interest he had pretended to explain his request for the spade and the pick—offers him the hospitality of the parsonage; and the gardener, who through a slip of Houseman's has discovered his real name, and who had himself found a gold coin in St. Robert's Cave, thinks that the stranger means to dig for hidden treasure, and determines to watch him. Then there is a lover's interview between Eugene and Ruth. Eugene is an infinitely sad man. Even in the presence of the girl he is to wed on the morrow he cannot forego his melancholy, and he never allows a smile to flit across his face. So much so that Ruth asks him, "Were you ever gay?"

And yet this is fourteen years after the murder—fourteen years after an act which was scarcely unjustifiable, and he is still the slave of remorse, regret, or fear. Yet he must, had he been a sane man, have felt safe, have felt happy. Everything had gone well with him. He was respected. He was loved. His own love had not gone forth in vain, but had found an answer in another pure heart. Everything smiled upon him. But he was mad. He had become the victim of a fixed idea, and that came between him and the girl he loved, between him and the pleasures he might have felt from the honour, the admiration, the respect which surrounded him. That is evident. Whenever Ruth mentions a stranger his suspicions are aroused. He asks questions about him. He has at that time no reason to suspect that the stranger is Houseman, but in the course of the conversation with the girl to whom he is to be married, he incessantly recurs to the subject of the stranger. There is more than the healthy curiosity of a coward who dreads detection, more than the healthy remorse of a great mind for a rash and noble act in this; there is the brooding possession of the man by an idea which tyrannises over him, which is ready to grasp any straw and turn it into a rope for its purpose of self-intimidation.

But there are many other proofs of Eugene Aram's mental aberration. In a healthy mind the mental cause of an act is more persistent than the emotions connected with the occurrence. If the latter live they exist in close relation to the

former; they are always parasitical, never independent growths. Thus, if a man had loved, and in consequence of the "sweet wants" which love engenders, done some act which had to be atoned for in the mental sackcloth and ashes of blushes and tears, the memory of the repentance would not be dissociated from the memory of the love. Now in Mr. Wills' play, Eugene Aram, loving nobly, seeing the object of his affection cruelly wronged, and basely pillaged, not only of her honour, but, in the miserable meanness of vice, of her little trinkets, is mad with jealousy, and fierce with revenge he finds her seducer and her robber, and he strikes "the human scoundrel, or two legged wolf," according to Mr. Carlyle's phrase, while still enacting a part of the horrible tragedy. Well, we can almost agree with Mr. Carlyle when he says of a man in such circumstances, "The soul of every God-created man flames wholly into one divine blaze of sacred wrath at sight of such a Devil's messenger, authentic first-hand monition from the Eternal Maker himself as to what is next to be done." But Eugene Aram cannot recognise the divinity in his wrath, and goes about blighted, as it were, by the blaze and the glow of his own anger. He never can forget it. Even in the tales he tells the girl he loves, the cave in which he buried the "two legged wolf" plays a part. Always and everywhere the murder and the memory of the murdered man haunt him. But what has become of his memory of his love and jealousy, which led to the outrage? It is not persistent like this insane remorse; it has passed away with the fourteen years of gentle erasing time; even in the circumstances of new love, with the same dalliance with pleasant nonsense, with the same sounds in his ears, the same kisses on his lips, there is nothing to call up the terrible old emotions, and to crown his heart with thorns. It is ever the murdered man that is with him, never the woman that he loved and revenged. But this is exactly the character of an insane emotional condition. It is ever irrationally dissociated from those thoughts, those emotions, which in a healthy mind are its necessary concomitants.

Again, in the scene with Houseman, Eugene Aram shews himself to be capable of dealing with circumstances of the most refractory character with an iron hand. He is cunning and bold. He knows his game, and he plays it. But whenever he is asked to go with Parson Meadows and the rest to view the remains which have been found in St. Robert's cave, he becomes a poltroon and a coward. He indulges in loose,

rambling talk, and deals with the events as limply as a girl might. This would be ridiculous on the supposition that Eugene Aram was sane. To a sane man who has “nerves of iron, and brain of ice,” the mere request to look at a skeleton, which has been furred by the earth of a grave during fourteen years, even although the bones were those of a victim, has nothing so very horrible in it. To an educated man, as Eugene Aram was, the mere looking upon dry bones, although they had once been the clothes-horse of a garment of flesh, is not very terrible. To an insane man, on the other hand, who is by reason of his very insanity superstitious, and who has a diseased remorsefulness, such an invitation was full of horror, and the incoherence which followed the request that he should go with them to see whether in truth it was the skeleton of Daniel Clarke which had been found, was, on the supposition of insanity, not improbable or incongruous. It is a fact that is sometimes overlooked by psychologists that there is a very close connection between superstition and mental disease. Most medical men are familiar with the superstitious belief in remedies which exist in connection with epilepsy; but we might even go further, and prove that almost every mental disease is connected with its own kind of superstition, and, consequently, that the superstitions of men are not without their diagnostic value. The superstition which existed in Eugene Aram showed itself, not only when he was invited to go with the others to view the skeleton, but when, having screwed his courage up, he went and saw the bones, and fled. In the third act he is in a churchyard, whither he has fled. To a timid man, the graves would have been fearful companions; but not to a madman, whose whole mind was concentrated upon the old crime, and the superstitions connected with the raising of those bones, which his hands had covered with the moist soft earth of the cave. Here, however, his conversation or soliloquy is that of a madman. His superstition shows itself, too, for he makes a confession, and seems to think that God, in the starry heaven to which he holds up his face and his hands, will give some sign that his confession has been heard—that his prayer has been answered. And yet this is the wise and learned Eugene Aram, this is the man that all the villagers hold in reverence and respectful love—that the parson admires and praises. No! in truth, it is Eugene Aram, the madman! Even with his last effort he proves himself to be insane. He rises from Ruth’s arms, and acts with misplaced vehemence, the tragedy which is the

cause of his remorse; he raises his arms and strikes as if the head of his victim cracked beneath his fierce blows, and yet it happened fourteen years ago; and this is a scholar and a gentleman who is eking out, as it were, a scant supply of words by too profuse actions. No, again! It is Eugene Aram, who is under the influence of an exacerbation of his mental malady. Other indications exist which would go far to confirm the truth of the opinion we have formed of this play. The death of the hero is unaccounted for, except upon the hypothesis of brain disease, but we have already written more about Eugene Aram than we intended, although we have said less about Mr. Irving than he deserves. His acting in the first act is calm and artistic. In the scene with Houseman he is admirable, and, what is too rare with Mr. Irving, economical of voice and gesture. Some passages in the last act are full of tenderness and pathos, and indicate that he might, with patience, become more than simply an intelligent and face-gifted actor, that he might really be a genuine and powerful artist.

Mr. Wills, although he has failed to produce what he intended, if he did intend to produce a great drama, and although he has produced what he did not intend to produce, if he did not really mean to make a madman the central figure of his play, has produced a play which is in many respects remarkably clever, although it is wanting in almost all the qualities which are requisite to a real drama. It is full of by no means contemptible poetry, and some of the situations are striking and dramatic. He also could do much better. The walls of our picture exhibitions are covered with what are called "pot-boilers," and the man who consents to paint such pictures, if he can do better, is doing a grave injustice to himself, and perpetrating a contemptible cheat on his fellow men. We are half inclined to believe that "Eugene Aram" at the Lyceum is a "pot-boiler." Doubtless it succeeds in making the pot boil, and making the home hearth comfortable. But the author and the actor have better work in them, and we should be glad to see them begin to accomplish it.

OCCASIONAL NOTES OF THE QUARTER.

The Madness of Rousseau.

The following description of Rousseau's madness is taken from the admirable "Life of Rousseau," by Mr. John Morley, which has been recently published:—

The most prompt and quite the least instructive of the remarks invariably made upon any one who has acted in an unusual manner, is that he must be mad.

This universal criticism upon the unwonted really tells us nothing, because the term may cover any state of mind, from a warranted dissent from established custom down to absolute dementia. Rousseau was called mad when he took to wearing plain clothes and living frugally. He was called mad when he quitted the town and went to live in the country. The same facile explanation covered his quarrel with importunate friends at the Hermitage. Voltaire called him mad for saying that if there were perfect harmony of taste and temperament between the king's daughter and the executioner's son, the pair ought to be allowed to marry. We who are not forced by conversational necessities to hurry to a judgment, may hesitate to take either taste for the country, or for frugal living, or even for democratic extravagances, as a mark of a disordered mind. The verdict that Rousseau was mad, stated in this general and trenchant way, is quite uninteresting, and teaches us nothing.

That his conduct towards Hume was inconsistent with perfect mental soundness is quite plain. Instead of paying ourselves with phrases like monomania, it is more useful shortly to trace the conditions which prepared the way for mental derangement, because this is the only means of understanding either its nature or the degree to which it extended.

These conditions in Rousseau's case are perfectly simple and obvious to anyone who recognises the principle that the essential facts of such mental disorder as his must be sought not in the symptoms, but from the whole range of moral and intellectual constitution, acted on by physical states, and acting on them in turn.

Rousseau was born with an organization of extreme sensibility. This predisposition was further deepened by the application in early youth of mental influences specially calculated to heighten juvenile sensibility. Corrective discipline, from circumstance and from formal instruction, was wholly absent, and thus the particular excess in his temperament became even more and more exaggerated, and encroached at a rate of geometrical progression upon all the rest of his impulses and faculties; these, if he had been happily placed under some of the

many forms of wholesome social pressure, would, on the contrary, have gradually reduced his sensibility to more normal proportions. When the vicious excess had decisively rooted itself in his character, he came to Paris, where it was irritated into further activity by the uncongeniality of the surrounding medium. Hence the growth of a marked unsociality, taking literary form in the Discourses, and practical form in his retirement from the town. The slow depravation of the affective life was hastened by solitude, by sensuous expansion, by the long musings of literary composition. Harsh and unjust treatment, prolonged for many months, induced a slight genuinely misanthropic element of bitterness into what had hitherto been an excess of feeling about himself, rather than any positive feeling of hostility or suspicion about others. Finally, and perhaps above all else, he was the victim of tormenting bodily pain, and of sleeplessness which resulted from it. The agitation and excitement of the journey to England completed the sum of the conditions of disturbance, and as soon as ever he was settled at Wootton, and had leisure to brood over the incidents of the few weeks since his arrival in England, the disorder, which had long been spreading through his impulses and affections, suddenly, but by a most natural sequence, extended to the faculties of his intelligence, and he became the prey of delusion, a delusion which was not yet fixed, but which ultimately became so.

“ He has only felt during the whole course of his life,” wrote Humboldt sympathetically; “ and in this respect his sensibility rises to a pitch beyond what I have seen any example of; but it still gives him a more acute feeling of pain than of pleasure. He is like a man who was stripped not only of his clothes, but of his skin, and turned out in that situation to combat with the rude and boisterous elements.” A morbid, affective state of this kind, and of such a degree of intensity, was the sure antecedent of a morbid intellectual state, general or partial, depressed or exalted. One who is the prey of unsound feelings, if they are only marked enough and persistent enough, naturally ends by a correspondingly unsound arrangement of all or some of his ideas to match, and the intelligence is seduced into finding supports in misconception of circumstances for the misconception of human relation which had its root in disordered emotion. This completes the breach of correspondence between the man’s nature and the external facts with which he has to deal, though the breach may not, and in Rousseau’s case certainly did not, extend along the whole line of feeling and judgment. That some process of nervous degeneration was going on to produce such a perversion of the mental relations to the outer conditions of life, nobody holding the modern theories of the mind will be likely to deny; nor that Rousseau’s delusion about Hume’s sinister feeling and designs, which was the first definite manifestation of positive unsoundness in the sphere of the intelligence, was a last result of the gradual development of an inherited pre-

disposition to affective unsoundness, which, unhappily for the man's history, had never been counteracted either by a strenuous education, or by the wholesome urgencies of life.

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This contentment did not last long. The snow kept him indoors. The excitement of composition abated. Theresa harassed him by ignoble quarrels with the women in the kitchen. His delusions returned with greater force than before. He believed that the whole English nation was in a plot against him, that all his letters were opened before reaching London, and before leaving it; that all his movements were closely watched, and that he was surrounded by unseen guards to prevent any attempt at escape. At length these delusions got such complete mastery over him that, in a paroxysm of terror, he fled away from Wootton, leaving money, papers, and all else behind him. Nothing was heard of him for a fortnight, when Mr. Davenport received a letter from him, dated at Spalding, in Lincolnshire. Mr. Davenport's conduct throughout was marked by a humanity and patience that do him the highest honour. He confesses himself "quite moved to read poor Rousseau's mournful epistle." "You shall see his letter," he writes to Hume, "the first opportunity; but, God help him, I can't for pity give a copy; and 'tis so much mixed with his own poor little private concerns, that it would not be right in me to do it." This is the generosity which makes Hume's impatience and that of his mischievous advisers in Paris appear so petty, for Rousseau had behaved quite as ill to Mr. Davenport as he had done to Hume, and had received at least equal services from him. The good man at once sent a servant to Spalding in search of his unhappy guest, but Rousseau had again disappeared. The parson of the parish had passed several hours of each day in his company, and had found him cheerful and good-humoured. He had had a blue coat made for himself, and had written a long letter to the Lord Chancellor, praying him to appoint a guard at Rousseau's own expense to escort him in safety out of the kingdom where enemies were plotting against his life. He was next heard of at Dover (May 18th), whence he wrote a letter to General Conway, setting forth his delusions in full form. He is the victim of a plot; the conspirators will not allow him to leave the island lest he should divulge in other countries the outrages to which he has been subjected here; he perceives the sinister manoeuvres that will arrest him if he attempt to put his foot on board ship. But he warns them that his tragical disappearance cannot take place without creating inquiry. Still, if General Conway will only let him go, he gives his word of honour that he will not publish a line of his memoirs he has written, nor even divulge the wrongs which he has suffered in England. "I see my last hour approaching," he concluded; "I am determined, if necessary,

to advance to meet it, and to perish or be free; there is no longer any other alternative." On the same evening on which he wrote this letter (about May 20th—22nd) the forlorn wretch took boat and landed at Calais, where he seems at once to have recovered his composure and right mind.

On the Decline of the Moral Faculties in Old Age.

Dr. George M. Beard, of New York, has delivered lately a lecture on this subject, in which he lays down some propositions in a rather startling form:—

The lecturer began by giving a *résumé* of papers previously read before the Society, on *Young Men in History; an Inquiry into the Relation of Age to Work*. He stated that from an analysis of the lives of 1000 representative men in all the great branches of human effort, he had made the discovery that the golden decade was between thirty and forty; the silver between forty and fifty; the brazen between twenty and thirty; the iron between fifty and sixty, and so on. The superiority of youth and middle life over old age in *original* work appears all the greater when we consider the fact that nearly all the positions of honour, and profit, and prestige—professorships and public stations—and nearly all the money of the world are in the hands of the old. Reputation, like money and prestige, is mainly confined to the old.

Very few young men are greatly famous, for fame is a plant of slow growth—first the blade, then after a time the ear, then, after many years, perhaps not till long after death, the full corn in the ear. Men are not widely known until long after they have done the work that gives them their fame.

Portraits of great men are a delusion; statues are lies. They are taken when men have become greatly famous, which, on the average, is at least twenty-five years after they did the work that gave them their fame. The statue of Morse in the Central Park represents a most excellent gentleman, but not the discoverer of the Telegraph. Morse at seventy could no more have conceived and completed his great discovery than he could have reached out his hands and brought the planet Jupiter from the skies. He insisted on the distinction between *original* and *routine* work, claiming that the former was best done by those under forty-five, the latter might be as well or better done by those in advanced life, or by the very young.

Original work required *enthusiasm*, routine work *experience*. In society both forces are needed; one makes the world move, the other keeps it steady.

If all the results of the original work done by men under forty-five were annihilated, the world would be reduced to barbarism. Men are

at their best at that time when enthusiasm and experience are most evenly balanced; this period on the average is from thirty-eight to forty. After this period the law is that experience increases, but enthusiasm declines.

The people unconsciously recognise this distinction between the work that demands enthusiasm and that which demands experience, for they prefer old doctors and old lawyers, while in the clerical profession, where success depends on the ability to constantly originate and express thought, young men are the more popular, and old men, even of great ability, are shelved or neglected. In the editorial profession original work was demanded, and most of the editorials of our daily press were written by very young men. In the life of almost every old man there comes a point sooner or later when experience ceases to have any educating power.

To this general law, as to nearly all other general laws, there are many individual exceptions. The most marked exceptions to the law are found in the realm of *imagination*; some of the greatest poets, painters, and sculptors, such as Dryden, Bryant, Richardson, Cowper, Young, De Foe, Titian, and Michael Angelo have done a part of their very best work in advanced life. The imagery both of Bacon and of Burke seemed to increase in richness as they grew older.

On the other hand, in the realm of *reason, philosophic thought, invention and discovery*, the exceptions are very rare. Nearly all the great systems of theology, metaphysics, and philosophy are the result of work done between twenty and fifty. The exceptions are both ways, and there are some who, like Napoleon, reach their prime *long before* thirty-eight.

In the whole recorded history of the human race, no great invention or discovery has been conceived and completed by anyone over sixty. The lecturer had also discovered by statistical examination that the golden decade for criminals was between twenty and thirty—nearly all the first class crimes of the world being done by boys and young men under thirty-five.

He had discovered also that the same law applied to animals. Horses lived to be about twenty-five, and were at their best from eight to fourteen; this corresponded to the golden decade of man. Dogs lived nine or ten years, and were best for the hunt between two and six. Plants also appear to be subject to the same law. Fruit-bearing trees are most prolific at a time of their average life corresponding pretty nearly to the golden and silver decades of man. Children born of parents one or both of whom are between twenty-five and forty, are on the average stronger and smarter than those born of parents one or both of whom are much younger or older than this. The same applies to the breeding of horses, dogs, and probably of other animals.

The generalisation broadly stated is that in all organic beings *there is a period when the productive power is greatest, and this not late, but early—not far from the middle of the average life.*

In this lecture he would go a step farther and submit the *moral faculties* to the same investigation. He would ask the audience to accompany him in two assumptions. (1) That the brain was the organ of the moral faculties, and (2) That the men whose lives he should refer to had really declined in their moral faculties.

The audience might differ from his estimate of men; but if he could make clear the *principles* and methods by which the subject is to be studied, his object would be accomplished.

It does not follow that *all* people suffer decline of the moral faculties in old age; with many their last days are their best days. Some, like Charles James Fox, the English orator, after a youth and manhood of dissipation, settle down to an old age of quiet and dignified virtue.

When a man declines in moral principles, he does not necessarily become a horse thief; a loss of active *moral enthusiasm* is frequently all that is noticed.

There are *three* causes of moral decline in old age.

1. The over-exercise through life of the lower at the expense of the higher nature. Thus it has long been observed and admitted that conscience becomes less sensitive, and that vanity, avarice, ambition, and a disposition to petulance and irritability increase with years. This is the *physiological* cause.

2. Disease of the brain, or of other parts of the body that react on the brain. The diseases to which the brain are liable are infinite. Strange results may follow from even slight injuries to the head, or mere molecular perturbations of the cerebral structure. The lecturer related striking cases that had come under his own observation—how a kick from a horse had destroyed memory of number of houses and locality—how a bereavement had destroyed memory of names; how millionaires once liberal, in old age had grown absurdly penurious; how hæmorrhages in the brain and serious disorders of the cranial cavity have gradually or suddenly made the clever foolish, the patient petulant, the hopeful despondent; had caused men to change almost instantaneously their religious, social, and political doctrines.

Among the diseased conditions of the brain that cause moral decline in old age, are degeneration of the arteries, with morbid deposits, atrophy, and hardening of the nerve substance, with increase of the connective tissue; inflammation; softening; persistent congestion or anæmia; tumor in the brain; hæmorrhage; thrombosis; embolism; poisons in the blood, and exhaustion of nerve force (*neurasthenia*), and probably simple molecular disturbance.

Cases of moral decline from these causes, he remarked, are continually under his observation and treatment, and they are sufficiently familiar to all students of diseases of the nervous system.

3. Intellectual decline. The intellect is the eye of conscience, and when that is blinded by disease or the decay of age men cannot dis-

tinguish the true faith, even though they desire to do so. The two last causes are *pathological*.

In private life illustrations of the theme are numerous enough, but in a public discourse, the lives of celebrities, living and dead, serve best to enforce these views.

Far more than is supposed the martyrs of history have been young men.

The decline of the moral faculties in old age may be illustrated by studying the lives of the following historic characters:—Demosthenes, Cicero, Sylla, Charles V., Louis XIV., Frederick of Prussia, Napoleon (prematurely old), Voltaire, Jeffries, Dr. Johnson, Cromwell, Burke, Sheridan, Pope, Newton, Ruskin, Carlyle, Dean Swift, Chateaubriand, Rousseau, Milton, Lord Bacon, Earl Russell, Marlborough, Daniel Webster, Sumner, and Greeley.

In some of these cases the decline was purely physiological, in others pathological, in the majority it was a combination of both.

Very few declined in *all* the moral faculties: one becomes peevish, another avaricious, another misanthropic, another mean and tyrannical, another exacting and querulous, another sensual, another cold and cruelly conservative, another excessively vain and ambitious, and others simply lose their *moral enthusiasm*, or their *moral courage*, or their *capacity of resisting temptation and enduring disappointment*.

In discussing the noted statesmen of America, the lecturer stated that evidence derived from the recent political contest would be ruled out of court, because men could not now reason on that subject soberly or dispassionately. The question of the *abstract right or wrong* of the views held by these men in their youth and middle life was of little moment for our present purpose; it was only necessary to suppose that they believed them to be right. If any of their opponents, who honestly held different views, had similarly declined in moral enthusiasm for their views, they would illustrate the theme just as well. Some of these men were more wise in some respects *after their moral decline* than before. Nearly all political questions are questions of expediency, and not moral questions; very few carry moral convictions into politics, hence illustrations of the theme drawn from political life are rare.

What the lecturer had to say of the case of Mr. Greeley was written before his death, and before his last sickness, and had no reference to the last campaign. Since that time there had been fulfilled, sooner than was expected, and in a manner at once striking, tragical, and romantic, the substantial truth of the prediction recorded in this lecture. There are various and sufficient evidences that the brain of Mr. Greeley, during the last five or ten years of his life, was never quite sound and strong. His brain at forty-five and fifty could have borne his domestic and political afflictions without serious harm.

The subject of the relation of age to work is a central one, and sheds light on many other sciences. It has important bearings on the

theories of the origin, development, and destiny of man, on biology in general, on medico-legal science, on the study of insanity and diseases of the nervous system, and on mental hygiene.

The whole subject of the relation of age to work would be discussed by the lecturer in full detail in an extended treatise now in preparation, where all its scientific and practical bearings would be exhaustively considered.

The lecture closed with these suggestions :—

1. These facts should be considered in apportioning the work of the world; positions that require mainly *enthusiasm* and *original* work should be filled by the young and middle aged; positions that require mainly *experience* and routine work should be filled by those in mature and advanced life, or (as in clerkships) by the young who have not yet reached the golden decade.

The enormous stupidity and backwardness and red-tapeism of all departments of governments everywhere are partly due to the fact that they are too much controlled by age. The conservatism and inferiority of colleges are similarly explained. Some of those who control the policy of colleges—presidents and trustees—should be young or middle-aged.

Journalism, on the other hand, has suffered from relative excess of youth and enthusiasm.

2. It is sometimes a blessed thing to die young, or at least before extreme old age.

The fame of William the Silent, of Henry IV. of France, of Sidney, and of Lincoln, is probably far purer than if they had lived longer, and thus run the risk of moral decline. Thus a man may be immortalized by a murderer. If Daniel Webster had died a number of years sooner, his public fame would have been spotless for all time.

Raymond, as editor of the *Times*, would never have overthrown the Tammany Ring.

3. Moral decline in old age means *take care*, for the *brain is giving way*, and is very frequently preceded or accompanied by sleeplessness.

Decline of the moral faculties, like decline of other functions, may be relieved, retarded, and sometimes cured by proper medical treatment, and especially by hygiene.

In youth, middle life, and even in advanced age, one may suffer for years from disorders of the nervous system that cause derangement of some one or many of the moral faculties, and perfectly recover.

The symptoms should be taken early, and treated like any other physical disease. Our best asylums are now acting upon this principle, and with good success.

Medical treatment is almost powerless without hygiene. Study the divine art of taking it easy.

Men often die as trees die, slowly, and at the top first. As the moral and reasoning faculties are the *highest*, most complex, and most delicate development of human nature, they are the first to show sigus

of cerebral disease; when they begin to decay, in advanced life, we are generally safe in predicting that, if neglected, other functions will sooner or later be impaired. When conscience is gone the constitution may soon follow.

Everybody has observed that greediness, ill-temper, despondency, are oftentimes the *first and only* symptoms that disease is coming upon us. The moral nature is a delicate barometer that foretells long beforehand the coming storm in the system.

Moral decline as a symptom of cerebral disease, is, to say the least, as reliable as are many of the symptoms by which physicians are accustomed to make a diagnosis of various diseases of the organs of the body.

When a moral is associated with intellectual decline in advanced life, it is almost always safe to make a diagnosis of cerebral disease. Acting on this evidence *alone*, the speaker had diagnosticated cerebral disease in Mr. Greeley a year before his death, and by the same evidence he predicted that Sumner would probably die of disease of the brain of some kind, and would never again be very eloquent or morally enthusiastic.

Let nothing deprive us of our sleep. Early to bed and *late* to rise, makes the modern brain-toiler healthy and wise.

The problem of the future is work hard and at the same time take it easy. The more we have to do, the more we should sleep.

Let it never be forgotten that death in the aged is more frequently a slow *process*, than an event; a man may begin to die ten or fifteen years before he is buried.

4. These researches enforce the duty of especial kindness and charity for those in life's decline. The old are the wards of the young, and their moral defects, so often due to causes beyond their control, should at least receive as much consideration as diseases of a purely physical character.

There should be at least as much charity for a tired brain as for a broken leg.

Greeley, for example, was no more to be blamed for the moral declension of the last years of his life than for his insane ravings during his closing illness; his fault was behind all that, in overworking—in taking no vacation until he found a week in which to die.

These views, startling as they may just now appear, will in twenty-five years be regarded as commonplace. Their general acceptance will modify many medical, hygienic and political theories and customs, and will tend to diminish much of the unhappiness of the family and of the social circle.

The late Mr. Lutwidge.

Our readers will have seen with deep regret the announcement of the death of Mr. R. W. S. Lutwidge, who was so long connected with the Lunacy Board—first as secretary to the

Commissioners, and afterwards as a Commissioner. While visiting Fisherton House Asylum, in company with Mr. Wilkes, he was suddenly attacked by a patient, who struck him violently on the temple with a nail, which had evidently been concealed and prepared for the purpose of inflicting injury on some one. An attack of paralysis followed, which ended fatally at Salisbury. Mr. Lutwidge was 72 years of age, so that it was not probable that, in the natural course of events, he would have continued to perform his active duties as a Commissioner for many more years; but it is beyond measure sad that a long and useful life should have been brought to an end in so distressing a manner. Mr. Lutwidge will be generally regretted by those who were brought in contact with him in his official capacity, and who could not fail to appreciate the courteous and genial manners of a kind-hearted gentleman. It must needs be that accidents happen from time to time in asylums; indeed, the marvel is that they are not more numerous than they are, when we consider how many irresponsible beings, dangerous to themselves or to others, are collected in them. An event of this kind is well calculated to make us appreciate more justly than we perhaps commonly do the trials, the endurance, and the unwelcome work of those attendants upon the insane who are in constant intercourse with them, and from whom we demand a long-suffering and a gentleness that are more than human.

PART II.—REVIEWS.

Asylum Reports for 1872.

Among the crowd of reports with which we have been favoured this year, it is only necessary that we should notice a few, taken almost at random, and extract from these any passages which may be of special interest. Of all their official duties, the writing of the annual report must be to the majority of medical superintendents their most disagreeable one. They are supposed to be written for the information of Committees of Visitors, and, such being the case, need not contain more than the most meagre medical details. Yet it is advisable that each superintendent should utilise, for his own benefit and that of his brethren in the speciality, his asylum experiences, and place them on record. Now, it is more than questionable if it is a judicious plan to incorporate

medical topics with those usually submitted to the perusal of Committees of Visitors, and which constitute in their eyes the only matter of importance. It is an undoubted fact that many asylum reports contain medical observations of the highest importance; but they are really lost, for we do not possess any method for facilitating reference to their contents. No man when working up a subject can afford the time to wade through all the asylum reports issued in the United Kingdom during the last twenty years. What becomes of all the reports issued annually? To obtain the true answer it is only necessary to enter the library of almost any superintendent in the country, where we may see these documents—in many of which much trouble had been bestowed in the preparation—lying in a heap of confusion at the bottom of some cupboard specially reserved for the reception of the “*dead dogs*,” as they have been called. Now, though it is gratifying to find in reports the records of medical experience, it is also a matter much to be regretted that good medical work should not be recorded in a more appropriate and convenient place.

BIRMINGHAM.—The medical report consists of *two* pages, with a number of the usual tables. The following are the paragraphs of most interest:—

There were 61 deaths, not quite ten per cent. upon the average number resident; with two exceptions this is the lowest annual rate of mortality yet recorded. In 1855 it was precisely the same; in 1861 it was only 8·3 per cent. The average age at death was: males, 44; females, 47. In forty cases *post mortem* examinations were made, and, as a rule, such examinations are always made when not objected to by the friends.

In five cases inquests were held; three of these were simply cases of sudden death from natural causes; the other two were more important, as, in each case, the death was indirectly the result of violence, and led in the coroner's court to a verdict of manslaughter. One was the case of a policeman, who, about a month before his admission, was struck on the head in a public house disturbance. The aggressor was tried at the next assizes, convicted, and sentenced to a term of imprisonment. In the other case, an attendant of the asylum was implicated, and at the inquest a verdict of manslaughter was returned against him; on the following day he was brought before the stipendiary magistrate, who considered the evidence insufficient for his committal. He was, therefore, sent for trial under the coroner's writ only, and was tried before Mr. Justice Brett, at the ensuing assizes for the county, when he was acquitted. The whole circumstances of this case

were also fully investigated at the time by the Committee of Visitors, and by two of the Commissioners in Lunacy.

The recoveries number 115, being 55 per cent. upon the admissions.

BRIDEWELL AND BETHLEM.—Dr. Rhys Williams is an advocate for the use of the stomach-pump in forcible feeding. He informs the Right Worshipful the President, the Worshipful the Treasurer, and the Governors of the Royal Hospital of Bethlem (Lords and Gentlemen with, we would suppose, no special desire to be initiated into the method of artificial feeding), that:—

Much discussion has arisen during the past year on the best method of forcibly administering food, and though differing from many of the medical men who have written on the subject, I must record my conviction that in the large majority of instances the stomach-pump is by far the easiest and most humane. In skilful hands, with efficient assistance to carefully control the movements of the patient, I cannot conceive any serious objection.

It would appear from the Commissioners' report that the patients in Bethlem frequently visit places of public amusement, and that several were present at the pantomimes. That is a most commendable manner of entertaining patients, and one which, it is to be feared, is very much neglected in some asylums.

During the year 24 patients died, and 16 *post-mortem* examinations were made. The results of these—tabulated—are given at the end of report; but it is questionable if “My Lords and Gentlemen” can be particularly edified by perusing them. None of them are specially interesting from a pathological point of view.

BUCKINGHAMSHIRE.—There is nothing calling for special notice in this year's report. The Medical Superintendent's Report, which is deliciously short, not quite extending to three pages, shows that the mortality for last year, calculated upon the average daily numbers resident, was 8 per cent. *Post-mortem* examination were made in 19 of the 28 deaths.

CAMBRIDGESHIRE, ISLE OF ELY, AND BOROUGH OF CAMBRIDGE.—Her Majesty's Justices of the Peace for this district appear to have a curious thirsting after knowledge of a trivial character; rude people would say that they are inquisitive. The Committee of Visitors present them with a report of no less than 58 pages, containing, *inter alia*, reports and cor-

respondence at full length, which might have been condensed to a few pages by an ordinary newspaper reporter in half-an-hour. Other portions of it might have been omitted altogether, with the best effect. Is it not insulting for gentlemen assembled in Quarter Sessions to be treated to the details of a petty squabble among some attendants? What can be thought of a committee who condescend to put the following on record?—

On the 28th October last, Dr. Bacon, through the Visiting Subcommittee, recorded a gross case of insubordination and misconduct by a male attendant, named George Blything, and a female attendant, named Ellen Ransom. It appeared that certain irregularities were discovered at the attendants' mess table, upon which Dr. Bacon ordered that the female attendants should take their meals in the wards. This order was defaced by Blything, who was at once dismissed by Dr. Bacon, and the female attendant, implicated with him, left the Asylum of her own accord. Dr. Bacon's conduct in the matter was fully approved by your Committee.

Although there was an average residence of 266 patients during the past year in the Cambridgeshire Asylum, there is no assistant medical officer; and, although pressed by the Commissioners to rectify that defect in the staff, the Committee have postponed the consideration of the subject to a more convenient season. Who is on duty to attend to cases of emergency when the Medical Superintendent is ill, on leave, or in London on asylum business?

Perhaps no one can read the report of the Committee of Visitors without being very uncomfortably impressed with the painful economy, "close fistenedness," which characterises their proceedings. We would strongly recommend to their careful perusal an article which appeared in the "Saturday Review" in May. From it they may learn the true spirit which should inspire all asylum proceedings. All have heard of stupid people being "penny wise and pound foolish." Is not the following a capital example?

From an attentive consideration of the foregoing statements it appears evident that in the present state of the law (*vide* secs. 31 and 45 of the Lunatic Asylums' Act, 1853), no work, however necessary, no undertaking, however urgent, can be carried out in this Institution without the unanimous consent of four distinct authorities (*viz.*), the Courts of Quarter Sessions of the County and Isle respectively, the Town Council of the Borough, and the Commissioners in Lunacy, in London; and the conflicting opinions, as well as interests of those

bodies, render the speedy and satisfactory completion of any work, however expedient, a matter of the greatest difficulty; and in the present instance the delay in proceeding with the proposed enlargement of the building, for the last 18 months, will be found to have enhanced the cost of the work (from the rise of the prices of labour and materials) not less than 20 per cent.

The easiest remedy, if it were a desirable one, for this state of affairs would no doubt be to invest the Commissioners with power to enforce their suggestions being carried out at once. When the work had been done, the visitors would then only need to occupy themselves with the means of getting money to pay for it.

CHESTER.—That good attendants may be retained, the scale of wages has been increased as follows:—The ordinary male attendants were raised from £23 to £25 per annum, increasing £1 per annum to £35; and the female attendants from £10 to £14, increasing £1 per annum to £20. It cannot be said that even now the attendants at Chester are extravagantly paid when we consider the wages to be obtained in other occupations and in some asylums.

The sudden death of one of the patients who, so far as could be ascertained, was smothered in bed whilst in a fit, led the Committee to adopt the plan of placing all the suicidal and epileptic patients in a large dormitory on each side of the Asylum, under the surveillance of special night attendants. Such a step is highly to be commended.

During the year 81 patients were discharged recovered, being a percentage, calculated on the admissions, of 41·3. Forty-eight deaths occurred, being at the rate of 10·9 per cent. on the average number resident. Seventeen patients died of general paralysis; seven of chronic disorganization of the brain; three of apoplexy; three of phthisis pulmonalis; and eight of senility and gradual decay.

It is certainly remarkable that in 196 admissions the cause of attack was unknown in 117 cases. On this subject Dr. Davidson's remarks are just:—

The principal physical factors of the insanity were intemperance, general bad health, and epilepsy; and the chief moral or psychological causes were attributable to domestic troubles, mental anxiety, and religious excitement. This information, I may state, is given by the Relieving Officer, but it would undoubtedly be of much greater value if supplied by the medical man who writes the certificate as to the patient's insanity. In some parts of the Continent not only does the

certifying physician give the cause, or supposed cause, but also a full history, so far as can be ascertained, of the patient's character, peculiarities, and habits prior to the mental derangement.

Perhaps the best method of getting at the facts of a case is to obtain them personally from the friends of the patient when he is brought to the asylum. The worst histories of cases are obtained in transfers from one asylum to another. It should positively be obligatory that when a patient is sent to another asylum a full report of his case should accompany him.

Coroners' juries are notorious for the peculiarity of their verdicts. Dr. Davidson reports, in the case of one of his patients upon whom an inquest was held, that the following was the verdict:—"Died of exhaustion from acute mania with serious effusion on the brain." Was this really the verdict, or is Dr. Davidson libelling the very intelligent jury, while he perpetrates a very serious but old joke for the amusement of his committee?

The spiritual condition of the patients is certainly most assiduously attended to. The chaplain reports that he visits the wards twice nearly every day. Were all chaplains as energetic they might positively sometimes find themselves at a loss for a text from which to address the patients. But a shrewd and very able psychologist of this country has kindly relieved them from all such danger by suggesting the passage, "Rend your heart, and not your garments," Joel ii., 13. An appropriate address can at all times be made from this passage in the refractory ward; or it may be permanently suspended on the wall, as many other texts are.

City of London.—It is proposed to enlarge this asylum. It has been full during the greater part of the past year.

With the view to the further protection of the building, and the safety of the inmates, a fire-engine has been obtained from Messrs. Shand, Mason & Co., with suitable hose and appliances, and directions have been given for its frequent exercise by the attendants and male patients, with the intention, that should at any time its services be required, it will be found not only in good order, but the attendants and patients accustomed to the proper use of it.

The following rebuke, administered by the Commissioners in Lunacy to the Committee, is surely uncalled for:—

We have also seen every patient, and afforded to each of them an opportunity of speaking to us, and making what complaints they desired. No charges of ill-treatment or harsh usage were made, but

we had numerous appeals for liberation, and complaints that the committee did not often visit the wards or afford them sufficient means to state their cases or hear their applications for discharge. As the power of discharge rests with the committee of visitors alone, we take leave to bring this subject under their consideration.

If it be intended that a Committee should be so familiar with each case as to be able from personal knowledge to discharge patients without the recommendation of the medical officers, then we would suggest that all Committees of Visitors become resident officials, and make themselves useful by keeping the case-books, and undertaking such other duties as the medical officers may suggest, to the end that said visitors may acquire a sufficient knowledge of the cases they are obliged to discharge. This snub is the more uncalled for when it is found, as Dr. Jepson reports, that during the past year—

The number of patients discharged is 22, of whom eight of each sex were recovered, one of each sex relieved, and three males and one female were removed to other asylums, not improved; the percentage of recoveries being 38 upon those of the males and 34 upon those of the females, making a mean average of 36 per cent.—a higher rate than has been attained in any previous year.

FIFE AND KINROSS.—In his official report on this asylum Sir James Coxe remarks:—

It has been stated that *post mortem* examinations were made in every case; and it has to be added that these examinations are made with great care, and the results recorded in such a manner as cannot fail to give them a high scientific value. The appliances for conducting these investigations are, however, insufficient, and are likely to become still more so by the appropriation of the room in which the necessary preparations are made, and the microscopical examinations are conducted, as part of the accommodation required for the private patients whom it is proposed to admit. Under these circumstances it is strongly recommended that a room adjoining, or in close proximity to the dead-house, should be erected, and fitted up with the necessary appliances for pathological investigations. It may be mentioned that the Directors of the Royal Asylum of Montrose are at present erecting a laboratory for the purposes indicated.

Dr. Batty Tuke continues to give a very large amount of liberty to his patients; keys are but little used, and he finds with the best results. On this matter he says:—

A very large number of the former class (acute cases) have been treated in those parts of the asylum where liberty of action is no more

controlled than in the wards of a general hospital. It is when recent cases begin to convalesce that the chief benefits of the open door system are observed. When such a patient is gradually regaining his powers of reasoning, when he is no longer—to use a homely, but most significant expression—“out of his judgment,” he finds himself in a hospital having none of the characteristics of a prison, he is treated as a reasonable being, is not locked up as an irresponsible agent, and, not being constantly subjected to the humiliation of being shut up under lock and key, he accepts the position of an ordinary invalid in an ordinary hospital, which he leaves with re-established health, and no more disagreeable reminiscences than must necessarily attach to the memory of past sickness. I believe it to be quite practicable to treat eight out of every ten cases of insanity on this principle. You will see in Table IX. that nine of the cases discharged recovered, and fifteen of those discharged improved, had been resident in the asylum for upwards of two years. Eight of these were men who had the fullest liberty of action in the convalescent house at the farm, and who during their residence there had so materially improved as to demand discharge. Several of the women had had similar confidence placed in them, with equally good results. In the reports of Her Majesty’s Commissioners in Lunacy we have been told of many instances of amelioration of the physical and psychical condition of chronic lunatics boarded out in private dwellings. Such cases bear a strong resemblance to those of whom I have just now been speaking, and the deduction to be drawn, at least in my mind, is that the present prevailing principle of construction of lunatic asylums is erroneous, as it places all the inmates on one dead level. I believe it would be a vast advance, both from a humanitarian and economic point of view, were asylums to consist of a small central hospital and a large number of detached cottages, scattered over a considerable extent of ground. Few lunatics require absolute seclusion, the large majority being quite amenable to discipline of the mildest nature. There is good reason for the belief that many of the violent maniacs and chronic dements which crowd our asylums have been developed by a system of indiscriminate restraint, which excites in one man refractory opposition, and in another fosters inactivity of the brain. It is to be feared that this condition must ever be, to some extent, inseparable from all asylums; but it may be very much lessened in extent, degree, and kind. Of course the open door system has its drawbacks, the chief of which is the increased number of escapes. A certain number of patients will break their parole, but if they are not dangerous to themselves or others this is a matter of very little consequence, and it is not unfrequently advantageous to the eloper, as he is then for a time thrown on his own resources. I am given to understand, however, that the escapes from your asylum during the past year have but slightly exceeded those of other institutions, and you may rest assured that the anxiety they have caused is more than counterbalanced by the increased tranquillity which has resulted from

the system which gives the opportunity. I may mention that the few who are detained in the locked wards are not submitted to any greater degree of restraint than they would have to undergo in any asylums where the doors are generally locked.

With much that Dr. Tuke says all must agree, but we cannot but regret that in attempting to exalt his own system he should unnecessarily wound the feelings of his brother superintendents. There are many asylums where great liberty is given to convalescent and trustworthy chronic cases. There are other asylums in the kingdom where a patient can be treated as a "reasonable being," and where he is not "locked up as an irresponsible agent," and not "constantly subjected to the humiliation of being shut up under lock and key." We consider it a libel on the members of the speciality to say, as Dr. Tuke does, "that the present prevailing principle of construction of lunatic asylums is erroneous, as it places all the inmates on one dead level." Certainly his views have changed wonderfully during the past few years. His opposition to the out-door system, as pursued at Kennoway, was so decided that it became necessary for Dr. Mitchell, one of the Commissioners in Lunacy for Scotland, to write an official report refuting many of Dr. Tuke's statements concerning the patients in that village. As Dr. Tuke very well knows, nothing irritated the Scotch superintendents so much, and thus, perhaps, introduced some feeling into a question which should have been discussed on its own merits, as the apparently unfriendly remarks on the condition of patients confined in asylums, made by the Scotch Commissioners, who appeared never to miss an opportunity of praising the out-door system, to the disparagement of asylums and their management. Of course we must make allowance for the fervour and earnestness of a recent convert; but it is a great pity that these good qualities in the advocate should prejudice the matter which he strives to further.

His opinions on restraint and seclusion are sound.

But mechanical restraint and seclusion have been rarely employed. As to the former, I am convinced that restraint applied through the muscular force of attendants is much more irritating and dangerous than mechanical restraint. It is too great a tax on the patience of any man or woman to be struggling for hours with a refractory patient, who, by word and deed, must eventually wear out the good nature of the best servant. In surgical cases, its employment is an actual necessity. In regard to seclusion, I hold that a large majority of recent cases are best treated in bed in single rooms; and, further,

that chronic cases which are liable to violent outbursts of dangerous passion and obscene conduct and language, are better secluded, than by being allowed to upset the tranquillity of a whole ward, and outrage the sense of decency of respectable attendants and quiet patients. The necessity does not often arise, but when it does, I have no hesitation in placing such a patient in a single room for a few hours.

This report has appended to it the records of all the *post mortem* examinations performed during the year. They are very full, exceedingly well reported, and may be used as an example of what such reports should be by those who neglect this most important department of asylum work.

DEVON.—The percentage of recoveries during the past year was 47·4,—42·4 per cent. on the males, and 52·74 on the females. The death-rate was 47 per cent. on the average number resident.

Among the deaths were two of gangrene of the lungs. Dr. Saunders devotes two pages of his report to a short lecture on this disease. Doubtless his Committee of Visitors, which consists of earls, lords, baronets, &c., &c., must have been greatly edified by being informed that Guislain first pointed out that gangrene of the lungs is unusually frequent among the insane; that “the disease is mainly due to impoverishment of blood, and perverted nervous action;” that “it is sometimes developed in the course, or as the termination of the low forms of pneumonia, either of the catarrhal or croupous kind, which are such common diseases among the insane and others who suffer from defective nerve supply;” that, “as a rule, the diffuse form of the disease is most commonly met with in asylum practice, and but rarely is the circumscribed variety observed, when interstitial pneumonia forms around the sphacelated portion, and encysts it,” &c., &c.

It speaks strongly in favour of the past management of the Devon Asylum that it is possible to make the following very satisfactory statement:—

Many of the attendants have been in the Asylum service for a lengthened period, and all the charge attendants in the female division have been here for periods varying from five to twenty-five years.

GLOUCESTERSHIRE.—The Annual Report for 1872 contains no contribution, except perhaps statistical tables, from the Medical Superintendent. The following paragraph occurs in the report of the Commissioners:—

We trust that on the completion of the additions and alterations now in progress, advantage will be taken to set apart, as has already

been recommended in previous reports, in each division, an Infirmary Ward, with special conveniences, and hospital comforts for the treatment of the sick. We attach great importance to this as an arrangement which should exist in all asylums of this magnitude.

It is quite surprising that such a matter should require to be pressed upon the attention of anyone who is obliged to treat the sick in an asylum. Even for the convenience of the medical attendant it is desirable that patients be collected in a sick ward. The duties of the nurses are much lightened by such an arrangement, and the sick are certainly more cheerful and better attended than if they are isolated in single rooms. A good sick ward is very often the most cheerful and happy part of an asylum.

HANTS.—The mortality during the year was under 10 per cent. on the daily average of patients resident; and the recoveries were 37 per cent. on the admissions.

In one instance only has there been an accident attended with fatal consequences. A feeble, toothless old woman, who, for safety's sake, was served daily with minced meat to prevent her choking herself by her voracious eating, managed to take a hunch of meat from a neighbour's plate, which she bolted; the morsel passed the wrong way, and, lodging in the larynx, partially closed the air passage, and produced epileptiform convulsions, which terminated in coma, although the air had free access to the lungs, an artificial opening having been made into the trachea.

On looking over the table showing the causes of death, we were much astonished to find that this case is entered under cerebral and spinal disease; the cause of death, as given, is "coma." We always understood that the word coma was used to indicate a certain condition of patients labouring under diseases affecting primarily or secondarily the cerebrum; we never knew before that coma, *per se*, was a distinct disease, and of itself capable of terminating life. At College we were taught, and the authorities still state, that the state of coma is merely a symptom dependent on many causes, and occurring in various diseases, as apoplexy, meningitis, &c., &c. In a case of poisoning by opium, would Dr. Manley certify the cause of death to be coma? It is a well-known fact that death frequently follows, sooner or later, partial suffocation, whatever may have been the mode by which the supply of air was temporarily suspended. In cases of drowning, hanging, and choking, many individuals have been saved before life was quite extinct, and yet have

perished in a few hours or days. It is not stated whether or not a *post-mortem* examination was made in Dr. Manley's case; if there was, we would be curious to know what was found. The probabilities are that something more satisfactory than "coma" might have been discovered to account for death.

HEREFORD.—This is the first annual report of this asylum. The building was commenced in 1868, and is now occupied by 129 males and 121 females—250 in all. An excellent plan of the asylum accompanies the report.

Eighteen patients died during the year; "*post-mortem* examinations have been made in every instance, the permission of the friends having been first obtained in all cases where they could be consulted; in those where they could not, an interval of two days was observed to give them an opportunity of refusing"—a very excellent arrangement.

Dr. Chapman very strongly objects to criminal lunatics being sent to county asylums. Certainly his experience of them has been very disagreeable. We entirely agree with all he says on this subject, and would humbly suggest that the authorities who have been attempting to interfere, or have succeeded in introducing a similar method of dealing with criminal lunatics into Scotland, would read his statement of the case, and then they shall perhaps be better able to judge of the probable results. The advocates of the outdoor system have taunted medical superintendents by declaring that their asylums partake of most of the characteristics of prisons. It really appears as if they were determined to make them prisons in reality by placing criminal lunatics in them.

INVERNESS.—One of the Commissioners in his report makes various suggestions for increasing the amount of outdoor exercise. It would appear as if the superintendent had some peculiar ideas about the use of airing-courts, as the Commissioner remarks—"some fears are entertained lest a tendency to degraded habits should be encouraged by such freer use of the airing-courts; but this result is not experienced elsewhere, and need not be apprehended with proper supervision." If airing-courts be objected to, what, may we ask, becomes of those patients who cannot be permitted to accompany the ordinary walking party? It would give some very valuable information were there kept in each asylum a register, showing the number of hours per day, week, month, and year, spent by each patient in the open air. It is all very

fine to enter into the register that such and such members take exercise, but it must be remembered that many so entered go out daily, and we are apt to forget that a certain percentage must necessarily get less of the fresh air. Particularly must such be the case where the airing courts are despised. Many cases cannot or will not accompany the ordinary walking party; if some special arrangement be not made, these patients must remain indoors if not allowed to go about in the airing courts; and we all know the result of detaining human beings indoors for protracted periods. As the population at Inverness Asylum, as noticed by the Commissioners, has suffered severely from phthisis, it is a matter for enquiry whether or not some of the patients might have more fresh air by being placed under supervision in the airing courts whenever the weather may permit.

The Commissioner also reports that "as a rule these patients (the sick) were in single rooms, but it appears to the Commissioner that if the sick of each sex were placed in appointed dormitories, they would not only be brought under more careful supervision, but would be placed in more cheerful circumstances." We can only repeat what we said in regard to the same matter in connection with the Gloucestershire asylum—that it is really amazing that the advantages of congregating the sick in a special ward should require to be urged upon the attention of any medical man of any experience and common sense. What advantages are derived by patients, nurses, or medical attendant, by the former being secluded to a certain extent? It must be a very doleful matter for all concerned, we would suspect, for a chronic case, as phthisis, to lie in a single room week after week. Such an arrangement would drive most sane people out of their mind, and it is not impossible that it influences injuriously the mental condition of those already insane.

If medical superintendents insist upon cramming all sorts of medical scraps into their reports to their visitors, it is at least advisable that the statements they make be correct. A man does not require a special medical education to know that it is not an unfrequent occurrence for an abscess to form near or on the site of vaccine vesicles, especially in adults. A chronic maniac at Inverness was re-vaccinated, and appears to have been greatly interested in the vesicles on his arm. "He was incessantly taking his coat off, tugging up his sleeves, looking at them apparently with a sense of admiration, patting them with his fingers, exhibiting them to every-

one who came into contact with him, and bending down at such a distance from the fire that the part of the arm on which they were might be gently warmed. In a short time an abscess formed, of considerable size, which, it is believed, may be fairly taken as an instance illustrative of the effect of attention directed to a particular part." Really, the ingenuity of this idea is too much. Most ordinary men, not endowed with such an inventive mind as the writer of the preceding sentence, would have attributed the abscess to the irritation of an already inflamed part, caused by incessant exposure, and by the patient incessantly rubbing it when removing his jacket and pulling up his shirt sleeve, patting it, warming it at the fire, &c.

Extra diets appear to be distributed in a peculiar manner at Inverness. Very judicious means are employed to detect phthisis (the predominant cause of death) on its first occurrence in patients; even "the diminution in weight is taken to indicate the necessity for a more liberal diet being given to the patient, and in this way the indiscriminate use of extra diets is avoided, which, without sounder principles than are generally acted upon in ordering them, are apt to become a source of needless extravagance in such institutions as this." Such a method of proceeding is a very apt illustration of the saying that it is useless to lock the stable door after the horse has been stolen. The ordinary principles which guide men in the use of extra diets are to *prevent* the occurrence of phthisis by a judicious distribution of food in larger quantity or greater nutritive power. These principles Dr. Aitken characterises as unsound; but we rather suspect that the practice founded upon these so-called unsound principles will show better results than can be expected where extra diet is withheld until the patient begins to emaciate or has got a tubercular deposit in one of his lungs. Phthisis may be prevented by attention and diet, exercise, &c., but we do not know that there is on record a single case of phthisis in an insane patient cured by an extra allowance of food. Such being the case, we do not expect that Dr. Aitken's suggestion will meet with approval from many, or, indeed, be acted upon by any who consider the matter from any but a narrowly economical point of view.

JOINT COUNTIES ASYLUM, CARMARTHEN.—The Chaplain, in his report, informs the committee that the general health of the asylum has remained, during the past year, in a remark-

ably satisfactory state. What official right a chaplain has to report on things medical we cannot understand.

The deaths during the year have been 22, giving a percentage of 8.18 on the average number resident. This is 2.66 per cent. below what obtains in other asylums. Only 3 per cent. of the female patients have died during the year, while the death rate of the males has been over 13 per cent.

Post-mortem examinations were made in 20 cases. Eighteen of the total deaths were due to diseases of the cerebro-spinal system.

Special arrangements have been made to extinguish a fire, should such an unfortunate event ever take place. "A system of pipes in connection with fire plugs, at intervals all round the Asylum, is being laid in continuity with the water supply from our steam pump. When this work is completed we shall be able, in the event of a conflagration, to deliver over 4,000 gallons of water an hour at any part of the building."

LANCASTER.—The following are the only paragraphs of anything like special interest in Dr. Broadhurst's report:—

The deaths have been 10 per cent. on the average daily number, an increase of mortality in excess of the last three years, chiefly owing to the number of cases affected with chest disease, several of them arising in the new block for men, where they are more exposed to atmospheric changes than in the older parts of the building. In 15 instances the period of residence at the time of death varied from 19 to 43 years.

An arrangement has been entered into to provide additional security for the epileptic patients during the night; 50 of the men of this class have been brought together on the top flat of the main building, and have been placed under the special charge of a night watch, who has no other duty to take his attention. The remainder of the epileptic men, about 20 in number, who required separation on the ground floor, either from infirmity or other causes, have been placed in the care of the ordinary night watchman; hitherto this system has worked well, and by this subdivision of labour it is to be expected that accidents in future will be avoided.

An application was made in the spring by the attendants and nurses for an extension of time for relaxation from duty; the request was granted, and carried out without any addition to the number of the staff. The artisans and out-door labourers applied for an increase of wages with success; the advance of remuneration to the in-door servants had been gone into the year before.

LEICESTER (BOROUGH).—Dr. Finch reports that the death rate continues very high. The mean annual rate was, males, 13·9; females, 13·2; average, 13·6 per cent. This, he says, is principally due to the large proportion of very feeble and infirm cases admitted; six cases having been brought to the Asylum last year in an almost moribund condition, and these died in less than a month.

It is noted by the Commissioners that about 15 female patients go to the village church on Sunday evenings. This is a most excellent arrangement, which perhaps Dr. Finch may be able to continue with increased numbers; and perhaps his example may be followed in other asylums. It is to be feared that proper value is not always attached to this matter. Patients highly value the privilege of attending church, lectures, and amusements outside the Asylum.

LINCOLN LUNATIC ASYLUM—

One case of recovery is worthy of remark, viz., that of a lady, considered hopelessly insane, who had resided in the Hospital for nine years in a state of complete melancholy, or, it might be said, *despair*. The patient suddenly recovered, and has remained perfectly well so long that her restoration may be looked upon as thoroughly established. Like many other recovered patients, she pays visits to the Institution on every opportunity, and even comes specially to see her old friends. Nothing can be more satisfactory, indeed, than such visits as these of former patients, who are welcomed, not only by the officers and attendants, but by the more intelligent patients themselves, who express their great delight in seeing their former associates once more among them.

This report contains a very curious table; it is called "House Surgeon's Daily Return of the State and Circumstances of the Patients." This return is stated to be made up daily from reports made by the attendants. It gives statistical information on nearly sixty points. Many of the matters referred to are most important; but we positively cannot see the necessity of printing and circulating figures to show the number of gentlemen who "chewed tobacco," "smoked in the grounds," "had confined bowels," &c., &c. Out of an average of 70 patients, 66 took porter and 4 wine, *medicinally*. It thus appears that the whole of the inmates are under medical treatment.

(To be continued.)

Neuralgia and Kindred Diseases of the Nervous System.
By JOHN CHAPMAN, M.D. J. and A. Churchill.

In the January number of this Journal for 1872 Dr. Anstie's book on Neuralgia was reviewed, and now we have a larger volume on the same subject by Dr. Chapman. Dr. Anstie put forward the theory that the disease means weakness of the body, and especially anæmia and atrophy of certain nerve centres in the brain; Dr. Chapman thinks it has but little to do with weakened vitality, and results from hyperæmia of the nerve centres. Anstie says the general health of nearly all his patients was bad; Chapman avers that neuralgic patients "live on often to a ripe old age, the term of their existence not being appreciably shortened by the disease." Anstie thinks it is a very hereditary disease indeed; Chapman does not think it very often so transmitted. The former treats it by all sorts of nutritive and tonic means; the latter treats it by "spinal ice bags." But we shall allow Dr. Chapman to state his own theory on the whole subject.

Summary Statement of the Author's Theory.—The theory which I believe adequate to explain all the phenomena of neuralgia, which indicates a successful method of treating the disease, and the truth of which seems to be proved by the results of the practical application, may be stated in the following propositions:—

(1.) That pain, whatever may be its exciting cause, and whatever may be the structure in which it is felt, is, like ordinary sensation, a phenomenon of functional change in the sensory centre into which the affected nerve is rooted.

(2.) That the nature of the functional change denoted by ordinary sensation, and the nature of that denoted by pain, are essentially identical; the difference between the two being only a difference of degree of rapidity or intensity with which the change occurs.

(3.) That pain, like ordinary sensation, is of various degrees of intensity, and that whereas pain denotes a more rapid functional change in the affected sensory centre than occurs during ordinary sensation, the successively higher degrees of intensity of pain are expressive of successively higher degrees of rapidity of functional change in the functioning sensory centre.

(4.) That whereas an indispensable condition of those functional changes in the sensory centres which are comprised within what may be termed the ordinary sensory scale is a normal supply of arterial blood, in order to provide for those transformative changes which are at once chemical and nutritive, and which constitute the groundwork and possibility of functional change. So a supply of arterial blood greater than normal is an indispensable condition of those more

intense functional changes in the sensory nerve centre comprised within the wide range of what may be called the neuralgic, or, more generally, and perhaps more correctly, the *Algic* scale.

(5.) That pain is not necessarily a morbid phenomenon; that in its beginnings it is rarely, if ever, so in otherwise thoroughly healthy organisms; but that if, in such organisms, the operation of its exciting cause be long continued, it will induce in the affected sensory centre a habit of morbidly intense functional activity; so that at length, when that habit is generated, it will persist even after its cause is removed.

(6.) That a neuralgic habit thus generated may be transmitted hereditarily; and that, although it may remain latent during a considerable time, it may be suddenly lighted up by some exciting cause, so slight as to escape observation, and thus constitute in the second generation what is sometimes designated spontaneous or idiopathic neuralgia.

(7.) That the general doctrine expressed in the foregoing propositions in respect to pain is, *mutatis mutandis*, applicable to the several phenomena constituting the complications of neuralgia, which consist generally in disorderly actions of muscles, voluntary and involuntary; of morbidly excessive actions of glands, and of disorderly processes of local nutrition.

Proof that the Algic Nerve Centre is Hyperæmic.—The proposition that there is hyperæmia of the affected nerve centre in all cases in which pain is felt is, in my opinion, susceptible of decisive proof; for, as I shall hereafter show, by exerting a sedative influence over the spinal centre of a painful nerve, the pain may be abolished; whereas, by exerting a stimulant influence over the spinal centre of a nerve prone to neuralgia, but not actually painful at the time when the stimulus is applied, the pain may be reproduced.

Dr. Chapman gives a full description of the various forms of neuralgia, with their complications, and this part of his work implies a wide acquaintance with the authors who have gone before him. This we consider by far the best part of the book—if, indeed, it is not the only part that is of much value, if we except the description of the causes of the disease. These parts of the book will be extremely useful for reference to those who wish to see what has been said about the subject by previous authors. There is but little care exercised in determining the relative value of the opinions expressed by his authorities, and there are a singular confusion and jumbling of names and cases; all this under the appearance of system and order, and regular headings. It is, in fact, an ill-assorted compilation in which it is sometimes difficult to make out which author's sentiments is being

referred to, or to distinguish the opinions of his authorities from his own. It is dry reading, and tends strongly to confusion of ideas if long continued.

He puts mental depression among the predisposing causes of the malady.

Mental Depression is itself a form of hyperæsthesia, a sort of generally diffused excess of feeling ; it is, therefore, easily conceivable how thoroughly conducive it is to the production of that special and distinctly localized excess of feeling constituting neuralgia ; and certain it is that of all the various causes of the malady which may be enumerated, there are few, if any, at once so potent, so frequently operative, and so difficult of detection and counteraction as that of Mental Depression.

“*Psychical Influences*” are included among the exciting causes.

Psychical Influences.—Still more subtle and mysterious even, and much more frequently operative than the agent just mentioned, as an exciting cause of neuralgia, is mental emotion, and especially when the disturbance is of a distressing kind. Though I cannot adduce any case in which any well defined and persistent neuralgia has been originated by the operation of psychical influences, I am disposed to believe that in a considerable proportion of those cases in which no assignable cause is seemingly discoverable, the real cause is psychical ; and it is notorious that neuralgia as well as epileptic paroxysms are, in a vast number of cases, very often induced by mental disturbances in the form of vexation, irritation, or emotional depression ; and in some cases even joyous excitement, when excessive, will act in the same way.

Moreover, a special and energetic concentration of thought on any particular part of the body is capable, in some cases, of exciting in it not only pain, but even symptoms of inflammation.

The physiological effects of undue “attention” serve to explain many curious phenomena exhibited in certain disturbed conditions of nerve centres which may be induced artificially, as in hypnotism, or arise from less obvious internal causes, as in hypochondriasis A woman is brought into close relation with some one suffering from cancer of the breast ; the attention is directed involuntarily to the corresponding organ in herself ; the part becomes painful, swelling even occurs, and what is termed neuralgia of the breast is set up. A case is related of a gentleman who lost an intimate friend from cancer of the œsophagus ; the sufferings which he witnessed made a strong impression on his mind ; he began himself to experience difficulty of swallowing, and ultimately died from the effects of spasmodic dysphagia.”

We would recommend Dr. Chapman to read Dr. Hack

Tuke's book on "The Influence of the Mind on the Body," before he publishes his second edition. He will find some more striking facts than those which he has mentioned.

Dr. Chapman devotes a long chapter to the demolition of Anstie's theory as to the cause and nature of neuralgia, and utterly refutes him to his own satisfaction. He then goes over all the drugs ever recommended for its treatment, quoting the opinions of the innumerable authorities who have written on the subject. The effect on the mind after reading this chapter is not any definite idea of what drugs and what modes of treatment are suitable for definite classes of cases, or that those therapeutical agencies have any sort of relation to special causes of the disease, or to special forms of the malady, but that if one had a case to treat, one might give arsenic, put on a blister, give opium or iron, or apply the constant current, and the result will be about the same, viz., failure to do any good. Dr. Chapman certainly admits that some drugs, such as bromide of potassium, do good in some cases, but they do so only temporarily, and by virtue of their power of "depressing the vitality of the algic centre." But at last, after wading through all this, we come to the safe, sure, and permanent cure, viz., "the neuro-dynamic treatment," and to the exposition of this the author warms up in earnest. This is merely one part of a system called by Dr. Chapman "neuro-dynamic medicine."

Dr. Chapman informs us that the cure (*i.e.* ice-bags) must be applied to the spinal cord as the *fons et origo mali*, to the part affected, and to the various complications of the disease; and that there is a "special neuro-dynamic treatment of certain kinds of neuralgia." He devotes a chapter to "the soothing and agreeable effects of the spinal ice-bag, and exemplifies the whole system of neuro-dynamic medicine" by "an analytic exposition of its effects," the last consisting of accounts of "cures" and letters from grateful patients of which this is a specimen taken at random: "The ice is beautiful. If you are lying in bed with the ice on, it's wonderful how warm your feet get. You don't notice it so much when you are up and about. My hands, too, are not so cold. I seem altogether very different." Dr. Chapman properly adds in this case, "Treatment as before."

The chief interest in such a book lies not in its contents, but in a psychological study of the author's mental condition. To say that he is utterly incapable of understanding the rudiments of what constitutes scientific proof is a mere

truism. To say that he is one of those who have abounded in our profession in all ages, doing no particular harm, gaining a temporary notoriety, is equally evident. But to understand the exact state of mind that is implied in knowing so much about a disease, taking so much trouble to hunt up every author on the subject, arguing in favour of a particular pathology so plausibly, seriously entering the lists with such men as Dr. Anstie and Dr. Radcliffe, brandishing his spear over an imaginary victory over them, and then finishing the performance with a grand proclamation that he has discovered a new "system" of medicine, in which hyperæmia of the spinal cord and sympathetic system is proved to be the origin of all disease, and ice-bags to cure it:—this, truly, is a study for the medico-psychologist.

What am I? A Popular Introduction to Mental Philosophy and Psychology. By EDWARD W. COX, Sergeant-at-Law. Volume I. *The Mechanism of Man.* Longmans and Co., 1873.

No one can find fault with the candid and earnest manner in which Serjeant Cox enters upon the formidable task of supplying an appropriate answer to the momentous question, WHAT AM I? Believing that the small progress made by Psychology and Mental Philosophy, when other sciences have been advancing with giant strides, is the consequence of the obsolete method of investigation pursued by the few who have undertaken the study of them, he has set before himself the aim of treating Psychology in the same fashion as the Physical Sciences are treated—that is to say, "by the gathering together of *facts*, attested by good and efficient evidence, trying them by experiments carefully conducted, rejecting nothing on merely *à priori* argument, nor because of its apparent impossibility, or improbability, or seeming inconsistency with some fact or law already assumed to be true." This volume is the first instalment of his labours; it is devoted to a description of the human mechanism—Body, Mind, Soul—merely as it is constructed; and it is to be followed by a second volume, which will be devoted to "a description of the *machinery in action*, and will embrace all the phenomena of *intellectual existence*, as distinguished from pure organic life, viewing it in its normal and abnormal conditions, in health and in disease."

The first nine chapters of this volume are occupied with a description, in plain language and in popular style, of the human machine—how it lives, how it grows, and how it dies; or rather perhaps, as we should say, with a dissertation on what Serjeant Cox conceives it to be, and on the way in which he conceives it to live, grow, and die. For, it must be confessed that the learned author by no means confines himself to the sober path of description, but indulges in long flights of imagination; it is only fair, however, to add that he conscientiously warns his readers not to accept his opinions as proved facts, but to take them as only conjectures. Assuredly the quantity of facts bears an exceeding small proportion to the great mass of conjecture and speculation.

In succeeding chapters he treats of the different senses, setting forth briefly the conditions and limitations under which each sense works, the kind of information which it furnishes to us, and discussing the value of their evidence when they act together in aid of one another. In this part of his book he is far less speculative than in the foregoing chapters; though there is not anything novel in what he says, some of his remarks will be found suggestive of profitable reflection; and he makes some not altogether undeserved strictures on men of science who are “found still cleaving to the old discarded folly of making their own conceptions the test of truth, and not only rejecting facts that do not square with their theories, but refusing even to inquire and investigate, contending that asserted facts are not facts, because, according to their own preconceived notions, such a fact is impossible.”

What is this unphilosophical folly but a tacit assumption of infallibility? Common sense as well as experience should teach them that the course of wisdom is to deal with a fact, asserted by credible witnesses, by bringing it to careful investigation, with patient trial and test, and thus to ascertain *if it be a fact* or a fallacy. . . Unhappily for the cause of Science, this appears to be too severe a toil; or, perhaps, is thought to be too humiliating a confession for Philosophers who claim omniscience and infallibility; and so they go on obstructing, instead of promoting, the progress of all knowledge that happens to be in discord with their assumption. It is sad to see Professors exhibiting this dogmatism of science, which in them is more odious than the dogmatism they so lavishly charge upon the Professors of Theology.

It is certain that some of the followers of science have not altogether escaped the bad theological habit of deeming

orthodoxy to be the test of truth, unmindful that in a world of which we know so little, of which we have so much yet to learn, the orthodoxy of one age must often be the erroneous *doxy* of the next age. But the learned Serjeant cannot fairly expect scientific men to be continually beginning at the beginning, and teaching each new comer his scientific alphabet, by correcting his misinterpretation of facts, and demonstrating to him, for example, that the sun does not move round the earth, that diseases are not the work of witches, that there are impostors and dupes in the world, and that the latter are the natural prey of the former. We have a suspicion that the real occasion of Serjeant Cox's strictures is that scientific men will not investigate the phenomena of so-called spiritualism, or, having investigated them, will not accept its alleged facts. Let him ponder a remark by Jean Paul:—"Hundertmal schweigt der Weise vor Gecken, weil er drei und zwanzig Bogen braucht, nur seine Meinung zu sagen. Gecken brauchen nur Zeilen, ihre Meinungen sind herauffahrende Inseln und hängen mit nichts zusammen als mit der Eitelkeit."

The second half of the volume is devoted to a description of the mental faculties, the author adopting the phrenological scheme of classification propounded by Gall and perfected by Combe. "If Phrenology," he says, "had done nothing more than give to the world this admirable classification of the mental faculties, it would have a claim to the gratitude of all who endeavour after that knowledge of themselves which has been truly called the most valuable of all knowledge." But Phrenology has wholly failed, he points out, to solve the problem of the abode of the Will; in its map of mind it has left no site for such a mental faculty, although it is certainly not less definite and distinct than the emotion of Benevolence or the faculty of Reason. A strange mental philosophy, which has no place in it for the Will! He offers, therefore, "a complete and rational solution of the problem"—namely, that "the seat of this important mental power, THE WILL, is in the group of ganglia at the base of the brain, which is connected with the whole brain, in which every part of the brain is centred." The extract will serve to exhibit the character of the Serjeant's psychological speculations, and on what foundations of acquired or unacquired physiological knowledge they are built. To criticise this theory, it would be necessary to begin at the beginning, and to fill several pages with the elementary exposi-

tion of physiological details, and of results of experiments which he certainly ought to have made himself acquainted with before he ventured to propound it. His training, as a lawyer, might have taught him that his duty, before coming to a conclusion, was to carefully collect and weigh all the facts; and this was a duty especially binding upon one who so often in this book censures men of science for their wilful neglect of facts. But we fear the Serjeant forgets altogether the sobriety of the lawyer when he comes forth in the character of a philosopher.

In the last few chapters of the book he enters into regions of speculation into which we cannot follow him—into speculations concerning the nature of the soul, its dwelling-place, and its destiny. No doubt these speculations will be of some interest to those who look upon Mr. Crookes and Mr. Varley as prophets, but we think that most men of science will continue to deserve the reproach of refusing to intermeddle with them.

Contributions to Mental Pathology. By I. RAY, M.D. Boston: 1873.

Although with two exceptions the contents of this work have appeared in print, we welcome with pleasure their publication in one volume. Moreover, the recent notes to the articles as they originally appeared add to their value, and acquaint us with the matured and not likely to be changed opinions of this veteran alienist, so well known as the former superintendent of the Butler Hospital, and for his writings on Mental Disease, especially his "Medical Jurisprudence of Insanity." In his address, delivered on the occasion of laying the foundation-stone of the State Hospital for the Insane, at Danville, Pennsylvania, 1869, Dr. Ray gives an interesting sketch of the treatment of the insane in his own country, commencing with the year 1752, when the Pennsylvania Hospital was established, and exerted a very beneficial influence upon the action of other States. Coming to recent times (about 1838), Dr. Ray pays the following well-merited tribute to the philanthropic Miss Dix, whose unremitting exertions have done so much for the amelioration of the condition of the insane.

"Most fortunately, too, as if to confirm a favorite belief—that, when a great exigency arises, the right man or woman will be found ready to meet it, a young woman in Massachu-

setts, about this time, became deeply interested in the condition of the insane, and thenceforth devoted her time to the noble purpose of effecting its improvement. With this end in view, she visited the jails, prisons, and poor-houses in her native State, and subsequently in other States, that she might see for herself precisely what that condition was. No place was so distant, no circumstances so repulsive, no lack of welcome so obvious, as to deter her from the thorough performance of her mission. Neither the storms of winter, nor the heats of summer, could diminish the ardour of her zeal; and no kind of discouragement could prevent her from gauging exactly the dimensions of this particular form of human misery. Favored by that exquisite tact and happy address peculiar to her sex, she overcame obstacles that would have defied the ruder efforts of the other sex; and thus brought to light a mass of suffering that seemed more like an extravagant fiction than real unexaggerated truth. Thus prepared, she went before the Legislatures of the several States in which her inquiries were pursued, and in the name of humanity, implored them to put an end to practices that would shock even a barbarous people. This appeal was enforced, not by vague sentimentalisms about the softening influences of kindness, or the debasement produced by such harsh and heartless treatment, but by a multitude of cases given in all their appalling details. It is creditable to our people that this appeal was seldom made in vain, but was usually followed by an Act establishing a State Hospital for the insane."

Of two articles in this volume it may be said that they both bring out in bold relief the sound and enlightened views on moral insanity which their author has always maintained with so much force and ability. A ripe experience has only served to confirm Dr. Ray in his opinion of the importance of insisting upon the possible occurrence of emotional without marked intellectual disorder. While, again, it is no doctrine of his that "a man is irresponsible for any and every crime he may commit, or for any moral delinquency, simply because some of his progenitors were insane;" he believes that great importance should always be attached to this hereditary element when it appears in evidence in those cases in which criminal responsibility is the question at issue. On this subject some valuable remarks will be found in the essay on "The Causes of Insanity"; while in that on "Moral Insanity" the reader will find a lucid statement of the argu-

ments in favour of the doctrine. As he justly observes, if men are sometimes unable or unwilling to see the difference between simple depravity and moral insanity, and mistake the former for the latter, "it is unfortunate for them, no doubt; but the fact cannot weaken the doctrine itself." The teachings of psychology have, he considers, been counteracted "more by the misplaced use of a homely phrase than by any profound objection. To the common understanding it is no better than a contradiction in terms to say that a man has *lost his reason*—the old English equivalent of *insanity*—while his reason is confessedly untouched. This play upon words has stood unquestionably in the place of facts and arguments, and still serves the opponents of moral insanity as their great piece of resistance" (p. 97). He naturally expresses surprise that even among those who have had opportunities of observing the disease, men may be found who seem unable to appreciate the labours of Pinel, Prichard, Guislain, Bucknill, and others, to establish this doctrine, and "do not hesitate to hold up these men as believers in a doctrine destitute of foundation and dangerous to society." Lest some should regard it as a work of supererogation to enter into a detailed defence of a form of mental disorder which those most conversant with the insane believe to be as clearly settled as any other, Dr. Ray maintains that "when it is regarded as a work of superior wisdom, and of elevation above the foibles and crotchets of well-meaning, but simple-minded men, to scout at such results of faithful observation as happen to jostle the prejudices of the world, it becomes a duty to speak." A contribution to the "American Journal of Insanity" since this essay was printed renders any apology of this kind superfluous, and Dr. Ray's re-publication is all the more opportune as an antidote to the retrograde position assumed in the article referred to, the language, character, and tone of which rather befit the pulpit than the pages of a medical journal; in fact, we had to look again at the cover to be quite sure that we were reading the "American Journal of Insanity."

There are many other articles* of great interest in this volume to which we had intended to refer, but the limits of time and space forbid us for the present proceeding further. Dr. Ray's reputation, however, in our, as well as in his own, country will doubtless induce many of our readers to procure

* Especially those on the Illustrations of Insanity afforded by the writings of Shakespeare, Walter Scott, and Richardson.

the work for themselves. We can cordially commend those which we have not, as well as those which we have, brought under the notice of our readers, and trust that this volume may ere long be succeeded by another from the same able and experienced pen.

An Essay on the Physiology of the Eye. By SALOM HENRY SALOM. Salom and Co., Regent Street. 1873.

In undertaking to investigate the theory of visual perception, the author of this essay set out with this maxim, that psychology is a science of observation, if not of experiment; that since we can observe the mind in connection with the body, we cannot hope to ascertain psychical laws, except as connected with physical phenomena. The doctrine which he upholds is, in the main, an extension of Berkeley's "Theory of Vision," from the perception of large areas—phenomena observable, to that of small areas—phenomena not observable. It may be briefly summarised thus:—

The eyeball is in a constant state of reflex or involuntary action; its action is due to the dynamic force of light acting through certain elements of the retina on the entire retina itself; the motions of the eyeball thus produced arouse, through the orbicular-ocular muscles, feelings of muscularity identical in kind, although diminutive in degree, with those excited when we voluntarily determine ocular direction; these small motions are precisely cognate with the larger one, considered by Berkeley, and similarly correspond with the other muscular exercises whereby a man born blind attains his knowledge of form and position; and thus, without any voluntary effort on our part, are we constantly aware of visual space properties.

It seems to us an exceedingly well-reasoned essay, and we regret that we are prevented on this occasion from giving, as we had intended to do, a summary of the author's arguments.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *German Retrospect.*

By W. W. IRELAND, M.D., Edin.

I have received the following periodicals, of whose contents a *résumé* is given :—

Archiv für Psychiatrie und Nervenkrankheiten, Band iii.

Heft i., , und iii., 1871 und 1872, und iv., Band I., Heft. i. Berlin, 1873.

Allgemeine Zeitschrift für Psychiatrie xxix., Band Heft i., ii., iii., iv., and v. Berlin, 1873.

Psychiatrisches Centralblatt, Nr. 1, 2, und 12. Wien, 1873.

Der Irrenfreund, Nr. 11 and 12. Heilbronn, 1872.

Correspondenz.—Blatt der Deutschen Gesellschaft für Psychiatrie und Gerichtliche Psychologie, Nr. 1 and 2. Coblenz, 1873.

I must confess my inability, with the amount of space at my disposal, to give anything like a *résumé* of the valuable researches into the Histology, normal and pathological, of the nervous system, contained in the periodicals put into my hands, which are a great credit to the skill and patience of German science.

The work of Dr. Francis Boll occupies 138 pages; that of Dr. Ludwig Meyer 66 pages; that of Dr. Tigges as many; that of Jastrowitz 52 pages; that of Butzke 24 pages; making up a total of 346 pages. These monographs ought to be studied by all who apply themselves to examine the microscopic character of the brain and spinal cord. In preparing a short summary of their contents I have tried to present those conclusions which seem to throw light upon disputed points, or raise new questions of scientific interest.

The work of Dr. Francis Boll, on the Histology and Histiogenesis of the Nervous Central Organs (Archiv Band iv. Heft i.), is principally devoted to the exposition of his microscopic observations on the brain and the spinal cord.

Dr. Boll commences with the neuroglia, or connective tissue, which he has carefully studied in man and the lower animals. As he goes on with his description he is careful to explain the manner in which his preparations were made. In opposition to Henle and Merkel he remarks, "In the white substance of the spinal marrow I have found no solitary fibrils of connective tissue and no corpuscles without prolongations, but only those Deiter's cells already described, with their countless prolongations of fibrillæ. The only analogy to these structures which I have met with are the embryo cells of the connective tissue. Like these embryo cells, Deiter's cells have amongst the fibrillæ what appears to be an albuminous substance which takes a bright colour from carmine. It is these Deiter's cells alone, with their prolongations of fibrillæ and accompanying granules, which fill up the interstices between the nervous fibres of the white substance."

They, in fact, form sheaths, or cases, which hold together the nervous substance of the spinal cord. He is inclined to think with Gerlach that these fibrils are composed of a substance more like elastic fibrous tissue than of the ordinary connective fibres.

Dr. Boll affirms that the stellate cells described by Kölliker in the interstices of the nerve-fibres of the spinal cord have no real existence. He describes the substance which makes up the main bulk of the grey matter of the brain and cerebellum, as a collection of granules grouped together, or holding by one another in a highly characteristic manner, which he compares to the arrangement of crystals of hoar-frost. This arrangement allows the grey substance of the brain to be easily distinguished from a portion of granular protoplasm, such as that taken from the cells of the tradescantia or from pus corpuscles.

The author finds great assistance in his researches from the use of osmic acid and chromic acid. By means of these re-agents fibres may be readily separated from the molecular substance in which they are embedded, and the confusion and ambiguity apparent in the works of some previous observers finally cleared up. It is much to be regretted that Dr. Boll occasionally makes use of disparaging remarks upon the labours of his predecessors, and indulges in self-gratulations in a style and tone happily not common in scientific literature.

Dr. Boll's treatise is divided into five principal parts. The first is occupied by the introduction; the second describes the connective tissues: the third gives an account of the microscopical appearance and arrangement of the anatomical elements of the brain and spinal cord; the fourth treats of the perivascular and epicerebral spaces; and the fifth gives the author's researches on the histological development of the nervous central organs. The last part is especially valuable, as we were in want of careful observations on the subject. Dr. Boll arranges the development of the nervous fibres in the chicken as follows:—

I. STAGE.—To the sixth day of incubation the growth of spindle-shaped cells into axes-cylinders.

II. STAGE.—From the sixth to the eighteenth day of incubation, the white substance takes a definite shape, but the structure is not altered.

III. STAGE.—From the eighteenth day of incubation to the second of life, the granular cells appear, and the axes-cylinders are covered with the white substance of Schwann.

Dr. Boll agrees in the main with Jastrowitz in his researches on the development of the grey matter of the brain, and considers the appearance of granular cells in the brain of new-born children as a normal occurrence. He, however, disagrees with this distinguished observer in the view that the white substance of Schwann is produced from the molecular mass which at first surrounds the axes-cylinders, and that the granular cells are the product of the superfluous mass of molecular substance. Dr. Boll, on the contrary, holds that the granular cells are the material out of which the substance of Schwann is produced.

Much of the success that has attended the success of German microscopical investigations, depends upon the new method of making preparations and applying chemical re-agents to separate the different anatomical elements. There is in the "Correspondenz-Blatt," No. 1, January, 1873, a description of the manner of investigation of the nervous system in the human subject used by Dr. W. Betz in Kiew, which will be useful to microscopists in our country. Dr. Betz is celebrated for the exquisite fineness of his preparations.

Dr. Butzke, in his "Studies on the Minute Structure of the Cortical Substance of the Brain" (*Archiv für Psychiatrie* iii. Band 3 Heft), gives us a clear and thoughtful statement of the results of his observations, illustrated by two pages of engravings. The following seem to me to be the most important of his conclusions. Many of the ganglion or nerve-cells have no connexion with genuine nerve fibres. Deiter's processes are different from the prolongations of the nerve cells; the latter are mere extensions of the cell substance. They never anastomose with one another. The Deiter's processes seem inserted into the cells, placed against them or pushed into them rather than coming out of them. The assumption that the prolongations of the nerve cells or the Deiter's processes pass continuously into nerve fibres, cannot be demonstrated. The prolongations break up into fibrils going here and there. Dr. Butzke goes on to describe the glia element or connective tissue of the brain, and the arrangement of the nerve tissues in relation to each other.

Dr. M. Bernhardt communicates in the "*Archiv für Psychiatrie*, iii. Band, 3 Heft," some experiments which he has made to determine the existence of a muscular sense. On this point the views of Charles Bell have been denied by Schröder, Spiess, Schiff and Leyden, who hold that the feeling we have of the posture of the limbs is not communicated through a property existing in the muscles, but of the parts covering and surrounding them, which are pressed or left relaxed by their contractions or relaxations. Muscular fibre itself seems very deficient in ordinary sensibility, nor is the perception which we have of the performance of certain motions destroyed by the loss of tactile sensibility caused by section or disease of the spinal nerves.

Jobann Müller thought that the mind became conscious of the performance of a muscular exertion by noting the measure of the effort of volition necessary to bring it about. Physiologists are unwilling to admit that the anterior root of the spinal nerve should both conduct a stimulus to the muscles and convey in a centripetal direction the states resulting from that stimulus. Dr. Bernhardt having invented a simple apparatus resembling a little gallows with three pulleys, so that the weight should drop at one end, and the hand or foot of the person experimented upon should have the traction applied at the other, made a number of observations by which he found that one could distinguish weights even when the muscles were made to contract by the induced current, without any effort of the will.

It might, however, be said that the subject of the experiment could

distinguish weights by the varying amount of pressure upon the skin, and Dr. Bernhardt found that this perception of pressure by the skin was a delicate one. In order to eliminate this disturbing condition to the isolation of the sought-for muscular sense, the author tried his experiments upon some patients suffering from spinal disease, in whom the sensibility of the skin was so much impaired that they had no perception, apart from vision, of the situation of their limbs, and were unconscious when they were moved by somebody else, and who did not feel the strongest induced currents which threw their muscles into energetic contractions. In two of these cases he found the capacity to distinguish weight well sustained.

Dr. Bernhardt's observations agree with those of Leyden and of Brown-Séguard, who states that in spinal diseases, where sensibility is impaired or destroyed, the muscular sense (*Kraft Sinn*) remains intact. The author states his opinion in the following terms:—"With Leyden, Bernstein, and Johann Müller, I hold that the sense of weight proper (*Kraftsinn κατ' ἐξοχήν*) is a function of the psyche, that force is conveyed by an exertion of volition through the nervous trunks distributed to the voluntary muscles, and that the sensorium is conscious of the amount of force given out, and how it is modified, in order to overcome resistance." The author confesses that the mind, in coming to a conclusion about the execution of voluntary motions, is much aided by the sensibility of the skin, fascia, and periosteum, as well as by the eye.

Dr. Bernhardt does not explain how his experiment with the induced current bears out his conclusion.

Dr. H. Nothnagel gives (*Archiv.*, iii. Band, 1 Heft) the case of a man who, after an attack of typhus fever, suffered from paralysis of the left leg. While walking with a crutch he was suddenly seized with paralysis of the right arm, especially implicating the muscles of the forearm. When the patient tried to bend the forearm upon the humerus, he could only succeed in doing it slowly, and with a fatiguing muscular exertion. This was found to be owing to the triceps which entered into contraction at the same time as its opposing muscle.

Thus the effort of the will to bend the forearm, brought into exercise the muscle used to extend it, and it was only by the superior force of the biceps that the desired movement could be executed.

Dr. E. Hitzig (quoted in the "*Centralblatt*," 30th Jan., 1873) has shown that powerful muscular motions of the eyes, as well as of the body, result from the application of galvanism to the occiput. On completing the galvanic chain, the man experimented on falls to the side of the anode, and both eyes are turned the opposite way, with motions resembling that of nystagmus. If the chain be interrupted, the person starts to the side of the kathode, while the movement of the eyes are turned towards that of the anode. At the same time the objects of vision seem to be swayed in the same direction as the eyes, and his whole body seems to him to move towards the same side.

Dr. Hitzig shows that this apparent motion of visible objects is the

result of the involuntary motions of the eyes in the same direction, while the real movements of the body are, as it were, instinctively made to restore the balance of gravity which the man imagines to be lost.

As the result of numerous experiments on animals, Dr. Hitzig concludes that injuries to one side of the cerebellum have the same effect as the anode in a galvanic current—they cause movements to the operated side.

Dr. E. Hitzig also has, in the *Archiv. iii. Band, 3 Heft*, a paper on "Anomalies of the Innervation of Muscles," with a number of curious illustrative cases.

Dr. M. Jastrowitz, in the "*Archiv. für Psychiatrie*," *iii. Band, 1 Heft*, has an extremely careful article, entitled "Studies upon the Encephalitis and Myelitis of Infancy." He commences by giving his views upon the histology of the brain and spinal cord in the adult—at least on those points which are still matters of dispute amongst microscopists. He describes the cells and fibres of the connective tissue, and their arrangement amongst the nerve cells and fibres, and gives us a description of the corpus callosum, which is evidently the result of very careful observation. In this structure he finds four layers. The first is composed of longitudinal nerve tubes, and round and oblong cells, throwing out elongations, and of that fine molecular substance which is found in plenty in the grey masses of the brain and in the centre of the spinal cord. The second layer he calls the ganglionic layer (*Ganglienschichte*), made up of spindle-shaped nerve cells, with large round nuclei, generally arranged in rows of four, with their long axis running from right to left. Here Dr. Jastrowitz disagrees with Kölliker, who says expressly that there are no cells, but only nuclei in the corpus callosum. The third layer is composed of transverse nerve fibres running from one hemisphere to the other, amongst which one finds the long, small cells which many anatomists hold to belong to the connective tissue. In the fourth and last layer adjoining the ventricles, the proper nerve fibres are rare, their place being supplied by white fibres and fibrillæ, amongst which the molecular substance mentioned in the first layer reappears. What has been described as the epithelial lining of the wall of the ventricles is treated by the author as undoubtedly composed of connective tissue.

Dr. Jastrowitz devotes much laborious attention to determine what cells and fibres belong to the nervous or connective tissue. This can only be conjectured by comparing the appearance of the several structures with those seen in different parts of the body. His histological descriptions are illustrated by two pages of engravings at the end of the periodical.

In the fetus Dr. Jastrowitz finds a fundamental difference which throws great light upon the nature of the molecular stroma. Instead of the white substance of Schwann which surrounds the axis-cylinder in the adult, the tissues are embedded in the molecular substance which abounds in the white matter of the hemispheres, and, indeed, makes up the most of its composition. Axes-cylinders are found at a

very early period of foetal life, lying naked in the white matter of the brain, and the molecular substance becomes less and less frequent, and at last disappears as the development of the white substance of Schwann goes on in the growing child—and this change of molecular stroma into the white substance of Schwann can be followed to a certain degree. We cannot, therefore, continue to regard this molecular substance only as a protecting substance, but must also view it as a species of embryonal white substance which fulfils the same function, viz., the isolation of the axes-cylindrical from one another. Upon this result the author bases the farther inference that the molecular matter has the same function in the grey nervous centres of the adult where it is seen surrounding the axes-cylinders and the prolongations of the nerve-cells, which are, according to Max Schultze, primitive fibrillæ without any covering.

The author finds the nerve-cells with all their characteristic marks fully formed at birth. He considers that the appearance of the fatty granular cells in the embryo is connected with the formation of nervous tissue, as these cells are observed to be present during the regeneration of a severed nerve.

Dr. Jastrowitz regards the presence of these granular cells in the spinal cord of new-born children, as well as infants at a later age, as a proof of morbid action. The general diffusion of these cells in the white substance of the brain of the six months' child and their partial appearance in the child of nine months old is also regarded as a sign of disease; for though these cells might have had a normal existence in earlier periods of the life of the embryo, their persistence is incompatible with the proper exercise of the functions of the developed organs.

Dr. Jastrowitz had an opportunity of examining the body of the infant of an imbecile woman, who had a pretty large, but unsymmetrical head. As the mother had a narrow pelvis from rickets, premature labour was induced, but the child died in a few days. The thorax of the infant was deformed with rickets, and the brain found to be inflamed. In such cases the inflammation seems sometimes to extend to the spinal cord. The author considers hydramnios is probably a cause of imperfect development of the brain, and consequently of imbecility. Dr. Jastrowitz finishes his article with an analysis of the morbid appearances in sixty-four cases who died at various stages of foetal and infantine life.

Dr. Ludwig Meyer, "*Archiv. für Psychiatrie*," iii. Band, 1 Heft, discusses the vexed question of the nature of fatty granules and fatty granular cells in the spinal cord and brain. His views may be gathered from the following passage:—"Fatty granules and granular cells are developed out of all species of tissues under such manifold conditions that their appearance in an organ does not give the least conclusion as to the pathological import of the process to which they owe their origin. The fatty degeneration of the histological elements of certain

organs is a normal and frequent occurrence, and the granular cells may be as much the residuum of a general decline of nutrition of the organism as of a localized inflammation." * * "Since attention was called to this point through the valuable work of Westphal, the spinal cord of every patient dying in the asylum of Göttingen affected with paralytic insanity, was carefully examined, where a dissection could be obtained, and granular cells were found, though not in all at least in most cases; but, as Westphal had already pointed out, no satisfactory connection could be made out between the occurrence of these granules and cells, even in considerable quantity, with the clinical symptoms. On the other hand, in accordance with Simon's observations, granular cells were found as abundantly in the spinal cord and brain of insane patients, who died of tuberculosis, and in whom no paralysis existed." One is thus driven to the conclusion that these products have no especial connection with general paralysis, but that they are more closely connected with alterations of a general pathological character. A careful study of the affected structures has convinced Dr. Meyer that the appearance of the granules and granular cells is dependent upon a fatty degeneration of the walls of the vessels, especially of the minute vessels which give off the capillaries, the venous twigs being more affected than the arterial. This degeneration seems common both to the grey and white matter of the brain and spinal cord, though it is easier to demonstrate it in the grey matter. Sooner or later the granules become absorbed, the vessels become filled with earthy salts, and are no longer pervious to the blood.

Dr. Meyer observes that the fatty degeneration of the minute vessels is a common sign of the degeneration and atrophy of tissues. It is found in all old inflammations, in granulating wounds, in cicatrices, and false membranes, covering serous surfaces in inflammations of the dura and pia mater, as well as after those of the nervous substance of the brain and spinal cord.

He remarks that diminished innervation may lead to degeneration of the vessels, and this in its turn increase the functional weakness of innervation. The disease of the nervous centres may act upon the lungs, kidneys, and other organs, which may, in their turn, act upon the brain.

Dr. Huguenin (Band iii., Heft. 3), has studied the appearance of the granular cells in a case of dementia paralytica, with embolism in the middle cerebral artery.

By the help of some engravings, he gives his views on the origin of the granular cells in a very clear manner.

According to this observer, the granular cells may originate from the nuclei of the cells of the neuroglia, or from the nuclei and nucleoli of the elongated cells forming the walls of the capillaries, which in the end break up. They may also be produced from the connective tissue cells surrounding the vessels, from the nuclei of the unstriped muscular fibres, forming the coat of the larger vessels, from the spindle-shaped

cells of the under layer of the grey matter of the brain, as well as from the regular ganglion or nerve cells.

Dr. Huguenin regards these granular cells and fatty granules as "the visible form of physiological death." The granular cells are the remains of cells and nuclei doomed to pass away, the granules are the *débris* of the broken-up protoplasm of the old cells.

Dr. Rabenau, ("Archiv.," iii. Band, 3 Heft,) gives a carefully studied report of three cases of myelitis implicating the posterior columns of the spinal cord in insane patients.

Dr. Frederick Jolly in the same number writes on Multiple Sclerosis, or Circumscribed Hardening of the Brain. This is a well-written and valuable paper. Both the observation of the clinical symptoms and the pathological examinations are carefully done, and I regret not having space to reproduce some parts of it.

Dr. Scholz has also in the same number a contribution to the Study of Insanity, combined with Anæmia, with an analysis of twelve cases, which is well worthy of perusal.

Dr. Tigges communicates to the "*Zeitschrift für Psychiatrie*," 2 Heft, the result of his studies upon granular cells in the spinal cord. He begins with an account of the labours of his predecessors, and the present state of the question, which show the differences of opinion and opposing facts which we have to balance. Some, like Westphal, hold or held that the occurrence of these corpuscles in the spinal cord is a mark of local disease; others, that they may occur even in health.

Simon found in three cases of dementia paralytica, with great loss of motor power, that granular cells were absent or rare; and after having examined two hundred spinal cords, he affirms that they may be found after death from a great variety of acute and chronic diseases. Dr. Tigges shews from an analysis of previous reports that these corpuscles are commonest and found in the largest proportions in the spinal cord of those who die of dementia paralytica, and are commoner with those who die insane than with those who die sane.

Several observers in Germany have remarked the increase in the fibrous connective tissue of the brain in dementia paralytica.

Dr. Tigges adds a number of carefully made observations of his own. He gives a case of melancholia passing gradually into dementia, where there were trembling and a marked stiffness of the muscles. The trembling passed away, but the rigidity continued, though varying in intensity. Sensibility was deficient, but the articulation did not seem to be affected. On dissection Dr. Tigges found in the grey matter of the brain an aneurismal state of the small arteries. The enlargements which are figured in the text were spindle-shaped or globular, sometimes two or three together like beads of different sizes.

The coronary arteries were found to be atheromatous, and the aortic valves insufficient.

In conclusion, Dr. Tigges remarks that we ought to distinguish between fatty degeneration of the vessels and the development of

granular cells outside the vessels. These granular cells are especially abundant in the posterior columns of the cord.

Dr. Otto Obermeier, in the "Archiv," iv. Band, 1 Heft., after studying the papers of Meyer and Tigges, gives us the result of his own investigations, carried on upon fifty-two cases who died in the lunatic wards of the Charité Hospital in Berlin. He does not entirely agree with Meyer in his views as to the import of the granules and granular cells, and their relations to the vessels, and is inclined to wait for more observations before arriving at a positive conclusion. "We ought to distinguish," he remarks, "between those cases where the vessels are altered, and bear masses of granules, from those where the granular cells lie free upon unaltered vessels. Where granular cells are found in great numbers in the spinal cord of non-paralytics, we are sure of finding notable alterations of the vessels. It is otherwise in paralytic cases. In them one finds a great production of granular cells with the vessels almost intact. This was found to hold good in seven cases out of twelve. In the other five the vessels had also become degenerated. Dr. Obermeier, therefore, is disposed to think that the occurrence of granular cells, without alterations in the vessels, may be characteristic of spinal paralysis. He, however, acknowledges that he has occasionally found granular cells in the spinal cord of cases not affected with paralysis, though never in considerable quantity.

Dr. Obermeier gives the report of his fifty-two cases with algebraic brevity. His system of contractions renders a case with almost stenographic rapidity, though possibly it might be too difficult for some readers.

At a meeting of Swiss doctors at Zurich, reported in the "Allgemeine Zeitschrift für Psychiatrie," xxix. Band, 5 Heft, and in the "Correspondenz Blatt," No. 2, Feb., 1873, Dr. Cramer, of Soleure, made a demonstration of the brain of three microcephales. The dimensions of the smallest amounted to 360 cubic centimetres. It belonged to Sophia Wyss, described by Vogt in his work on microcephales. The dimensions of the second brain are not given, but that of the third amounted to as much as 900 cubic centimetres. In all these brains the island of Reil was left uncovered, owing to the defective development of the frontal and parietal gyri. The same deficiency is noted in the brain of a microcephale in Gratiolet's work. In the anthropoid apes the island of Reil is always covered, and this is also the case with some microcephalic brains which have been already described by other observers. It may be here noticed that the great difference between microcephales and the brains of higher apes is that the temporo-sphenoidal convolutions are the first to appear in the ape, whereas in the microcephalic idiot, as in the normal human brain, it is the frontal lobe which is the first to appear, and the temporo-sphenoidal are the last.

Dr. T. H. Simon, of Hamburg, gives in the "Virchow's Archives for Pathological Anatomy, &c.," 55 Band, 3 und 4 Heft, quoted in

the "Psychiatrisches Centralblatt" for 30th December, 1872, the dissection of the brain of an imbecile woman, aged 69, who had in the last years of her life suffered from insanity, and had died in the poor-house. The weight of the brain was 795 grammes. The lateral ventricles were enlarged, and full of serous fluid, by which the convolutions of the hemispheres were somewhat flattened. The convolutions themselves were more simple than usual; and those of the island of Reil were replaced by a smooth layer of grey matter. The grey matter of the brain itself was normal, but contained much pigment. In the right hemisphere of the cerebellum a small, chalky tumour was found, of two centimetres in diameter. Degenerated cretaceous vessels were also found in the cerebellum. On examination through the microscope, another smaller tumour, of a similar character, was found in the left side of the cerebellum, embedded in the white substance.

At a meeting of the Berliner Medicinisch Psychologische Gesellschaft, reported in the "Archiv. für Psychiatrie," iv. Band, 1 Heft, Dr. Mierzejewsky gave a description of the brain of a microcephalic idiot. The size of the head was about that of a child of one year old; the encephalon weighed 369 grammes; the cerebellum, pons, and medulla oblongata were about the usual size, the deficiency being in the cerebrum; the corpus callosum was only one-third of the usual length; the convolutions were simple and undeveloped, the grey matter deficient. The idiot, who was fifty years of age, had the capacity of a child of a year and a half. He could only repeat a few words. He was indifferent to music, and was very apathetic; he would not ask for his food if the attendant did not bring it. His walk was slow and heavy, and his other motions awkward.

Dr. Friedrich Carl Stahl, in the "Zeitschrift für Psychiatrie," 4 Heft, gives the result of his Clivus-Studien. A deformed condition of the Clivus—that portion of bone which descends from the posterior clinoid process of the sphenoid to the anterior edge of the foramen magnum—has been found very frequent in cretinism, and Dr. Stahl, following out a dim foreboding that some interesting results might be found through an attentive examination of the base of the skull in insane subjects, has taken a note of its condition in 104 dissections. In a few cases he found an abnormal condition of the Clivus, and his descriptions, which it would be difficult to reproduce, are illustrated by three engravings. These cases—one male and two females—were all insane, but one had been previously imbecile. There is no explanation given of the connection between the unusual formation of the Clivus and the insanity of the patients. One thing is clear, that deformities of this bone are not very common in insanity, though frequent in cretinism.

Dr. Nothnagel, quoted in the "Centralblatt," No. 12, has some remarks upon cutaneous pain and neuralgia. At the beginning of neuralgia, from the second to the eighth week, there is increased

sensibility (hyperalgesic) over the integument covering the seat of the pain; but deficiency of sensibility (analgesic) is later in coming on. In general, the hyperalgesic stage is shorter the greater the neuralgia becomes.

In paroxysmal neuralgias increased sensibility persists in the intervals of remission. In like manner deficient sensibility, where it appears, alternates with the neuralgic pain. These abnormal conditions disappear with the neuralgia. What has been called hyperæsthesia the author finds is not an increase in the sensibility enabling one to have a finer perception of the minima of differences, but an increase in the intensity of painful impressions.

Dr. William Zenker, in the "*Zeitschrift für Psychiatrie*," 3 Heft, writes upon Arthritis in the insane. He gives three cases where arthritis deformans supervened upon insanity. He is disposed to believe that the nervous disease either was the cause of the morbid action in the articulations, or that both affections appeared under the influence of a common cause not yet made out. Dr. Zenker quotes the observations of pathologists and military surgeons, describing injuries to the nutrition and other changes following lesions to the nerves supplying the parts.

Dr. P. Samt ("*Archiv.*," iii. Band, 3 Heft) has an article on Aphasia, with two cases. Towards the end of his acute and careful article, Dr. Samt says:—"Localisations of a speech-centre are at present quite unwarranted; discussions on the possibility of a speech tract on one side of the brain quite idle; I, at least, understand as little and as much of thinking and speaking with one hemisphere as of thinking and speaking with two.

In the "*Zeitschrift für Psychiatrie*," xxix. Band, 5 Heft, there is an account of two cases of imbecility, or dementia, following on epilepsy passing away with the cure of the epileptic attacks. The first case was a girl called Caroline; her father subject to epilepsy, and a drunkard. She had frequent attacks of epilepsy when three years of age; but on the gradual disappearance of this disease she grew to the normal stature and intelligence of a girl of fourteen. About this age the epileptic attacks again returned, and became very frequent, when she passed by degrees into a fatuous state. Her gait became tottering; often she was unable to sit up even in an easy chair, and she even required to be fed. Sometimes she would wander about at night, instead of sleeping, or fall into maniacal bursts of passion. After four years' illness she was admitted into the asylum under Dr. Wiedemeister, of Osnabrück, where she passed her time in the compartments used for dirty and noisy patients. The fits were both severe and frequent, and she was treated with bromide of potassium and oxide of zinc. Little hope was held out of her recovery; but after being a year in the asylum, and five years ill with epilepsy, the fits began to be less frequent. In November her catamenia first appeared, and in December the last fit was seen. She began to do

simple pieces of work, her strength revived, and her intelligence gradually returned, and on the 23rd of June, 1872, after being three years in the asylum, she was dismissed cured of imbecility and epilepsy. On her returning to the world it was found that she had forgotten many things which she had once learned. She had again to be taught to sew and knit. She never entirely lost the use of speech, and even during the period of her deepest fatuity, she used to sing songs which she had learned in the school, generally with the proper tunes; and when she was again sent to her lessons, it was found out she had not entirely forgotten reading and writing. During her fatuous condition she was not able to recognise her mother, and on her recovery she had entirely forgotten that her mother had pigs and cows; nor did she recognise her native place, nor even her home when brought back to it.

The second case was a girl named Wilhelmina; her father was given to drinking. When thirteen years old she began to be troubled with epileptic fits, which brought on an attack of mania. She ran at her father and mother with a knife, and wanted to strangle her little sister. On being admitted to the asylum, she was observed to have epileptic fits, to fall into a cataleptic state, and to talk in her sleep. She was treated with bromide of potassium for above two months, and after having been ill for four months, was dismissed in the complete possession of her faculties, which were stated to be of rather a superior order.

Dr. M. Bernhardt (*Archiv.*, iv. Band, 1 Heft) gives the results of his studies of a case of injury to the spinal cord, implicating only one side. In the same number Dr. W. Sander gives a case of epilepsy with subjective sensations of smell, found to accompany destruction of the right tractus olfactorius through a tumour. Both papers bear marks of careful application and ripe study of the subject.

There appears still to be much difference of opinion amongst chemists about the changes which occur in the secretion of the kidneys after waste of nerve tissue. For example, Dr. L. Hodges Wood, as the result of his observations published in 1869, denies the correctness of the generally received statement that the amount of phosphates in the urine is increased by fatiguing mental exercise. He found that while the alkaline phosphates were slightly increased the earthy phosphates were notably diminished after mental work, and that when the mind was not much employed the excretion of earthy phosphates was increased instead of diminished. He accounts for this by the hypothesis that when the brain was worked it withdrew more phosphorus from the circulating fluid.

Dr. E. Mendel (*Archiv.*, iii. Band, 3 Heft) gives us the result of his observations on the amount of phosphoric acid in the urine of those suffering under diseases of the brain. He finds that the amount of phosphoric acid excreted during the night time is greater than that during the day.

Dr. Mendel ascertained that, as a rule the quantity of phosphoric

acid excreted in patients with chronic diseases of the brain is less than with healthy persons using the same diet. The quantity is increased really, as well as relatively to the amount of the other solid components of the urine.

Dr. Mendel also found that, during periods of maniacal excitement, the phosphoric acid was diminished both really, and relatively to the other solid contents; but that the phosphoric acid was increased both really and relatively after apoplectic and epileptic attacks.

(*To be continued.*)

2. *American Psychological Retrospect.*

By T. W. McDOWALL, M.D., Assistant Medical Officer, West Riding Asylum, Wakefield.

American Journal of Insanity, Vol. xxviii., January to April, 1872.

(*Continued from page 157.*)

A New Definition of Insanity.—Dr. Cruse, having remarked upon the real difficulties which beset any attempt to give a truly accurate definition of insanity, and having pointed out in what respects definitions already proposed fail, offers the following for general acceptance—“*Insanity is the psychic manifestation of brain-disease.*” The Editor of the “*Journal of Psychological Medicine*” appends a note to Dr. Cruse’s paper to the following effect:—“While Dr. Cruse has given a definition of insanity, which is in the right direction, and has written very philosophically in support of his views, the terms of the definition are not sufficiently explicit. A man insensible from the effects of cerebral hæmorrhage exhibits ‘psychic manifestations of brain-disease,’ and yet he is certainly not insane. The definition of the editor, ‘a manifestation of disease of the brain, characterised by a general or partial derangement of one or more faculties of the mind, and in which, while consciousness is not abolished, mental freedom is weakened, perverted, or destroyed,’ appears to be preferable. If Dr. Cruse’s definition were made to read, *a psychic manifestation of brain-disease unattended by loss of consciousness*, it would probably be more compact, and fully as logical as any extant.”

A Case of Diffused Cerebral Sclerosis.—As excessive brevity greatly lessens the value of clinical records, we shall reproduce in their entirety Dr. Baldwin’s notes of this case.

“The victim of the disease, the name of which heads this history, was a gentleman of rare endowments and extensive acquirements; his ancestry were healthy, his habits unexceptionable; he was the father of nine children, all of whom are living and healthy. Some two years since he was assailed by charges highly derogatory to professional and personal character. The charges proved unfounded; but, to escape

the mental torture of a sensitive nature, severe and protracted literary labour was undertaken. It was not, however, until the early part of the year 1871 that evidence of intra-cranial disease was apparent. About this time the patient complained of a loss of memory, which had always been remarkably retentive. He constantly mis-called the names of persons who were familiarly known to him. He next mis-called things; a watch he called a star, &c. He was quite conscious of this failing, and was much annoyed thereby, saying, "I will get it in a minute; you know what I mean," &c. He could articulate complex words with great distinctness, showing the integrity of the muscles concerned in articulation as well as the larynx. Distinct chilly sensations marked the early part of the disease. He complained of pain on the left side of the head, which was characterised as intolerable. This pain seemed intermittent, exacerbations occurring during the afternoon and evening. The tongue was not deflected to either side. The pupils were only slightly affected, the left being somewhat contracted. Facial palsy of the right side was first shown by a deficiency of the furrow extending from the nostril to the angle of the mouth, and at the same time an apparent excessive contraction of the muscles of the left side of the face. He could still walk well, and had considerable power of both hands. He was, however, obliged to give up his literary labours. Slight bewilderment was now occasionally noticed, or perhaps it is better expressed by an uncertainty as to what to do next or where to go; coincident with this there was shuffling, which was *always* present. Recognition of friends, joy, and the emotions well preserved. Unilateral sweating was present in a marked degree, the seat of pain being free from moisture, while the right side of the head was covered with perspiration. The hands now became weaker, and complaint was made that the right leg seemed shorter than the left. Examination of the urine revealed no albumen, but granular casts were present under the microscope. There were no epileptic seizures at any time, nor was there present any noticeable flexure of the fingers; tremors of the muscles were not present. The pulse was slightly accelerated, uniformly about 92 per minute. There was no noticeable disturbance of respiration. The appetite was capricious, and at times relaxation, and again some tardiness of the action, of the bowels; during the last month of life there was a gradual failure of the mental powers, and an increase of paralysis of the right side. The conjectural diagnosis during life was lesion of the left hemisphere in the neighbourhood of the deep origin of the facial nerve, the nature of lesion not determined. During the month of July the patient visited Dr. W. A. Hammond, who, from ophthalmoscopic and other examination, confirmed the above opinion, proving through the agency of the dynamometer, considerable loss of power of the left hand.

"The treatment consisted of bromide of potassium to relieve pain; the occasional administration of a mild tonic, to keep up the tone of

digestion; a laxative or a stringent, if necessary; and nutritious alimentation. It was found that the central pain was more relieved by half a grain of digitalis (English leaves) every three hours, than by any other agent.

“The autopsic examination was made forty-eight hours after death. The head only was examined. The cranium was found below rather than above the ordinary thickness. The dura mater was unusually adherent to the calvarium, so much so, indeed, as to require great force for removal of the skull-cap. Marked osseous deposit existed at several points in the course of the longitudinal sinus. No signs of lymph were present upon the arachnoid. The cavity of the arachnoid contained no unusual quantity of fluid. The vessels of the pia mater were fuller than natural. The whole substance of the brain was of unusual hardness. Upon slicing the substance of the brain, the layers could be easily handled without danger of disintegration. The lateral ventricles contained a small quantity of serum. Upon deeper slicing (on the left side of the transverse fissure, and occupying the position of the corpus fimbriatum and a part of the hippocampus major) was exposed a round mass of a lemon-yellow colour, of the size of a hazel nut, and which looked like a mass of adipose substance. The choroid plexus, as it passed through the transverse fissure, was found completely disintegrated; descending from the mass above mentioned, the substance of the left hemisphere of the cerebrum was found, for the space of a square inch, to be almost diffuent. Microscopic examination of the yellow mass above described showed an abundance of oil globules, but no traces of proper brain tissue. The same was true of the deeper-seated structural lesion, which was of a dirty-grey colour, with quite a distinct line of demarcation.”

Suggestions relative to the Sequestration of alleged Lunatics.—From Dr. Parsons' statements it would appear that there exists, in the United States, great diversity of opinion as to the proper means to be adopted to prevent persons being improperly confined in asylums. Numerous attempts have been made to pass a law to the effect that no person shall be confined as a lunatic without a jury-trial. Such a law is in operation in one State. Though such a method of procedure may have its advantages, it cannot be denied that there are grave objections against its general adoption. These, as mentioned by Dr. Parsons, are:—1, the method is inefficient; 2, the patients are very liable to be injured directly by the delays and excitements inseparable from the process; and, 3, they are liable to be injured indirectly by being kept at home, on account of the prejudice of their friends against a jury-trial.

The opinion held by many, that a lunatic should simply be treated like a patient requiring admission to an ordinary hospital, has not been received with universal favour by any means. “Hence in this (New York) and some of the other States a middle course has been adopted by which the most serious of these objections have been

avoided. The law of the State of New York, as applied to New York City, provides substantially as follows:—Two respectable physicians are first to examine the alleged lunatic. If satisfied that the person is insane, and needs asylum care and treatment, they make a joint affidavit to that effect before a judge (magistrate). Hereupon the magistrate (judge) commits the person to an asylum in due legal form, retaining the affidavits of the physicians as his vouchers. A method similar to the above in all its essential particulars has recently been recommended for general adoption by the Association of Superintendents of American Asylums for the Insane.”

It is evident that there is something far wrong in the method of admitting patients, when the following statement can be made:—“ Since the year 1847 no less than one hundred and twenty-five persons, who have been committed to the New York City Lunatic Asylum as insane, have been discharged as improper subjects. During a single year forty persons have been discharged from American asylums as having been *not insane* at the time of their admission. Many such cases are admitted every year.”

Dr. Parsons makes excuses for these blunders by saying:—“ They (the physicians) have not been taught the symptoms of mental disease they have seen few cases of insanity, they have not learned those methods of investigation that are most likely to elicit the facts. Hence they are distrustful of their own knowledge and abilities, and are liable to content themselves with vague generalisations that are principally based on the statements of interested parties, on preconceived notions, and on the appearance of the patient. The appearance of the eye alone has been adduced as the pathognomic symptom on which the diagnosis of insanity was based.”

Having given the details in a number of cases, to illustrate the classes of persons occasionally locked up as supposed lunatics, Dr. Parsons proceeds to consider the methods that ought to be pursued and the principles that should be kept in mind during the examination of alleged lunatics, and to suggest the means and regulations adapted to secure the best results. It is unnecessary, however, to follow him in these topics, for we, in this country, already possess admirable arrangements for the avoidance of all the inconveniences. At most asylums, great attention is paid to ascertaining all previous facts in the cases likely to bear upon the future treatment. The method pursued in admitting patients is also good. In Scotland it is certainly admirable; the result is that cases of illegal detention are never heard of.

3. *A Commentary on the Affair Chorinsky.* By Dr. HAGEN, of Erlangen.

This is an interesting memoir, partly from the social position of the chief person concerned, partly from the difficulty of reconciling the symptoms and *post-mortem* appearances with the different forms of insanity as we know them.

Gustav Chorinsky, born in 1832, at Salzburg, died in 1871, was the eldest son of the Countess Chorinsky-Ledske. His mother was subject to somnambulism, and so troubled during the period of gestation with pains in the back, and weakened by continual feverish attacks, that delivery had to be completed by the forceps. The boy was always ailing, and when five years old had enteric fever, from which time his disposition seemed much altered. At seventeen he entered the army as lieutenant, in Bohemia. His letters to his mother between 1851 and 1866 illustrate his mind and habits. In all of them he complained of headache, especially at evenings and often through the night, and of nervous, irritable sensation; at times too he bled freely from the nose, and suffered from "congestion of the brain." From an early age he had practised onanism. In 1857 he formed the acquaintance of an actress, Mathilde Rueff, who cost him a great deal of money, and put him into debt. In 1860 the Count exchanged into an Italian regiment, and married Mathilde. Soon, however, his letters to her became indifferent in tone, and about this time (1832) he said in some letters to a certain Madame Barth that he had separated himself from his wife because she was a "spendthrift and her mother a pimp." In 1866 he was engaged in the Austro-Prussian campaign, and was twice wounded at Königsgrätz. The report of his superior officer, the Archduke Henry, at this time was as follows:—"Count Ch. is descended from a noble family, but is of weak bodily health and feeble intellect, inclined to lie, of unformed character and no stability, a great chatterbox, and very ignorant of military matters. He speaks Italian, French, English, and Russian tolerably well; can ride, swim, and fence properly, and behaved well before the enemy. At Königsgrätz he received a sword wound in the foot and a bullet in the chest."

In 1868 *Julia v. Ebergényi* came to Vienna, resolved to make as much as possible out of her charms and artifices. At first she lived with a relative, but soon entered into certain liaisons which cost the gentlemen concerned very dear. She met the Count at an evening party, and he was not long in declaring his affection for her. Then ensued a series of the most rapturously-written letters, a whole dictionary of endearing epithets. Marriage was agreed upon, the only obstacle in the way being that the true Countess was still alive, and that a separation from her could not be obtained. Another advantage from the death of the Countess would be that the Count would receive 12,000 florins, of which he stood greatly in need. Chorinsky applied

to a person named Rempacher, and obtained from him some cyanide of potassium. He furnished Ebergenyi with false introductions and letters to his wife, took lodgings for her in Munich, changed her money, and endeavoured to set up proofs of an *alibi*. Julia went to Munich in November, introduced herself as Madame Berger, and took an opportunity of poisoning Mathilde with the cyanide. Suspicion, of course, settled on the Count, and he was imprisoned. His conduct when in prison was as follows:—"At first he tried to despatch letters secretly, and to bribe the warders. He was good-natured, but lustful and excitable, especially regarding the slightest neglect in his food. On any little oversight he became furious, and ran about with clenched fists, saying he would eat nothing more. On the receipt of some new clothing he danced about like a child, and became wildly excited on hearing that the verdict had gone against Ebergenyi. Stimulants caused headache, and he complained of sleeplessness, but had no hallucinations. His propensity for letter-writing was very great, and he would write letters of 12 to 20 pages long, containing assurances to Ebergenyi of his deep affection." In June, 1868, he was tried and manifested great indifference, though condemned to twenty years' penal servitude. Martin, Solbrig, and Gudden were for him; Morel and Meyer against.

About this time he began to suffer from hallucination, for when Morel visited him in the prison of Rosenberg, he said, "Now I am quite happy. Every night troops of young girls, beautifully clad, sing most ravishing songs under my window. When I do not see them I can hear them, and I have recognised Hotooy among them." He had also delusions, for Dr. Fahrenholz says that "the Count was always addicted to venery, and practised onanism publicly. He would weep the whole night, and professed to be a general, Pope, Christ, and the Emperor. He became unruly, and was straight-jacketed. Pulse quick and intermittent. Face congested. Constant micturition, and very thirsty. He passed motions in the bed, and threw his food about the room. He would cry out loudly, and tear off his clothes, and dance can-cans, fainting when the paroxysm of fury was over. On one occasion he attacked an attendant, tore his own beard 'to send it to Mary,' and talked to the wall."

"In December, 1868, he was removed to the asylum at Erlangen. Here he was very violent, abused people and tore up the clothes and mattresses, saying that his 'father did it,' that he had 'never slept since being born,' &c. Weight, 8 stone 4 pounds. At times he played games and read the papers. Said that he was 'King William, and had bombarded Vienna during the night.' His speech became affected, and walking more difficult, with an inclination to the left side. His left hand was œdematous, and colder than the other. Appetite voracious. At last convulsions supervened, and lasted two days, after which he died."

Post-mortem.—Chronic inflammation and thickening of the membranes. Atrophy of the brain. Old othœmatoma. Red hepatization

of lung on right side. Endocarditis of mitral. Cyst in left kidney. Circumscribed obliteration of processus vermiformis. *Ascaris lumbricoides*. *Oxyuris vermicularis*. *Tricocephalus dispar*. Skull *thin*, finely-punctated, symmetrical, all sutures obliterated. Dura mater strongly injected. Much blood escaped in opening the cranium. Inside the dura-mater was a false membrane, much injected, and connected at many parts with the pia-mater. Lateral ventricles of brain but moderately enlarged, holding little serum, ependyma only slightly granular, but the epithelium of fourth ventricle much so. Arteries at the base very narrow in calibre. Weight of brain nearly 34 ounces. On microscopical examination the brain-elements were not noticed to be affected either in size or arrangement, nor were the vessels thickened. Heaps of fat granules and corpora amylacea were found in the spinal cord, otherwise its structure was normal.

The difficulty and interest of this case is in determining the particular kind of insanity. At first there were all the appearances of ordinary mania; still it was not simply mania, for there was not the very rapid flow of ideas nor the talkativeness. Was it general paralysis? Measured by Hagen's "goldener schnitt," that is estimating what SHOULD HAVE BEEN the weight of the brain determined by different measurements of the skull, and comparing such supposed with the actual weight, there was found to be a defect of $7\frac{1}{2}$ ounces in the weight of the brain proper, *i.e.* not including the cerebellum and the pons. No doubt there was some hereditary predisposition to insanity, and matters were not mended by the use of instruments at the time of birth. There was no history of syphilis or rheumatism, only of an excitable condition of the vaso-motor system as shown by the quickened circulation, blushing, and sudden pallor.

On the whole, according to our notions, the condition of Chorinsky appears to have been that of paralytic dementia, occurring in a man of insane temperament. For the age at which he died favours it, *viz.* 39 years. There was a preliminary stage of excitement attended with grandiose delusions; there was marked hesitation of speech, which developed itself during the last year of life; the spinal cord was affected; and, finally, the mode of death by a continued series of convulsions was very significant. Surely no collection of symptoms could be much clearer! Dr. Hagen, however, thinks that the hesitation of speech was not sufficiently developed for general paralysis; still speech *was* affected, and there are in general paralytics numerous shades of difference in the altered style of articulation. The pathological changes of general paralysis are too indefinite to admit of exactness of definition, still it is curious that in Germany, the land of at least the pathology of the disease, so little value should be attached to what we regard as, if not actually diagnostic, at least so in the largest proportion of cases.

PART IV.—NOTES AND NEWS.

Medico-Psychological Association.

A quarterly meeting of this Association was held in the Hall of the Faculty of Physicians and Surgeons, Glasgow, on Tuesday, the 10th June.

Present:—Professor W. T. Gairdner, Drs. J. Batty Tuke, Macintosh, Ireland, Alexander Robertson, Fred. Skae, H. Strehill Wright, Coates, and McGill.

Dr. J. BATTY TUKE occupied the chair.

The SECRETARY (Dr. SKAE) read the minutes of the last quarterly meeting, which were approved of. He also read apologies for absence from Sir James Coxe, President of the Association, Drs. Clouston and Howden.

Professor GAIRDNER showed a case of *Athetosis*. He said—I am afraid I must presume that for practical purposes the name *Athetosis* is not known to certain members of this Association. It may be, or it may not be; but it so happens that I have had communication within the last few days with one of the most distinguished students of nervous disease in this country, and, on asking him if he had seen any cases of *Athetosis*, his answer was, "What is *Athetosis*?" I am not, therefore, I think, assuming too much in supposing there may be members of the Association who do not know what it is. In fact, it is a name applied by Dr. Hammond to a peculiar condition, which, when I read his description, appeared to me to be new to myself, with the one doubtful exception of a case that I saw many years ago; and, therefore, I have no doubt that the subject will be quite new to a great many persons of a like amount of experience, or, perhaps, even of much greater experience. Through the kindness of Dr. Forrest, a former pupil and a most distinguished graduate of this University, I was introduced to the case now before us, and was at once led to regard it not only as an example of a rare disease, but as a case of *Athetosis*, differing, however, in some particulars from both the cases which Dr. Hammond has recorded. Being applied to by your Secretary for something of a clinical kind as a contribution to your proceedings to-day, I thought I might, perhaps, be allowed (in default of better) to bring this case before the Association; although I must admit that it does not appear to lie strictly within the province of the Medico-Psychological Association, as a case of mental disorder. This disease has been, as we shall find presently, in more than one instance associated with distinctly cerebral symptoms; its natural alliances, moreover, are with those spasms which probably take origin in lesions of the corpus striatum, or other intracranial centre; at all events, it is, undeniably, a very curious instance of nervous disease. I may preface my remarks on this individual case by a brief reference to Dr. Hammond's chapter on the disease. He says:—

"Under the name of *Athetosis* (*Ἀθετος*, without fixed position), I propose to describe an affection characterised by an inability to retain the fingers and toes in any position they may be placed, and by their continual motion." You will see that in the boy now before us this characteristic is present, and further, that the movements of his fingers are not at all like the clonic, jerking spasms of chorea; but rather like a peculiar modification of the rigidity that often attends hemiplegic lesions, only with this great difference again, that the rigidity here is not permanent and fixed, but ever-varying; passing from flexors to extensors, from promoters to supinators, in such a way as to involve successively all the muscles of the hands and forearm, individually, or in groups; whereby the affected member is not only made useless for practical purposes, not answering, except with great difficulty, and to a very limited extent, the demands of the will upon it, but it is also practically uncontrollable by the will, in respect that it cannot be voluntarily kept, even for a moment, in a state of rest. Hence the name of *Athetosis*, though by no means very descriptive of this affection, is quite characteristic of it as opposed to every kind of paralytic rigidity. It is, in fact, something quite different from, and yet having points of comparison with, chorea, tetanus, epileptoid spasms, and still more strikingly, perhaps, resembling, and yet widely differing from, most of the strange varieties of disease which have been described under the names of *tremor coactus*, *paralysis agitans*, *eclampsia nutans*, and even the so-called writer's cramp; there is not one of these with which this affection can be confounded for more than a moment, and yet the differences can only be fully appreciated by an observer who has studied them all in succession. Dr. Hammond records two cases. In one of these the patient, *æt.* 33, was of intemperate habits, and had frequently had

epileptic paroxysms; the commencement of *athetosis* seemed to coincide with the subsidence of an attack of prolonged cerebral disorder with unconsciousness, arising out of *delirium tremens*, and followed by appreciable impairment of the memory and intellect. In the other case (a farmer, *æt.* 39) there was an inherited tubercular taint on the mother's side, and the father and paternal grandfather were free drinkers of ardent spirits; this patient also had had attacks, if not of epilepsy, at least of vertigo and loss of consciousness; he had also been aphasic, and was still under the influence of some slighter forms of disturbance of the articulation, vertigo, and other distinctly cerebral symptoms, when brought under Dr. Hammond's observation.

In both Dr. Hammond's cases, therefore, you may see that the cerebral antecedents were quite unequivocal, that in both cases the patients were at an age at which insanity is not uncommon. Almost all, if not all, of these circumstances, are absent in this boy. The affection is practically confined to the right upper and lower extremities, and it is much more distinct in the upper than in the lower limb. It cannot be affirmed with certainty that there were any cerebral antecedents at all, and the only thing observed by the boy's mother which would bear this construction is that she "thinks she has noticed a little twisting of the face to the right side at times." This has not been observed by me, and although it is difficult to be too positive, I am inclined to think that the patient is quite up to average as regards intelligence, and as regards most of the strictly cerebral functions. The disease cannot, so far as known, be referred to any bad habit as its cause. The general health, though not robust, is not very bad, and there is no distinct symptom of any constitutional disease. The muscles of the affected limbs, so far from being developed in size by their abnormal activity (as in Hammond's cases), are, if anything, rather smaller than those of the sound side. It is rather remarkable that this should be so, because you will observe that the extremely forcible contractions perpetually going on have obviously influenced the shape of the hand, and have brought about a quite abnormal mobility of the fingers in the backward direction, just as the muscles of a gymnast may be trained in early life, so as to give an abnormal suppleness to every joint in the body. From the complicated character and perpetual variations in these abnormal movements in this case, it is difficult to describe them accurately. Almost every conceivable movement may be observed at one time or another, and each movement as it occurs is extreme and involuntary; in short, is of the nature of a tonic spasm, as much as in tetanus, only there is absolutely no pain. It takes a good while to see all the phases of this disease. Sometimes the wrist is strongly flexed, and at other times it is strongly extended, and very often the fingers are in precisely the opposite position to the wrist; sometimes individual fingers are flexed, while others are extended, and all more or less rigid. There is one point about the disease which I think is very interesting. I don't think that you can say that any individual muscle is wholly withdrawn from the action of the will. You will find that under favourable circumstances he can, to a certain limited extent, control every individual muscle of his arm, but when the rigidity or spasm comes particular groups are for the time being wholly withdrawn from the will, or very nearly so. There is no paralysis, properly speaking, and equally little are there any of the jerky movements of chorea. The presence of the spasms is to some extent influenced by the attention. If he is quite still and occupied with something else the abnormal movements diminish, but they scarcely ever cease, except in sleep, or perhaps when he is deeply engaged in reading, or absolutely at rest. By using a certain amount of force you can always overcome the spasm, as you see me now do, in opening successively the fingers of the closed palm; and it is done without pain or difficulty; but an attempt so to overcome the spasm in one group of muscles is very apt just to set it off in the opposite direction. Although this is (as I have already admitted) scarcely a psychological case, it appears to me to present a kind of corporeal type or counterpart of a whole group of mental disorders, where, owing to the influence of disease, or, as we call it, of insanity, particular acts of the mind, emotions, affections, thoughts, as the case may be, are in a practical sense involuntary, *i. e.*, withdrawn from the practical control of the will, although in another and more absolute sense the will remains free; indeed, you may say that at almost any moment the will is capable of exercising a certain amount of control over almost every individual act, as here over the movement of each individual movement; and yet for all that there is not a single act or movement within the diseased area that can be normally performed, or normally controlled. Chorea has been aptly called an "insanity of the muscles," and the term is not less applicable to this disease; I should call it, further, a case of incont-

able muscular impulse without paralysis, and without permanent spasm or rigidity. It is a kind of *quasi* rhythmic spasm, somewhat resembling the peristaltic movements of the involuntary muscles in the alternating or successive affection of groups of muscles. I have seen one other case of athetosis since Dr. Hammond's description of it; and looking backwards, I think I can find one case, but only one, in my previous experience. Here is a drawing I got done a number of years ago, of a patient in the Edinburgh Royal Infirmary. I think you will at once recognise the resemblance. I was much interested and not a little puzzled; had a drawing made, and afterwards got it lithographed, and then neglected to publish the case on the ground of the extremely anomalous character of the affection, and my inability to connect it with any other case, and even to form a distinct notion of the disease in my own mind. On reflection, I think it must have been a case in some respects very similar to the one now before us, although, to a certain extent, different. At that time I consulted most of the standard works, but could find nothing at all corresponding to what I observed. The patient, a young man, died soon after of pericarditis, with suppuration of the mediastinal glands; but a careful examination threw no further light upon the nature of the nervous affection.

Dr. IRELAND—I once saw a case of an imbecile boy in Carscube Road, which perhaps might amount to a modified case of athetosis. I dare say you could lay hold of the boy yet. He is in Glasgow.

Dr. SKAE—Dr. Howden, of Montrose, showed me in his asylum a case of athetosis. It is not so remarkable as this one.

Dr. GAIRDNER—Do the two cases strike you—having seen them—as being of the same order?

Dr. SKAE—No. There is not the same continual movement.

Dr. ROBERTSON—This is certainly a very rare form of disease. I do not remember having seen a case quite similar. The nearest approach to it occurred in a man about sixty, who had been several times under my observation. In him the motor symptoms resemble those we have just seen in this boy somewhat closely. He has suffered from the disorder for many years. With respect to its pathology, as Dr. Gairdner has said, in some respects it is like chorea, though it is distinctly different. Not improbably the seat of both disorders is in the same part of the brain. This, in regard to chorea, as Dr. Hughling Jackson suggests, is probably the Corpus Striatum, and neighbouring convolutions. There is no evidence of disease of the heart in the case before us. It was therefore probably not caused by embolism of the vessels supplying the parts of the brain just mentioned, which Dr. Jackson holds to be by far the most common cause of chorea.

The CHAIRMAN—I am sure the Society are under a debt of obligation to Dr. Gairdner. He says the case is hardly fitted for our Psychological Association, but I think it is, for if it is not insanity of the mind, it is insanity of the muscles. It has not been noticed yet, I believe, in Scotland, but two cases have occurred in London. It is very interesting, as Dr. Gairdner says, owing to its difference from Dr. Hammond's recorded cases.

Dr. GAIRDNER—Everything I have seen about this boy, as yet, shows that he is sound in mind, and tolerably sound also in body. We made faithful trial of electricity in all its forms, but it does not seem to have done any good. I rather think I gave him arsenic too, and tried carefully regulated exercise for several weeks in the Infirmary, and there has been no decided influence on the disease. I have only to say further that I should be glad to receive any hint as to the treatment of the case. It is an extremely disabling disease, being in the right hand especially, and his mother is very anxious about him of course.

Dr. IRELAND read "*Notes of a Case of Idiocy, with Synostosis of the Sutures and Deformity of the Base of the Skull.*"

The CHAIRMAN—I am sure we are all obliged to Dr. Ireland for his exceedingly careful paper. It is such papers as this that do the real good in the elucidation of such diseases as are comprised under the general terms, insanity and idio-y. Carefully recorded facts do a great deal more than the generalisation on a great number of cases imperfectly recorded and considered.

Dr. ROBERTSON—The symptoms would seem to indicate that the development of the brain was checked in infancy. The sutures might, consequently, close earlier than usual, and the skull accommodate itself to the small organ within. In illustration of this accommodating disposition of the skull in early childhood, I would remind you of one of the specimens I showed at the last Glasgow Meeting of the Association. In it there was marked atrophy of one hemisphere of the brain, and the skull on that side was much hypertrophied, this abnormal growth being

obviously of a compensatory nature. In connection with the development of the brain, I may mention that I have seen several cases of atrophy of one hemisphere, but in none of them have I observed any apparent hypertrophy of the other one. About six years ago I examined a case in which there was decided atrophy of the left hemisphere. The patient had been aphasic and homiplegic for twenty years, but was fairly intelligent. I asked Professors Allan Thomson and Young of this city, to be so good as to state their opinion on the point referred to. They both agreed with me in thinking that there was no unusual complexity of the convolutions of the right hemisphere, nor other indication of compensating hypertrophy on that side. Perhaps some of the members present may have had experience of similar cases.

Professor GAIRDNER then opened a discussion on the question, "*In what Sense, and under what Limitations, can Insanity be regarded as a Disease of the Body?*"

We can only give a brief abstract of Professor Gairdner's remarks in introducing the discussion, leaving their purport, so far as not here stated, to be gathered from the discussion itself and from his reply. He said that the idea of introducing the subject arose in his mind from some incidental remarks made at the last meeting in the Glasgow, which were very imperfectly, and indeed unintelligibly, reported in the *Journal*. *Apròpos* of a case of tumour of the brain, Dr. Gairdner had said that physicians practising in asylums were apt to draw fallacious inferences from the fact of the coincidence of such lesions with disorders of the mind in particular cases, and that this followed almost necessarily from the fact that their field of experience excluded all the far more numerous instances in which similar organic changes occurred without anything that could be rightly called insanity. It had grown to be a kind of *dogma* of late years that insanity is simply a disease of the brain, and this dogma, like all other dogmas, when once formulated and affirmed with a certain amount of conviction, tended to distort the evidence on which it professed to be founded; a most notable proof of this fallacy being the popular, and in a certain sense also medical, use of the term "softening of the brain," as a vague general term for almost all kinds of chronic insanity,* with just as much and as little reason as is, or was, implied some years ago in referring all manner of digestive disorders that were not clearly understood to the liver. In consequence of this loose way of arguing in a circle from insanity to softening, and then again from softening to insanity, an odd conflict of evidence arose some years ago in a court of justice. An old man died, it was alleged, of "softening of the brain," this being, in fact, the technical name under which his fatal disease, apoplexy, was with quite probable accuracy registered by his ordinary medical attendant; and it was further alleged that many years before this he had suffered an attack of "sunstroke" in Africa. Upon these two alleged facts was built up a hypothesis of insanity, commencing with the sunstroke, and ending in "softening of the brain," which, aided by a vast quantity of local gossip, and medical evidence chiefly relating thereto, was so convincing to the jury as to lead them to concur, unanimously, in reducing a will framed three years before death, evidently with great care and forethought, and on the basis of holograph instructions that were unquestionably shown to be the spontaneous act of the testator, and the cherished idea of half a lifetime. The verdict was appealed against as contrary to evidence, and a new trial ordered, and it was then proved to the satisfaction of another jury, which with equal unanimity sustained the will—first, that the alleged sunstroke had never had any existence; and, secondly, that the "softening of the brain" carried no such significance as had been attributed to it inferentially in the first trial, and indeed that it, too, was not at all a positive fact observed, but a mere presumption founded on the mode of death.

In dealing with the question announced for remark, Dr. Gairdner said it was essentially the same question and surrounded with the same difficulties and perplexities, as were found to environ everywhere the attempt to distinguish between functional and structural disease. All that can be definitely and positively affirmed is that there are cases of mental disorder where a structural lesion, or some chemical change affecting the blood or the tissues, can be demonstrated as an apparent cause of mental derangement; and others, again, where no such changes can be proved. Further, there are some cases where the structural lesion, when present, may be reasonably inferred to have a distinctly causal relation to the symptoms, and others again where, given a structural change, no such causal relation can be legitimately

* "I seldom tell the friends of the patient," a fashionable alienist once said to us, "that the man is insane. I say he has softening of the brain; it saves the feelings." "*Journal of Mental Science*" for January, 1862, p. 597.

inferred, inasmuch as in numerous cases, not necessarily of insanity, like changes are found to occur with symptoms wholly dissimilar in kind. All beyond this is involved in the same mystery and perplexity that surrounds the essential nature of the association of the mind with its organ, or indeed of function with structure in the case of any organ.

The difficulty is, therefore, not peculiar to the case of mental pathology, though it is in that region that it comes most evidently into contact or collision with beliefs involving important practical consequences. Furthermore, it is not a real solution, but only an evasion, of the difficulty, to postulate as a proved fact the dependence of insanity upon bodily disease. The fact is not proved; the difficulty, therefore, remains as before.

In one sense, indeed, it may be assumed as indefinitely probable that structural changes *always accompany*, even if they do not *always cause*, insanity. For it is as nearly certain as any profound, almost transcendental, truth can be, that function and structure, however associated in their essences, cannot be separated in their pathology any more than in their physiology. As we have reason to know that *every functional change whatever*—the contraction of a single muscular fibre, the secretion of a single drop of urine, and in like manner the functional activity of every nerve-ganglion or nerve-conductor—*involves a certain change in the structure of the parts thus actively engaged*, it does not seem too much to infer that thought, sensation, emotion, will, are in like manner accompanied by structural changes in the organ through which they are manifested; and this without the slightest prejudice as to any ultimate theory of mind, and the mode of its association with the bodily organ. It seems, from this point of view, extremely probable, if not demonstrably certain, that no case of mental derangement is unaccompanied by changes (probably exquisitely and infinitesimally minute in some cases) either in the structure or in the chemistry of the brain and nerves. And perhaps it may seem, from the practical point of view, idle to discuss the question whether, in apparent derangements of the mind, it is the mind first, or the body first, that is disordered. In many, or most, cases indeed we cannot know—we grasp only the end-links in the chain of cause and effect, and no mere observation of casual alterations in the tissue of the brain will justify the conclusion that these have been really the cause of the earliest symptoms.

As a question of simple observation, then, it is impossible to found a purely *somatic* pathology of mental derangement in general upon what we know of the morbid anatomy and chemistry of the insane brain, or blood.

On the other hand, it is unquestionable that some, especially of the more acute and (so to speak) explosive kinds of insanity—the paroxysms of general mania and of acute delirium—have analogies so close and suggestive with the more obviously somatic forms of delirium, determined by blood-poisoning (alcohol, haschish, and probably typhus poison, &c.), that it is much easier to conceive of these as arising from the bodily state than to suppose the latter to be determined by the former. But even in these cases the acute attack of insanity is often only the incidental paroxysm of a permanently abnormal state, and the question of the physical origin of this is as difficult and as remote from direct observation as ever.

Conversely, there are cases of insanity so obviously growing out of the long and continuous action of moral causes, aggravated in some instances by physical complications, or by the sudden disturbing influence of overwhelming emotions, grief, terror, political and religious excitement, love, even sudden fashions, and the power of simple association acting upon ignorant multitudes (dancing-maniacs, child-pilgrimages, witch-sabbaths, &c., &c.); that it seems impossible to doubt the competency of psychical causes, under certain combinations, to determine mental derangement. And if we carry out the inferences derived from these more typical cases into the still ample realm of the less known groups of disease commonly confounded under the various names of monomania, melancholia, hysteria, morbidly developed emotion of various kinds (often, no doubt, associated with more or less obvious bodily disease), we shall find it quite reasonable to suppose that in many of these cases, the starting-point may be, as it often seems to be, *an abnormal mode of activity of the mind itself*—a prevailing sentiment; an habitual emotion; a strong prejudice in favour of, or against, an individual; a settled opinion, a rooted feeling of love, hate, jealousy, ambition, so nursed and indulged as to dominate over the whole moral nature, and to control, practically, the freedom of the will, and even the reason.

In such cases, not only may delusions follow, and the whole phenomena of insanity in its most developed forms; but even when the morbid changes fall far short of

this, the psychical disorder will inevitably, as we have seen, become associated with corresponding changes in the physical organisation, and these, infinitesimal at first, will go on deepening, and being confirmed by time, the wear and tear of the nervous system being in accordance, so to speak, with abnormal instead of normal, modes of activity; so that in the end it cannot be surprising that these changes should be found practically irremediable; the very channels of nervous influence, and the ganglia, through which its storage and discharge are effected, becoming permanently diseased and disabled for normal activity, in accordance with the laws of textural nutrition underlying both pathology and physiology.

And, to conclude, it is in strict accordance with all we know of the hereditary transmission of the physical instincts, along with that of the structures conformed to them, that *such changes, even when thus acquired, may become hereditary*; so that vicious habits and unsound propensities, in the first instance implanted by accident or by training, may, *when confirmed by habit into instincts*, be transmitted so as to vitiate a whole race, just as acquired beneficial habits or instincts are known to be transmitted, *e. g.*, in the case of the shepherd's dog, the pointer, &c., or even indifferent habits, as in the case of those *tricks* of manner which are well known as occasionally passing from a parent to his offspring, or even his grandchildren, under circumstances wholly precluding the possibility of direct imitation.*

The CHAIRMAN I very much regret that there are not more present to-day to discuss a subject which seems to me to implicate to a very considerable extent the status of psychiatric medicine. I am quite unprepared to reply to Dr. Gairdner, still cannot refrain from making a few remarks. It strikes me that Dr. Gairdner advocates to some extent the belief of the existence of mind apart from body; if so, I hardly see how to join issue with him, for we have no common ground for combat. But I can hardly believe that he does not admit that every operation of the mind is manifested through the brain, and that every manifestation is accompanied by and results in a certain change of tissue, whether chemical or molecular. For my own part I cannot imagine the existence of an insane mind in a sane body. I think an appeal might be fairly made in support of this proposition to those of the profession who treat the great mass of mental disease—I mean the general practitioner and the physician, not the medico-psychologist. Whilst that word is on the tip of my tongue, I should like to say that it is to my mind the most miserable of the many miserable euphemisms which exist in our speciality. I would ask the general practitioner and physician how many diseases they meet with in their everyday practice in which there is not to a certain extent a mental condition different from the normal mental condition of the patient. The various diseases comprised under the generic term of dyspepsia, diseases of the liver, kidneys, and spleen, fevers, pregnancy, and the puerperal condition, and surgical diseases, more especially those of the rectum and bladder, are rarely, if ever, unaccompanied by impairment or perversion of the intellectual powers, or of the moral condition of the patient. Does the physician, the obstetrician, or surgeon apply his remedies to the *ψυχή*? Does he administer articles of the pharmacopœia to the immaterial? No. He attacks the mental symptoms through the body, and in so doing he is potentially a materialist in theory and in practice. If, then, we find that the great mass of mental aberration is the manifest result of bodily aberration, we have a foundation for the hypothesis that the graver forms of mental disorders which come under the notice of alienists are likewise due to a somatic change, whether that change be primary or sympathetic. It does not appear to me more difficult to understand the hereditariness of an evil cerebral condition, intellectual or moral, than of hare-lip or cleft palate. I would also appeal to pathology to confirm my position. In my own experience I have submitted 100 brains of insane persons to microscopic examination, and have never yet failed in demonstrating a marked departure from health in each and all of them. It is true, all these were more or less chronic cases, and it may be said that the lesions were the result of perverted function. But the morbid change must have commenced at some time, and if the evolution of function is produced by change of tissue, why should we not believe that it accompanied or preceded the symptoms? In traumatic insanities we cannot doubt the sequence of cause and effect; why should we doubt the power of strong moral shock or loss of sleep, which we know are accompanied by considerable vascular changes, to produce permanent structural abnormalities in the delicate organisation

* Darwin—"Expression of the Emotions," p. 33, note. Carpenter—"On the Hereditary Transmission of acquired psychical habits." "Contemporary Review," January and April, 1873.

of the brain. It implies simply an admission that our present appliances are not so perfect as to detect the initial processes of disease. I freely admit, we are not yet able to lay our finger on any lesion, and say that it produces certain symptoms, but nervous pathology is yet in its infancy, and again ignorance must be pleaded. There is a circumstance in comparative anatomy which appears to me to bear upon this point. It is much easier to demonstrate the structure of the brain in the lower animals than in man; it is easier to demonstrate it in young animals, high or low, than in older ones. Now, may not the reason of this be that the work of the human brain is of a much more complex nature than that of the beast, and, consequently, that the loss and repair of tissue necessary for its performance leaves indications of greater activity, of greater wear and tear. I would only add that I cannot admit the tendency of the materialistic view to lump insanity as suggested by Prof. Gairdner; on the contrary, its tendency seems quite the reverse, for it leads to the investigation of causes and results, the process by which the mysteries of other forms of disease have been disclosed. I am quite content to lie under the accusation of being a materialist in this matter, for the employment of this mode of enquiry need implicate no man's religious belief, and further, every physician must in the exercise of his medical functions be potentially a materialist.

Dr. IRELAND regretted that more members had not come to listen to the views of Dr. Gairdner. He thought that a discussion of this kind might become an interesting part of their meetings. Dr. Gairdner left out of consideration what he called the two hypotheses—that mental activity was a function of the brain, or that there was an immaterial entity different from the brain, and which might exist without it. He did not think we could clearly discuss the question unless we knew the views a man held on this subject. He believed that there is an immaterial entity independent of the brain, for he could not conceive of thought being carried on by so much albumen, cerebrie acid, and phosphorus. It was a common assumption that the immaterial mind could never be affected by insanity; but this could not be proved. We know from experience that our minds can become distracted by passion, by false reasoning, and strange desires. Experience shewed that men might be subjected to painful emotions from which they could not escape, or that they might yield to vicious passions till these mental conditions ended in insanity. It might be answered that there was always a constitutional tendency in such cases for the brain to become diseased from the influence of these emotions; but unless it could be shown that this tendency was very powerful, so as to manifest itself under common exciting causes, it would be absurd to deny the great power mental emotions have in producing insanity. The speaker quoted Hecker's "Epidemics of the Middle Ages" as a proof of the power of mental influences in producing mental derangement, and the observations of German microscopists upon fatty granules and granular cells as a proof that lesions which were at first believed to be the causes of insanity might turn out to be merely its results. In reply to Dr. Tuke, who argued that it was unreasonable to talk of a man treating insanity medicinally, unless it were an accidental matter, Dr. Ireland remarked that no one was holding that the mind was not closely connected with the brain, and that the great improvement in the treatment of insanity did not consist in acting upon the body with hellebore or douches, or other material methods, but in introducing new methods of mental and moral treatment, and that some pronounced materialists were remarkable by the great stress they laid upon this psychical method of cure.

Dr. ROBERTSON—The connection between insanity and a disordered brain has been so generally admitted that the very title of Dr. Gairdner's communication is startling. And yet he has shown there are good grounds for putting the question; for it has not been established, in fact it is impossible to show, that a disordered condition of the brain exists in all cases of insanity; and often, even where it is present, that it is at all sufficient to account for the amount of insanity in the case. Notwithstanding our inability to establish the existence of this association in a certain number of cases, I must say it is my conviction that insanity is always directly due to cerebral disturbance. Of course that is not opposed to the idea advanced by Dr. Gairdner as to the origin of insanity. According to him its origin may be mental, and afterwards this mental disorder may act upon the nervous tissue inducing disease. But when insanity is fully declared, I certainly think, as I have said, that the brain itself is involved. If, upon a *post-mortem* examination of an insane person, we do not find evidences of disease, the probability is that this is due to an imperfect examination, or if the examination has been sufficiently complete, it may be that the instruments we employ are not sufficiently refined to detect those minute changes in the cerebral substance which may prevent the healthy exercise

of the mental powers. But though this is my conviction, and is also, I believe, the conviction of almost all medico-psychologists, it must be admitted that the universal dependence of insanity on brain disorder has not been demonstrated. While that is so, we need not feel surprised if it should be considered by some psychologists that certain cases may be accounted for on the old spiritualistic idea that it is a disorder of the mind, independently of its organ—the brain. I shall not now attempt to go into the question at all fully, and conclude my observations by thanking Dr. Gairdner for his very lucid exposition of a difficult subject.

Dr. SKAE—I would not have ventured to speak on the subject without a very great deal of preparation were it not that there are so very few of us here, and that it is desirable we should all have a shot at it. I listened with great interest to Dr. Gairdner's exposition of his view of this question, for it is always a downright pleasure to listen to Dr. Gairdner, even when one thinks him in the wrong; but I must say, I do not even yet understand clearly what his position is. He sometimes talked of the mind itself, leaving one to suppose that he believed in the two entities, as Dr. Ireland does; and at other times he talked as though the mind were a function of the body. I must say I don't think you can discuss the question which he has raised, unless you adhere to one or other of those opinions. When I look at the question as it is in the printed notice, I cannot exactly understand whether Dr. Gairdner means that the question is this—"Is insanity sometimes only a functional disease, or is it always an organic disease?" or—"Is insanity sometimes a disease of the mind—an immaterial entity—and sometimes a disease of the body?" I entirely agree with what Dr. Tuke has said. The whole question is summed up in the expression he made use of—"Can you have an insane mind in a sane body?" We must all admit that we hold our existence in this physical world by physical means. If you have no body you have no mind. You have your body in a certain condition, and your mind in a certain consequent condition, and any alteration of the mind must be accompanied by an alteration in the body. The same cause will always produce the same effect—that is to say a different state of mind—if you have a different effect you must have a different physical basis or cause for it. I don't think the argument Dr. Ireland made use of about false reasoning bears on the subject at all. Correct reasoning is carried out by a healthy brain, and it is quite natural also to suppose that incorrect reasoning may be carried out by a weak, disordered, or diseased brain. To argue for a spiritual disease apart from a bodily one, is as much at variance with our present knowledge of pathology as it is to talk of epileptics being possessed with devils. You cannot rest your proofs on pathology at all. You may have the most reckless notions of a general paralytic without any demonstrable brain disease, and you may have a great deal of brain disease, as Dr. Gairdner said, without any demonstrable insanity at all. I think to discuss the question you must revert to the larger one of whether or not mind is a function of the body; and, of course, if you admit that a healthy mind is a function of a healthy body, you will admit that an unhealthy mind is a function of an unhealthy body.

Dr. GAIRDNER—It would have been impossible for me to have supposed when I saw the small meeting, that my suggestions should have brought out so valuable reasoning. At the same time I feel the difficulty of replying, because the farther you go into these matters the more you seem to yourself to be getting into discussions like those that occupied the great scholastic doctors of the middle ages—discussions that really tend to no practical result, and that are as capable of being argued eternally on the one side as on the other. I quite agree with Dr. Skae that the argument reduces itself in the end to the fundamental question of what is the actual mode of association of the mind and the body, and as this is wrapped in profound mystery we are always apt to lose ourselves in a mist of words. But nothing shows the almost intangible character of the differences arising in this discussion more than the excellent remark of Dr. Tuke, that he could not conceive of an insane mind in a sane body. I agree with him entirely. The very object of my remarks was to show that wherever the abnormal condition may be conceived to begin in any case of so-called mental disease, it must touch both function and structure. You cannot separate the two. I think we are bound to admit that, speaking from the physiological point of view, function and structure are absolutely and indissolubly associated. I quite agree with Dr. Tuke that it is impossible to have an insane mind in a sane body; and further, the more the insanity of the mind becomes chronic, the more habitual it is, the more multiplied the departures it takes from the standard of sanity—so much the more inconceivable does it be-

come that we should have an insane mind in a sane body. But to show how this touches on the impalpable, I will push it a step further. I cannot conceive of a passionate or wrathful mind in a perfectly normal body. I cannot conceive of a lustful mind in a perfectly sane body. I cannot conceive of a mind, which for any length of time, or even from any temporary cause, has become the slave of any bad passion, or vicious indulgence, or, indeed, that is subject to any kind of abnormal manifestation whatever, as being associated with a brain that is utterly and absolutely normal; because I think the very fact of an abnormal manifestation disturbs the normal physical constitution of the organ. Therefore there is no real dispute as to the fact of bodily implication in mental unsoundness, and the question is what is the most proper way of stating the fact—the way that will comprehend the greatest amount of truth, and exclude, to the uttermost, fallacy and error in stating an admitted general principle. I am of opinion that the now popular way of speaking of insanity as if it were a structural disease of the brain—just as pneumonia is a structural disease of the lung—has led to errors and fallacies of observation, and in some instances to great confusion of thought, and assertions not founded on observation at all, as I have endeavoured to show in my introductory remarks. Then there is another aspect of the subject that I think is not unimportant. Dr. Skae says quite correctly that this question leads up to the metaphysical question. I was willing to argue it on a less abstract ground; but if I am pressed to declare my opinion, I will say, “Yes, I must acknowledge mind as conceivably separated from body—at least from any particular body with which it is at present associated.” That may seem to be unpractical from the medical point of view, but it is not unpractical when you consider that every bad habit arising in the mind, every abnormal mode of its activity, every passion indulged, every strong rebellious habit nourished up so as to become an overmastering power in the soul, is, or may be, actually creating disease—gradually and slowly developing insanity, and with it those changes in the physical structure, which, I believe, in many cases are secondary, and which when confirmed so as to become a permanent portion of the individual organisation, may, I believe, be transmitted by inheritance. I think it important that the public and the medical profession should appreciate fully the powerful influences that a man’s moral control has over himself to prevent and modify the occurrence of insanity in many cases. A little book was written some years ago on “Man’s power over himself to control insanity.” It is a subject, I think, very interesting. As Dr. Ireland has very properly said, the whole discipline of our asylums in the past, and the change to everything that is good in the modern treatment of insanity—everything in which it differs from the old harsh methods of hellebore, stripes, and chains, is, in fact, an appeal from physical to moral agencies; a recognition of the fact that even the insane mind, can, within certain limits, be controlled by moral and spiritual forces; that although obstructed and impaired in its action, it is still essentially *mind*, and subject, therefore, to the laws of spirit as well as those of matter.

The CHAIRMAN—The very least we can do is to thank Dr. Gairdner for having initiated the discussion. A discussion like this is far better than reading papers. We are under a deep debt of gratitude to Professor Gairdner for having come forward thus prominently and assisted us in this matter, and I trust he will accept our thanks as cordially as they are given by us.

Some interesting microscopic sections, illustrating the pathology of the brain, were exhibited by the Chairman.

A vote of thanks was accorded to the Faculty of Physicians and Surgeons for the use of the Hall; and on the motion of Dr. ROBERTSON, a vote of thanks was given to the Chairman, and the meeting separated.

Asylum Management.

It may be taken for granted that before very long there will be a change of some kind or other in the local administration of our counties. The English Justice of the Peace is confessedly an anomalous being. He is a Government official in so far as he has his commission from the Crown, but the fact of his being unpaid of itself makes him something wholly different from the paid servants of the Crown at home or abroad. On the other hand, the fact that he has his commission from the Crown makes him something wholly different from those officers, at home or abroad, whose authority springs from popular election. He cannot stand according to either the French principle or the Swiss principle.

Even in England he stands by himself. Other officers of the Crown are paid ; other unpaid officers are elective. All that is to be said for him is that he is, and that it is by no means clear that anybody else would do his work better or so well. And that this can be said for him is, in our land of precedent, a good deal. An anomalous institution is in England not likely to be upset simply because it is anomalous. Still, if an institution which is confessedly anomalous is attacked on other grounds by any powerful class, the fact that it is anomalous greatly strengthens the hands of those who attack it. The county magistracy, anomalous as it is in theory, might go on safely discharging its duties both judicial and administrative, if nobody found anything to say against it except that it is anomalous. But in several counties the ratepayers profess to have found out that the magistrates are not only anomalous but something much worse, namely extravagant. The charge in most cases arises from sheer misconception ; but the practically important thing is that the charge has been brought. In the case of men who vote away the money of other men to whom they are in no way responsible, a suspicion, even an unjust suspicion, is almost as bad as a conviction. Men cannot in reason be asked to submit to taxation without representation any longer than they choose to submit to it. It is probable then that the present form of county administration will have, at some not very distant day, to give way to the elective board in some shape or other. It is hardly a question whether the change will be for the better or for the worse. When those who are affected by an anomalous institution say that it is not only an anomaly but a practical grievance, the anomaly cannot stand.

We have before now had to speak our mind about the local government of counties, and we shall, no doubt, have to do so again more than once before the matter is finally settled. Some settlement must be made some time, but the chances of a really good settlement will be seriously endangered if the subject of local government be taken up as an electioneering question for political parties to outbid one another about. The vote of the farmers is already so powerful, the Ballot is likely to make it so much more powerful, that there is the greatest possible temptation for all parties to bid for their support. It is certainly not an agreeable aspect of human nature to hear magistrates, especially Conservative magistrates, disparaging their own order and flattering the prejudices of the farmers, with a view to an expected election. The advanced Liberal is sometimes less zealous for change on this head than his Conservative neighbour. He has been known to argue that democracy is the right thing where it is to be had, but that, where democracy is not to be had, there is nothing gained by pulling down a better oligarchy to set up a worse. It is quite certain that, as regards the efficiency of public administration, above all as regards the welfare of the classes below both, it would be no improvement to exchange a government of squires for a government of farmers. Some malicious tongues have gone so far as to say that the farmer is produced by keeping the bad side of the squire and leaving out the good. However this may be, it is certain that the tendency of the farmer is to take a breeches-pocket view of everything, to grudge every penny that is spent, to delight in the false economy which makes some petty saving at the cost of really efficient and liberal administration. It is said that some Poor-law Guardians believe that their title means that their duties is, not to be Guardians of the poor, but to be Guardians of the parish purse against the poor. It is certain that it is the hardest thing in the world to make a body of farmers understand that an incompetent officer is far dearer at a low salary than a competent officer is at a high salary.

There is one branch of local administration above all which it will never do to hand over to bodies at all like the present Boards of Guardians. These are the Pauper Lunatic Asylums. Of the two it would be far better to centralize them, to place them, at the risk of any number of outeries, under purely Government management of some kind. We are far from wishing for any such change. All that we can say is that, of two possible changes, this would be the lesser evil. The management of the Asylums at present is somewhat peculiar. A Committee

of Visiting Magistrates is appointed yearly by Quarter Sessions ; but, when once appointed, they are, for most purposes, independent of the Court. They have on great occasions to come to the Court for money ; but in ordinary life they have more to do with the Commissioners in Lunacy. That is, when they have to lay out money beyond the income of the Asylum itself, they have to come to Quarter Sessions for it, while they have not to come, like other Committees, for the confirmation of their ordinary acts. The local public at large therefore hears of them only as spenders of money, and has very little notion of what the real work of the Asylum is. In more counties than one an outcry is raised against the extravagance of the Asylum Visitors, which for the most part simply proves the ignorance of those who raise it. We allow that the ignorance itself is often not their fault, but to raise a disturbance about matters of which they are even innocently ignorant is certainly a grave fault. That the general public should know little of the details of Asylum management is a necessary consequence of the form of management which the law has decreed for Asylums. Therefore Boards of Guardians and the like would be better employed in attending to their own duties than in censuring men who are doing their own duties also, though in a sphere which is necessarily less open to the public eye. But it is much worse when a future candidate or his zealous supporters join in the outcry with a view to the next election, or when a nobleman, bent on a popular harangue, thinks that his nobility exempts him from any need to get up the subject on which he is speaking. The cry of extravagance is of all cries the easiest to raise, unless, possibly, the cry of Popery. And people raise it as if magistrates and especially Visitors of Asylums had some interest in extravagance. From the way in which malcontent Guardians and the like are apt to talk, one would think that the rates went into the magistrates' pockets, instead of the magistrates having to pay them like other people. In matters of expense the interest of the magistrates is exactly the same as the interest of the ratepayers, for the simple reason that the magistrates are themselves ratepayers. Any one who knows anything of the working of the Quarter Sessions must know that hardly a penny can be spent without some zealous economist rising to object to spending it. Extravagance is certainly not the fault of a body of men who, if they vote away other people's money, vote away their own also. But it is possible that expenses which seem necessary to those who understand the matter in hand may sometimes seem extravagant to those who know nothing about it.

One point at which the class represented by the elected Guardians are apt to grumble is the salary paid to the Medical Superintendents of the Asylums. A retiring Superintendent gets a pension, or the actual Superintendent gets an increase of salary, and the voices of the discontented are loud against the waste of the public money. It is in vain to tell them what a post that of the Superintendent of an Asylum really is, to tell them of the rare union of intellectual and moral qualities which it calls for, the scientific skill, the tact, the temper, the thorough zeal for his work, without which the work cannot be done—qualities which are cheaply purchased indeed at £500 or £600 a year. It is in vain to tell them of the wearing and distressing nature of his duties, of the special need that his work should have occasional breaks, and that it should not—for fear of his own mind giving way—be kept on for any very great number of years together. It is in vain to point out that for this very purpose an Act of Parliament was passed allowing pensions to be granted to officers of Asylums after a shorter term of service than formerly ; to show perhaps that the pension complained of might, by the terms of the Act, have been much higher in amount and might have been granted several years sooner. It is in vain to tell them how cheaply the services of a really good Superintendent are bought at the highest salary which any Superintendent receives—to explain the constant, discriminating, and delicate treatment which is needed by patients under the various forms of disease ; how many little refinements which, to the vulgar eye, might seem luxuries are really parts of the medical treatment ; how the pictures, the band, the theatre, the chapel with its fabric and services at least up to the standard of a well ordered village church, all have their direct share in coing

the work which the Asylum has to do; how great a power of organization as well of scientific skill is needed in the man who has to look to all these things and to manage a large staff of inferior officers. All this goes for nothing with men whose one cry is that the thing might be done cheaper. So it doubtless might, if all that is needed were, after the good old fashion, to chain and beat our lunatics, to shut them up in cold and darkness and nakedness. The Guardians could doubtless get that done for a much smaller sum. Or they might doubtless even get the parish doctor, for a much smaller increase of his pay, to look in at the Asylum every day as he looks in at the workhouse. Or something might be saved by cutting down Asylum diet to the standard of workhouse diet, the difference between which two standards is shown by the simplest of tests; patients removed from the Asylum to the workhouse always lose in weight, while patients removed from the workhouse to the Asylum always gain. And there is one way perhaps better than any of these for lessening Asylum charges, and for taking away the need for enlarged Asylum buildings—a way which many a grumbling Guardian has in his own hands. No one cause sends so many patients to the Asylum as drunkenness; every Guardian who pays any part of his labourers' wages in drink instead of in money is directly helping to increase the number of Asylum patients, and thereby to increase the amount of Asylum charges and the size of Asylum buildings.

The upshot of all this is that, whatever changes may be coming in the form of the local government of our counties, the Lunatic Asylums, at all events, must not be handed over to bodies whose spirit and temper are at all like that of our present Boards of Guardians. They cannot be managed under the influence of that hard grudging spirit which forces every penny, either for the proper welfare of the inmates of the workhouse, or for the fair pay of its officers, to be absolutely wrung out of it. The way in which the Guardians manage the workhouses, the way in which their complaints show that they wish to manage the Asylums, is proof enough that they must never be allowed to have them in their hands. Under their care the proper medical treatment could never be carried out. No medical man of the class which alone is fit for the delicate work of Superintendent of an Asylum would either take such pay as they would offer him, or would submit to such interference as theirs. Whatever happens, our Lunatic Asylums must not be placed in the hands of men less liberal of money, less able to understand the position and feelings of an able scientific man, than they are now. Local management is no doubt best when fit local management can be had, but if the only form of local management that is to be had is such local management as is likely to be given us by Boards of Guardians or bodies at all like them, the care of our Asylums had better become a direct branch of the business of the central Government.—*Saturday Review*, May 10th.

THE LIMERICK DISTRICT HOSPITAL FOR THE INSANE.

In our last issue it was mentioned that an investigation was then in progress conducted on oath by Dr. Nugent, the Senior Government Inspector in Ireland, respecting certain charges made at the instance of the Board of Government of the above institution in regard to its management, and more particularly in reference to the death of a male patient named Danford, in consequence, it was stated, of a cold plunge bath improperly administered to him. The result of that investigation was that by order of the Lord Lieutenant, under the advice of the Crown Counsel, an indictment for manslaughter was laid against the attendant who gave the bath in question. He was tried accordingly at the late Spring Assizes at Limerick, the trial ending in an acquittal. Subsequently the Lord Lieutenant addressed a communication to the Resident Medical Superintendent, Surgeon Robert Fitzgerald, in which, after recapitulating several matters of an unsatisfactory kind in the general conduct of the Home, he called upon him to resign. This he has since done, and, after a service of twenty-two years, has been awarded a superannuation pension of £220 per annum. On a review of the whole of these unfortunate proceedings it must be admitted that the course which has been pursued by the Lord Lieutenant was the only one possible that could have been

adopted; at the same time the Governors themselves cannot be held altogether blameless in the discharge of their duties, as the Lord Lieutenant has very plainly intimated to them. The very arduous and responsible post of the Medical Superintendent was certainly not lightened, but heavily weighted by their bearing, which, instead of being conciliatory and encouraging, was the very opposite, and only too well calculated to have a most depressing effect on any man of the least spirit or possessing the smallest particle of self-respect. When a Board of Governors complain that no power is vested in their hands of "punishing" the head of a public institution with which they are connected it is saying quite enough to shew that there is something "rotten in the state of Denmark," and yet this is what has been done in a recently published communication of the Limerick Governors to the Lord Lieutenant. It is to be hoped, however, that the infliction of the treadmill or the "cat" will not be placed in the hands of these "punishment" Governors, who appear to be entirely forgetful of their own proper duties, and of the commonest respect towards a gentleman as well entitled to it as any one of themselves from his position and the important trust reposed in his hands. It is only further to be observed that the more than ordinarily trying and difficult task committed to Dr. Nugent in this most unpleasant and invidious matter was carried through by him in a manner highly to his credit in every point of view; he having a very hostile local party to contend with, and one only too well disposed to throw any difficulty in his way.

Obituary.

DAVID SKAE, M.D.

Great Britain and France have each suffered the loss of one of their most distinguished alienists since our last number was published. Dr. Skae and M. Morel have long held a high place as physicians who, being both engaged in the active practical duties of their profession, not only did those with success, but also did much to advance our knowledge of insanity by their investigations and writings.

Dr. Skae was born in Edinburgh on the 5th July, 1814, and was educated by his uncle, the Rev. W. Lothian, in St. Andrews. He attended the art classes in that university for two years at the early age at which Scotch students of that time usually went to college. He was then for a short time a clerk in a lawyer's office in Edinburgh, and he used to say that it was there he acquired those orderly and business personal habits, and that clear handwriting that always distinguished him. He then studied medicine in Edinburgh, and settled in practice in partnership with Dr. Davidson in that city. In 1836 he became a Fellow of the College of Surgeons of Edinburgh, and began to lecture on Medical Jurisprudence in the Extra-Academical Medical School there in the session 1836-37. He delivered 14 courses of lectures on that subject, and had larger classes than any extra-academical lecturer on that subject had ever had before. He afterwards lectured on anatomy in conjunction with Drs. Handyside, Lonsdale, and Professor Spence. His colleagues during his career as a lecturer were men many of whom have since made enduring fame for themselves by their work in medical science. Dr. Knox, Sir J. Y. Simpson, Professors Hughes Bennett, John Reid, E. Forbes, Goodsir, Henderson, Day, Geo. Wilson, Lizars, Miller, and Douglas Maclagan, Sir W. Ferguson, Drs. Argyll Robertson and Martin Barry formed a galaxy of medical talent enough to have given lustre to three or four medical schools. They were all then in the glory of their youth, eager to make new discoveries in medicine, eager for fame as teachers, and laying the foundation of that work which will carry their names down as benefactors to humanity and medicine. Skae was looked on by them as by no means the least brilliant or promising, and unquestionably he caught at that time the spirit of doing original work in medicine, which he earnestly inculcated on his assistants to the last. His attention was first directed to the subject of insanity in connection with mental and nervous physiology, and undoubtedly he approached it from a good point of view. As a medical jurist he had to acquire some practical acquaintance with it. Like his friend Sir James Simpson, he had to begin with an unsuccessful candidature for a parish doctor's place. He was surgeon to the Lock Hospital, and wrote several original papers on syphilis. In 1846 the Physician-Superintendency of Morningside Asylum fell vacant by the death of Dr. McKinnon. Dr. Skae became a candidate, and as the institution had been founded through the influence of members of the medical profession in Edinburgh, and it is laid down in its regula-

tions that one of its chief objects is to teach insanity and extend our knowledge of it through the wide range of experience which such an institution affords, he was considered the most suitable man for the position. Sir Robert Christison and Sir James Simpson assisted him actively in his application. In addition to the superintendence of the institution, he began successfully to lecture on insanity, was much consulted in his own department, and was an Examiner in Medicine at St. Andrew's University, which had conferred the honorary degree of M.D. on him in 1842. He did not, therefore, divorce himself from the general body of the profession when he entered a speciality. His conduct of the Asylum gave satisfaction to its Directors and to the profession in Edinburgh. His annual reports were from the beginning distinguished by great clearness, apt illustration, and literary elegance, and were most interesting, both professionally and to the public. He took great pains with his reports, and largely by their means he and his asylum became a power, not only in Edinburgh but throughout Scotland. They always contained an elaborate pathological appendix, and usually some original medical views.

Dr. Skae contributed several important papers to the medical journals. Those on "The Specific Gravity of the Brain in Insanity," on "The Treatment of Dipso-manias," on "The Legal Relations of Insanity," and on "General Paralysis," are the best known of these; but unquestionably his most important production was his address as President of the Medico-Psychological Association in 1863. The system of classification of insanity he there put forth has already had important results, and will have still more important results in the future. He was appointed Morisonian Lecturer on Insanity for 1873, and had intended to give a full exposition of his system in those lectures. He attended regularly the quarterly meetings of our Association, held in the North, and usually presided. His influence was very great, from the large number of his assistants who were fortunate enough to secure asylum appointments.

His personal character was well described in the *Scotsman* at the time of his death:—"Dr. Skae was one of the most kindly and genial of men, large-hearted, sympathetic, and tolerant, with a refined taste and most subtle humour, a singularly clear judgment and a well-balanced mind."

His personal appearance and characteristics were striking, and agreed with this description of his mental qualities. A stout figure, a kindly expression, ever ready to break out into a winning smile or a jovial laugh, reassuring brown eyes, a massive head, only second to Simpson's among the Edinburgh doctors, set on a strong neck and shoulders, the impression he made on a stranger was that of one who enjoyed life and wished others to enjoy it too. He was careless to a fault in his dress, was a great smoker, and did not, despite the good things of this life. He exercised a wonderful charm on those who knew him intimately.

He married early in life, and leaves a widow and five sons, three of whom are members of the medical profession, two of them following worthily in their father's footsteps as Asylum Superintendents.

He had been in failing health for the last two or three years, and died on the 18th of April of soft cancer of the œsophagus, from which he suffered most severely, but was perfectly calm and patient and composed in mind to the end. His unruffled mental equanimity, the expression and effect in a great degree, no doubt, of thoroughly balanced brain power and perfect bodily health up to the time of his last illness, carried him safely through his pain and weakness, enabled him to look steadily and trustfully at his grounds of hope for the future life, and was an euthanasia that made his last moments tranquil as those of a child going to sleep.

T. S. C.

B. A. MOREL, M.D.

Our great men are passing away from among us. It is not very long since we had the sad duty of announcing Griesinger's death, and now Morel, of Rouen—another man of genius—who filled a not less eminent position in psychological medicine, has gone over to the majority. We are not acquainted with the early history of this distinguished physician: all that is known to us is that he was for a long time the chief physician of the Asylum of Saint-Yon (Seine Inférieure); that many years ago he visited England, and resided for a time in the Hanwell Asylum, in order to make himself practically familiar with the working of the system of non-restraint; that he was ever afterwards its earnest defender in France; and that he has published several most valuable contributions to our knowledge of mental diseases, and especially to our knowledge of the characters of the different forms of degeneracy of

the human kind. His *Traité des Dégénérescences Humaines* is an original work, the reputation of which will grow with the growth of our knowledge; for in it he has marked the lines which future researches must follow in a most promising and important field of enquiry. His *Traité des Maladies Mentales* is a standard work, and, philosophical in its scope, full of valuable observation, profoundly suggestive, and sparkling with gleams of original insight. Nowhere else will so complete and exact an account be found of the characters of the varieties of hereditary insanity, nor so complete an exposition, from a scientific point of view, of the entire causation of insanity. The etiological system of classification which he has propounded should be well-known to our readers. Though it has not been adopted as a practical system of classification, there are features in it of which assuredly account will have to be taken in the formation of a complete classification, when the time comes for it. Besides these standard treatises Morel published a work on the Medical Jurisprudence of Insanity, and many most important contributions at different times on medico-legal cases, and on other matters of medico-psychological research. Among these we may specify, as being of special excellence, his work *De la Formation du Type dans les Variétés Dégénérées*, 1864, a medico-legal report *De la Folie Héritaire*, 1864, and a valuable contribution *D'une forme de Délire suite d'une surexcitation nerveuse se rattachant à une variété non encore décrit d'Épilepsie - Épilepsie Larvée*. His medico-legal reports on different cases which he was called upon to examine are to be found in the pages of the *Annales Médico-psychologiques*, and will well repay the study which they deserve. One of his last appearances as an expert was in the affair Chorinsky, of which we give a brief notice in this Journal, and it is a striking proof of his thorough competence, and of the confidence which a complete and exact knowledge begets, that on that occasion he predicted that Chorinsky would die of paralysis or epilepsy, and that the man has since died of paralysis.

Morel was not honoured with much worldly honour or recompense in France. His life was spent as the physician of a provincial asylum. He had fallen on the evil days of Imperialism, and he was of too noble and sincere a nature to follow in the train of its supporters; he could not frame his lips to speak well of him who, having most solemnly sworn, as President of the Republic, to preserve the Republic, immediately afterwards, aided by a band of congenial conspirators, strangled liberty in the night, and consecrated its destruction by the murder and transportation of its martyrs. But he has left behind him a name which will be remembered so long as men shall study the history of the origin and development of medico-psychology; and should the time come, as no doubt it will come, when his name is no longer heard of, when his individual reputation, like his bodily individuality, shall have passed away, the original and useful work which he has done will not perish; it will have had its immortal part in the promotion of that great process of evolution which, it may be presumed, will go on in the time to come as it has gone on in the time past.

THOMAS POWER, M.D.

The demise of another of the resident Medical Superintendents in Ireland has unhappily to be again recorded, following comparatively soon that of Dr. Smith, of Londonderry. In the present instance, an experienced and worthy member of the specialty, in the person of Thomas Power, M.D., of the Cork District Hospital for the Insane has to be announced, he having succumbed, on the 17th April last, more immediately to an attack of bronchitis complicated with Emphysema and a gouty diathesis. He had attained the ripe age of 72, and up to the last few months continued in the active performance of his onerous duties. A more kindly or well-hearted member of the profession could not have been, and greatly indeed has his loss been felt by the inmates of his Institution, in whose charge it had been for the lengthened and trying period of 28 years, his appointment dating in 1845. Dr. Power had a highly cultivated mind, and was well and thoroughly educated in his profession, having, after graduating as M.D., in Edinburgh University, in 1823, further studied for three successive years in Paris, under the celebrated Dupuytren, Laenec, Velpeau, &c. He, besides being Lecturer on Botany in the Cork School of Medicine, was the author of a useful and interesting little volume entitled, "Flora of County Cork," also a "Report on first employment of Turkish Bath as a remedy in Insanity." Dr. Power was a widower for the last few years, and has left behind him sons and daughters to mourn his loss. His eldest son in the profession also holds a lucrative and important position in the Military Medical Department at Hong Kong. Another son likewise is a medical man.

Carmichael Prize Essays.

At a meeting of the Council of the Royal College of Surgeons of Ireland, the prizes founded by the late Surgeon Carmichael, for the best essays on subjects connected with the progress of medical education, were presented to the successful candidates at this year's competition. The first prize of £200 was awarded to Isaac Ashe, Esq., M.B., Resident Medical Superintendent of the Londonderry District Lunatic Asylum; and the second, of £100, to Dr. William Dale, of Plymouth.

Appointments.

ALEXANDER, R. R., M.B., C.M., has been appointed Assistant Medical Officer to the Middlesex County Lunatic Asylum, Hanwell, *vice* Hawkes, appointed Resident Medical Superintendent of the Westbrooke House Asylum, Alton.

BALFOUR, W. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Medical Superintendent of the Metropolitan Asylum District Asylum for Imbeciles and Harmless Lunatics, Haverstock Hill, *vice* Grieve, resigned.

CAMPBELL, Dr. J. A., has been appointed Medical Superintendent of the Cumberland and Westmoreland Asylum, *vice* Clouston, appointed to the Royal Edinburgh Asylum.

CARRE, G. E., M.B., L.R.C.S.I., has been appointed Consulting and Visiting Physician to the Donegal County Lunatic Asylum, and Medical Attendant of the Royal Irish Constabulary, Letterkenny, *vice* Ashe, appointed Resident Medical Superintendent of the Londonderry District Lunatic Asylum.

CASE, H., M.R.C.S.E., has been appointed Assistant Medical Officer to the Metropolitan District Asylum for Imbeciles, Leavesden, *vice* Skelton.

CLOUSTON, Thomas S., M.D., Edin., Medical Superintendent of the Cumberland and Westmoreland Asylum, has been appointed Medical Superintendent of the Morningside Asylum, near Edinburgh, *vice* Dr. Skae, dead.

COURTENAY, EDWARD MAZIERE, M.B., and Master Surg. T.C.D., Assistant Medical Superintendent Derby County Asylum, has been appointed by the Lord Lieutenant Spencer, Medical Superintendent of the Limerick District Hospital for the Insane, *vice* Robert Fitzgerald, M.R.C.S. Eng., resigned and superannuated.

EAWIN, JAMES ALEXANDER, M.D. St. And., F.R.C.S.I., Resident Medical Superintendent of the County Donegal Hospital for the Insane, has been promoted by the Lord Lieutenant Spencer to the Cork District Hospital for the Insane, *vice* Thomas Power, M.D., deceased.

EAGER, R. T. S., M.B., M.R.C.S.E., has been appointed Assistant Medical Superintendent of the Buckinghamshire Lunatic Asylum, Stone, *vice* Alexander, resigned.

HAWKES, J., M.D., F.L.S., Assistant Medical Officer to the Middlesex County Hospital at Hanwell, has been appointed Resident Medical Superintendent of Westbrooke House Asylum, Alton, Hants.

HOWLETT, M. P., L.R.C.P.Ed., L.R.C.S.I., has been appointed Resident Medical Superintendent of the Limerick District Lunatic Asylum, *vice* Fitzgerald, resigned.

LLOYD, E. J., M.B., C.M., has been appointed Assistant Medical Officer to the Joint Counties Asylum, Carmarthen.

NOTICE.

The Twenty-eighth Annual General Meeting of the Medico-Psychological Association will be held (by the kind permission of the President and Fellows) on Wednesday, August 6th, at the Royal College of Physicians, Pall Mall, London, under the presidency of T. Harrington Tuke, M.D., F.R.C.P. Notices of papers, &c., to be sent to the Hon. Secretary, Royal India Asylum, Ealing, London, W.

Notices and Announcements of Books received, with other matters, are unavoidably postponed until next Number, on account of pressure on our space.

THE JOURNAL OF MENTAL SCIENCE.

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VOL. XIX.

PART 1.—ORIGINAL ARTICLES.

The Medico-Psychological Association. The President's Address for 1873. By T. HARRINGTON TUKE, F.R.C.P.

(*Read at the Annual Meeting of the Medico-Psychological Association, held at the Royal College of Physicians, London, August 6th, 1873.*)

GENTLEMEN,—I must again express my deep sense of the distinction conferred upon me in my election as your President. It is a great honour to occupy a place which has been held by so many eminent men, masters in mental philosophy, distinguished in science, and in literature, taken in its wider sense, as well as in that strictly medical. I am fully conscious of inability to follow them with equal steps, but supported by some of you, whom I am privileged to call my friends, and by many other valued associates, I venture to hope that your interests will not suffer in my hands. I say this, reckoning confidently on the ready help which the less advanced among us have always received from the honoured heads of our Association; one, especially, is present to my mind, by whose friendly encouragement many probationers have been induced to put forth their powers for the advancement of mental science. Distinguished in medicine, in science, and in general literature, the Founder of our Journal, and as its Editor for many years, ever courteous, considerate, and just, no one has done more for the best and highest interests and objects of this Association, than our esteemed colleague and former President, Dr. Bucknill.

In performing this, the first of my new duties, I am not discouraged by the recollection of the wisdom and the eloquence to which you have been accustomed in the ad-

dresses of those who have preceded me in this chair, from the earliest of your Presidents, to the last in order of time; from that honoured relative of mine, at whose feet I sat when my professional life began, down to my immediate predecessor, whose masterly address on the Causes of Insanity, and as perfect in its kind, whose cordial welcome to Edinburgh we can never forget. Dr. Conolly, Dr. Browne, Dr. Thurnam, Sir James Coxe, are great names, but I am not discouraged, because nothing can be farther from me than the design to vie with them. I am here to learn rather than to teach. After not many words of my own, I shall bring before you questions which engage the attention of the public, as well as of our profession; and in the friendly encounter of conflicting opinions that will follow, thoughts may be struck out to advance the good purpose for which we meet together.

Since our last yearly meeting we have lost a friend, who, although not a member of the Society nor of our profession, had been long engaged in the work in which we are still hopefully toiling. For more than thirty years he acted as Secretary to the Commissioners in Lunacy, and afterwards as Commissioner; and during the tenure of this important office he lost his useful life in the performance of his duty. I am sure you will feel, that as your President, I am right to pay my and your tribute of respect to the memory of Mr. Lutwidge.

Our Association has this year sustained a great loss in the death of our friend and former President, Dr. Skae, a physician of considerable note, a man eminently kind and humane. In his Presidential Address he laid before you a new classification of mental disease, based upon its physical causation, which is of great practical value, evincing much power of original thought and careful study.

The public career of both these gentlemen, commencing in the year 1842, was contemporary with a grand revolution in the treatment of the insane in England. In the year 1839, Dr. Conolly, following Pinel, Esquirol, and our countrymen, Tuke and Charlesworth, had published his first yearly report. In 1840 he could tell the world that there had not been one single instance of mechanical restraint at Hanwell through the preceding year. In the next year this Society held its first meeting, and began with a resolution which had powerful influence in accomplishing the great change which Dr. Conolly was working out, and assisting him in that struggle

against the difficulties which are invariably opposed to the overthrow of long-established custom:—

“That without pledging themselves to the opinion that mechanical restraint may not be found occasionally useful in the management of the insane, the members now present have the greatest satisfaction in recording their approbation of, and in proposing their thanks to, those gentlemen who are now engaged in endeavouring to abolish its use in all cases.”

Starting with these cautious words, men of acute intellect and compassionate hearts applied themselves, not to speculate upon new methods, but to investigate, and practically to learn, and to teach that better way which has been since invariably followed. In the next year our Association became thoroughly informed of the system which had been introduced at Hanwell, and offered their co-operation to Lord Shaftesbury, already distinguished by his endeavours to better the condition of the insane. In 1845 the legislature enlarged the powers of the Commissioners in Lunacy, constituting them a permanent body. From that time the work has gone bravely on. Chains and darkness and solitary confinement have given place to comparative freedom, light, and social intercourse; every art that could minister to the mind diseased has been called into action; and *that* refuge, in which the most miserable may hope for solace, has been opened to them by the appointment of resident Chaplains in public establishments, and provision for the same purpose in Private Asylums. Close bonds knit together the duties of the divine and the general physician; but in no branch of medicine, when admissible at all, is religious consolation more necessary than in the treatment of mental depression or morbid fear; no functions can be more closely united than those which require us to firmly yet trustfully attempt to heal those that are *broken in heart, to give medicine to heal their sickness.*

This Society may honestly claim the praise of having well acted a part in the great and good work. Our progress has been as sure as might have been foretold from the caution and care with which it was begun. Very early the chiefs among us were ardent supporters of the new method, and now, when we number nearly three hundred members, and can show upon our roll the name of every eminent physician in Europe, however we may differ on details, there is not one

who doubts that the power of gentleness and kindness is universal, and not least effectual with those who, in the old times, were treated as the outcasts of humanity. The persevering labour and thought with which the great object has been pursued by this Society, are recorded in our Journal, and more than that is shown there, or our duty would have been but half done. The principle of non-restraint being established, to alleviate becomes the easier part of the physician's task, and does not belong to him exclusively. It is true that in the case of insanity, irregulars contending against the particular form of evil, without proper training, would probably find that they had entered upon a warfare without counting the cost. Wanting medical knowledge, they would not always rightly divide the rational liberty which may, from the wild freedom which may not, be safely allowed. Yet they participate with the physician in forbidding harsh restraint, and prescribing pure air; all things necessary to comfort; amusement, and unvarying kindness; but because without these nothing can be done, the outer world is disposed to believe that nothing more can be done. That is not the creed of the physician. Such treatment may sometimes cure a patient, or rather may permit him to recover; but if it were regarded as all-sufficient, there would be but few cures. The special aim of the physician is to heal disease, not merely to care for the incurable. The most diligent heed to one duty will not excuse neglect of the other. Let our Journal bear witness that this Society has neglected neither. It teems with new remedies, and new combinations of those that are old. During the last ten years many drugs have been added to the pharmacopœia, and the experience of every year adds to our knowledge of their efficacy.

I speak of therapeutics in its higher sense. The indiscriminate administration of medicine is useless. Medical treatment is only valuable, when based upon sound reasoning, conjoined with prolonged experience.

At an early period, the Board of Lunacy included medical treatment in their supervision. They asked for general reports, and afterwards they enquired into the particular employment of water as one of the means of cure. From that time they have discontinued to specially notice medical treatment. We find a legal member of their board declaring before a Committee of the House of Commons, that their duty is limited to the prevention of illegal confinement, superintendence of restraint, lodging, and the like. To physicians,

this seeming indifference to medical treatment has naturally been surprising; and, in truth, our special functions seem not to be very highly esteemed, since the Chairman of the Board has pronounced that any sensible man is as good a judge of insanity as a doctor. While altogether differing from this opinion, we must acknowledge that Lord Shaftesbury and the Board have done well and wisely all that they have done, and perhaps not less in what they have forborne to do, leaving medicine and the medicinal art to our care. It might be shown that we have proved ourselves worthy of confidence, and that the trust has not been exercised carelessly, but it is unnecessary. I need not detain you with proof, it will be enough to resolve that we will perpetuate this Society, still united together to discover new remedies, and to improve modes of treatment for the better prevention and cure of mental disease.

And now it remains for me to lay before you the subjects for discussion to which I have alluded, and which I will mention in the order in which it may be convenient to consider them.

- 1.—Is medicine, in its narrow sense, of paramount importance in the treatment of mental disease?
- 2.—The increase of insanity in England.
- 3.—Can the present system of treating the insane be improved?

1.—If medicinal science be anything more than a name, it is hard to understand how the first question can be answered otherwise than in the affirmative. Let me remind you of the eloquent words of Dr. Browne, delivered in the course of his address from this chair, in 1866; and no one could speak from greater experience, or knowledge of the subject:—

“Such a view does not exclude enlightened therapeutical treatment; it enhances its value, and gives not only a wider scope, but a more precise and intelligible aim in its employment. If our knowledge of the physical changes upon which the different forms of alienation depend was more extensive and sound, the limits and effects of remedies might be as much relied upon as in other maladies; but, even in the present state of our science, when treatment is founded and judiciously conducted on the principle of restoring to health the organization generally with which mind is connected, and upon the normal state of which its soundness depends, success attends the attempt in a large number of cases.”

With these views I entirely concur, and I think it most important that on the subject of the value of therapeutics in the treatment of insanity, this Association should pronounce

no uncertain opinion. A cloud of scepticism has appeared in the horizon of modern science, has darkened medicine, and would, if it could, obscure still higher truths. I am proud to preside over a Society in which the practical work and earnest writing of the majority of its members, shew that they are true to their faith as physicians, and can trust in the resources of their art with confident hope in their still further development.

To name the workers in the great field of therapeutical enquiry is really to nominate almost all those I see around me. We may expect to hear from Dr. Macintosh his further experience in the use of the hypodermic injection of morphia; from Dr. Clouston and Dr. S. D. Williams their views as to the action of the Bromides and their combinations; Dr. Lockhart Robertson, ever interested in medicine, can speak to us of the use of digitalis, and the value of the Turkish bath; the action of conium, of nitrous oxide gas, of the continued galvanic current, has been investigated by Dr. Burman, Dr. Mitchell, and Dr. Newth. Within the last few days, Dr. Crichton Browne, already known for his successful application of the Calabar bean and ergot of rye, has given an able contribution to medical literature, and added a new remedy to our list, by his discovery of the value of nitrite of amyl in the treatment of epilepsy. The paper is published in the last number of the West Riding Asylum Reports.

From these gentlemen we may hope to learn much, and from other members of the Association we may hear the result of their individual experience. As physicians, we have no higher aim than the relief of disease; as members of this Association, I believe we can not better employ our meetings than in discussing the means and agencies by which such relief can be accomplished.

One of the most important questions that can engage the attention of the physician practising in one branch of medicine—one, indeed of momentous consequence to the community—is the alleged increase of insanity; is it possible that, despite our exertions, the disease, which it is the business of our lives to subdue, is gradually gaining upon us? Very opposite opinions are held upon this subject, and in some very able papers in the "Journal of Mental Science" Dr. Lockhart Robertson has exhausted all that can be said, has adduced all that can be brought forward in advocacy of the hopeful view that the statistical returns lead to a fallacious conclusion, and that insanity has not increased in any undue

proportion. I regret to say that the elaborate annual reports of the Commissioners in Lunacy, and the inference to be drawn from them, seem to me to unanswerably demonstrate the reverse. The subject naturally attracts much public attention; it is one well worthy of our most careful consideration.

In 1861 the Commissioners in Lunacy reported that they have no reason to believe that insanity is increasing, of course admitting that the absolute number of the insane was larger. They ascribe that to improved registration; wide recognition of the advantages of asylums, and to other causes, which have obvious weight. I am not aware that they have since expressed any opinion, but the materials to form a judgment upon the subject are amply afforded in their valuable annual reports. In the report for 1872 the Commissioners have given the table now before you.

TABLE II.—The Ratio per 1,000 of the Total Number of Lunatics, Idiots, and Persons of Unsound Mind, to the Population, in each year from 1859-1873, both inclusive.

YEAR.	Population.	Total Number of Lunatics, Idiots, &c., on 1st January.	Ratio per 1,000 to the Population.
1859	19,686,701	36,762	1·86
1860	19,902,713	38,058	1·91
1861	20,119,314	39,647	1·97
1862	20,336,467	41,129	2·02
1863	20,554,137	43,118	2·09
1864	20,772,308	44,795	2·15
1865	20,990,646	45,950	2·18
1866	21,210,020	47,648	2·24
1867	21,429,508	49,086	2·29
1868	21,649,377	51,000	2·35
1869	21,869,607	53,177	2·43
1870	22,090,163	54,713	2·47
1871	22,712,266	56,755	2·49
1872	23,074,600	58,640	2·54
1873	23,356,414	60,296	2·58

It will be seen from this return that in the ten years ending in June, 1873, there has been an absolute increase of the insane from 43,118 to 60,296, in other words, the number of the insane upon the register of the Commissioners is each year increased by 2,000. That there is a much greater increase than is commensurate with the growth of the population is shown by the ratio of the insane to the sane having increased from 1·86 per thousand to 2·58.

The Commissioners, in their report, have compared the aggregate number of the insane with the entire population. In the following table, to which I am mainly indebted to the kind courtesy of Dr. Farr, our most eminent statistician, the increase of insanity is more strikingly shown by dividing the population into groups of those below twenty, those of middle life, and of advanced age.

TABLE shewing the number of insane in each year from 1861 to 1871, the ratio per 1,000 of the population at different ages.

DATE.	Ratio of Insane per 1,000 of population.	Ratio per 1000, from 20 to 60.	Ratio per 1,000 from 20 to 60 and upwards.
1861	1·97	4·1	3·6
1862	2·02	4·3	3·7
1863	2·09	4·4	3·8
1864	2·15	4·5	3·9
1865	2·18	4·6	4·0
1866	2·24	4·7	4·1
1867	2·29	4·8	4·2
1868	2·35	4·9	4·3
1869	2·43	5·1	4·4
1870	2·47	5·2	4·5
1871	2·49	5·3	4·6

Mental alienation being most frequent in its occurrence between the ages of 20 and 60, excluding children and the aged, in figures counted by millions, will make a very great difference in the gross returns, but does not affect the rate of increase. It will be seen at once that the ratio of the insane to the sane, in the adult population, has increased during ten years from 4·1 to 5·3 per thousand, an increase of more than 20 per cent.

In the first column the ratio per 1,000 of the insane is given in reference to the whole population; the second is the ratio of the insane in the age between 20 and 60—it is to this I have specially drawn your attention.

These figures would appear to prove that a great wave of insanity is slowly advancing, but making each year a definite progress; further examination may show that the danger it presages is more apparent than real, but it is incumbent upon us to examine it carefully, to study well the laws by which it is formed and directed, and to carry boldly against this sea of trouble all the arms of science and medicine, all the arts of prevention and cure.

Various reasons have been suggested to explain this increase, supposing it to be such, and some of these it may be useful to consider.

It has been thought that the congregation of large bodies of men in towns and cities, the confinement arising from the nature of their toil, and the restriction of their space, has given us a degenerate population, subject to mental disease; but this is not altogether so, such causes would induce idiocy in children, and diminish the average duration of human life, but would not necessarily induce insanity in men of mature years; moreover, it is by no means certain that the inhabitants of the crowded city are more prone to mental disorders than the inhabitants of agricultural districts.

The emigration of the adult population, which has been steadily increasing during the last half century, may also have had some influence upon these returns, but it cannot be a great one; if emigration takes to other and kindred shores some of the finest of our peasantry, the best of our workmen, it also fortunately tempts the unstable, the enthusiastic, the adventurous, the disappointed, who, perhaps, remaining here, fretful and despairing, would have swollen the number of the insane.

The hypothesis has been advanced, that the progress of civilization, and the spread of education among the masses, have with a greater activity of brain produced a corresponding increase of nervous exhaustion and disease. This is a melancholy theory; it would unsettle our belief in the onward progress of mankind, it would shake the very foundation of our faith. Such a theory receives no support from statistics; if intellectual training and mental exertion were causes of insanity, then it should be more frequent in those ranks in which during the last half-century, the mental powers have been so much more cultivated and exercised. The statistics of lunacy show that the increase of insanity has been amongst the poorer classes

only. The Commissioners in their eighth table state the per centage of poor lunatics to the total number of the poor to be 3.66 per thousand, in 1859, but the large proportion of 5.98 per thousand in 1873, or nearly double in 15 years.

This increase has been notably great during the last two years. I fear the explanation is to be found in higher wages, and the consequent means of undue indulgence. But there is another aspect to this view. It may be that the inexorable laws of supply and demand, while giving more than due wages to some of the working class, plunge others into dire distress. The knowledge of this can only add to our tender pity for the insane poor. That poverty and the absence of mental training have much to do with the production of insanity is shewn by the return of the Commissioners in Lunacy for Ireland. From 1846 to 1861 there was an increase of *one-third* in the number of the insane in this part of Great Britain, the population by emigration and other causes having diminished during the same period by nearly three millions!

The Chief Commissioner for Scotland, in his presidential address last year, spoke well and wisely in counselling that this state of things should be met, not by "increasing our asylums," not by "waiting till insanity is produced," but by "arresting its progress and stepping in before the mischief is accomplished."

This is, perhaps, the business of the state rather than ours, but we can at least help, by shewing that only "dull fools suppose" that education can be instrumental in the increase of brain disorder. On the contrary, it will prove the chief means of its prevention, if by education is understood the training that teaches the control of the passions and the emotions, the careful exercise of reasoning power, and calm trust and belief in the One sure Guide, our *present help in trouble*.

In order to examine whether the treatment of the insane, apart from therapeutics and the so-called non-restraint system, can be still further improved, it is essential to consider the present methods of treatment and their results. As in a great majority of cases separation from home and its associations is unavoidable, the law recognizes for their safe care and detention seven various forms of institutions; in the case of the rich, who can command treatment at home, there is no legal provision.

The following table, taken from the same valuable reports of the Commissioners as the former one, gives the numbers in each class of institutions, and the percentage of cures in them:—

TABLE showing the Proportion of stated Recoveries to the Admissions in each Year.

	Number of stated Recoveries to 100 Admissions.												Averages.		
	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.		1871.	1872.
County and Borough Asylums ...	34.04	30.65	35.42	39.28	36.93	37.11	33.88	35.71	36.19	36.10	35.72	36.36	33.78	38.35	35.08
Registered Hospitals ...	46.65	35.99	43.23	37.71	39.95	36.10	37.24	48.70	37.07	36.72	36.74	40.09	37.20	30.98	38.91
Metropolitan Licensed Houses ...	32.04	30.79	28.29	29.85	32.01	30.93	23.04	23.75	21.24	24.05	24.24	21.83	26.94	20.83	26.41
Provincial Licensed Houses ...	39.33	33.56	31.70	32.32	33.07	29.52	24.49	33.95	34.11	28.62	29.88	29.26	32.55	27.15	31.39
Naval and Military Hospitals, and Royal India Asylum ...	25.22	23.13	18.16	21.12	17.94	19.56	16.94	5.26	22.33	15.28	31.82	17.98	30.37	40.56	21.83
Criminal Asylum ...	...	...	...	...	1.01	3.07	7.41	13.95	9.33	4.21	18.75	32.25	22.07	17.64	12.96
Private Single Patients ...	15.63	4.00	5.88	13.11	9.52	3.77	9.64	12.50	6.34	8.09	10.06	8.22	10.10	11.25	9.15
Proportion per cent. of the aggregate Number of Re- coveries to the aggregate Number of Admissions ...	35.12	31.06	34.11	36.81	35.34	34.37	31.56	34.22	33.08	33.06	33.95	34.14	33.01	34.87	33.95

Although it would be unwise to give undue weight to minor statistics, these figures involve large numbers, and include many years; in the absence of any other indication it may be as well to take them for what they are worth; even if imperfect, they are at least some measure of the success or failure of the methods in question, in relation to the great object, the cure of the insane.

First as to the county asylums, the table shews us that during ten years the average percentage of the cured, calculated upon the admissions, was about 35, and in the registered hospitals 38. As there is a higher class of patients in the latter, this is further proof, if such were needed, how surely linked together are poverty and insanity. The fact that the cures in these institutions are nearly equal speaks well for the management of the former.

I shall not enter into the details of the methods by which these large asylums may be improved; they are still in a transition state, and the boarding out of selected cases, of building pavilions, of a more extended intercourse between the sexes are all questions under consideration. Admitting that the first cost of some of these asylums has been too great, and has unduly pressed upon the ratepayer, the present expenditure is very carefully regulated, and in some institutions the result has been all that could be desired. It must, however, be remarked that the exact figures which are to be found in the Commissioners' reports, show that there is a very great variance in the ratio of cures in different asylums. Why is it that the average rate of cure in all should be only 35 per cent., while in one asylum 55 per cent. are cured, and in another the rate of cure sinks down to only 28 in the hundred?

Let there be no Gheel colonies, no material change in a system that at its best is so successful; but it will be well to explain the variance referred to, to take measures to improve those asylums which fall so far behind the rest. If the rate of cure in all public asylums were more nearly equal, the difficulty as to the increase of the insane would be removed, cures of fifty-five per cent., or even forty-five, would soon palpably diminish the number, that now assumes so formidable an aspect. As to private asylums, the table before us does not give the proper means to judge the question of their usefulness; the result as given is obtained by grouping together a number of large and small asylums, some not under the charge of medical practitioners at all, others con-

taining large numbers of the poor; and no one could form a correct judgment upon such data.

More careful classification of private asylums would lead to a very different conclusion, and certainly it must be conceded that the report of the Commissioners appears to prove that the progress of insanity in the upper classes has received a material check. It should be remembered that comparing the results as to cure in public and private asylums, is hardly fair to the latter. To the poor the asylum is a welcome refuge; they have skilled medical attendance, kind treatment, and in the best asylums in a great proportion of cases a certainty of cure. In the higher ranks of society the asylum is as much as possible avoided, and the object of the physician is to cure the patient without resorting to this the last measure. In the present state of public opinion, the physician is frequently right; but I confess I have grieved to see prejudice interfering with and delaying proper treatment, and valuable time lost, and I certainly agree with Lord Shaftesbury in his emphatic declaration given in the report of the Select Committee of the House of Commons, in 1859. His lordship says:—

From the bottom of my heart, I would advise anybody, if it should please Providence to afflict any member of his family, to send him or her to a private asylum; if my own wife or daughter were so afflicted, and I could not keep her in my own house, under my own eye, I would send her to a private asylum—a good private asylum.

Lord Shaftesbury goes on to state as his reason “that there are some most remarkable examples of excellence and comfort among them.” And this shows, as I believe, that the private asylums, like the public ones, vary in their mode of treatment and in their rate of cure.

That the decrease in the number of the insane of the higher ranks is not due to their being sent away from home into other houses than asylums is fully shewn by the returns of the Commissioners; less than one in ten of such cases the Commissioners register as recovered.

The diminution in the number of the insane of the upper classes is due, I believe, to the improved knowledge of the disease amongst the medical profession; hence arise an earlier recognition of the malady, and a quicker application of remedies. These, moreover, have recently been much increased in number, and their action and those of the older ones more studied and better understood.

Sanitary Science, too, has achieved much; the muscular training of our youth, now so universal, has done great good; again, our country during the last decade has had a happy immunity from those disturbing influences that act as banefully upon the intellectual powers of a nation as upon individuals, and the wider spread of education has not only trained the mind to fight against imaginary evils, but to bear patiently those that are real and unavoidable.

It only remains for me to ask your opinion upon the subjects I have named; it is impossible that in this large meeting of the most eminent of our profession but that something may be struck out to advance the interests we have so much at heart, and that which I may elicit from you will recompense for those deficiencies in my own address of which I am so conscious. I sincerely thank you for your kind attention, and again must express my gratitude for the honour you have done me in my election as your President.

The Morisonian Lectures on Insanity for 1873. By the late DAVID SKAE, M.D., F.R.C.S.E., Physician Superintendent of the Royal Edinburgh Asylum, &c., &c. Edited by T. S. CLOUSTON, M.D.

I take this my first public opportunity of thanking the Patron of the Morisonian Lectureship on Insanity, for the honour of nominating me to the appointment of lecturer. Permit me also to say that I feel very highly gratified and honoured in addressing the Fellows of the Royal College of Physicians in their own hall. This gratification is, however, alloyed with a very strong conviction of my inability to do justice to my subject or myself in this course of lectures. It would be absurd in me to give to you a systematic course of lectures upon insanity, the subject being one with which you are all, as physicians, more or less familiar. The duty devolving upon me is, I presume, that of giving you any special opinions I may have formed from my point of view, and from my long-continued and very large opportunities of observation.

This I shall have much pleasure in attempting, although it will lead me necessarily to repeat myself to a certain extent, as I have already published on most of the subjects which will pass under review. I shall endeavour to avoid repetition as much as possible, and I trust you will bear with me, while I endeavour to explain how far these opinions

have been extended or completed, and how far they will stand the criticisms passed upon them by others.

The review will comprise first, the mode I have suggested for the classification of insanity, with some remarks on the comments on it, offered by some, the objections made by others, and the extent to which my system has been adopted or modified by recent writers on insanity, at home and abroad.*

This system of classification was first made known in my presidential address delivered in London, to the annual meeting of the Medico-Psychological Association in 1863. The system had, however, been more or less dwelt upon in my clinical lectures for some years before.

I may remind you that up to the last 12 years or little more, our only method of classifying the insane was that offered by Pinel, modified by Esquirol, and was founded entirely upon *mental symptoms*. The forms of insanity were referred to *mania* (acute and chronic), *melancholia*, and *monomania* and *dementia*, and the forms of idiocy were simply two degrees, viz., *imbecility* and *idiocy*. This classification has been in common use up to the present time, modified by some by further sub-division, such as moral insanity, monomania of *fear*, of *suspicion*, of *unseen agency*, *pyro-mania*, *kleptomania*, &c., &c., but all founded upon the same basis, namely, the *mental symptoms*. This is, in fact, not a classification of diseases, but a classification of symptoms. It is very much

* The following introductory remarks by Dr. Clouston were made on the occasion of delivering the lecture :—

Before I begin this lecture you will perhaps allow me, in the first place, briefly to explain the circumstances under which I appear before you to deliver the Morisonian Lectures on Insanity this year, and then to say a few words in regard to the position in his own department of medicine occupied by the distinguished physician, whose place I am conscious of filling so unworthily. As you are all aware, the late Dr. Skae was selected by the patron as Morisonian Lecturer on Insanity for the next three years, and his choice had been universally approved by the profession. Dr. Skae had selected the subject of the lectures, had arranged the method of treating it, and had, in the midst of much suffering and weakness from the disease that proved fatal to him, prepared three of the six lectures. As he himself told me this was "hard work," and he persevered until his strength was no longer equal to the task. He then sent for me, and asked me if I would complete them on the plan he had arranged, and read them for him. This, of course, I at once agreed to do, provided the consent of the Patron and the President of the College was obtained. Indeed, I felt that I was greatly honoured by the request, and was more than pleased to be able to do this small service to my old teacher and chief, whose genial friendship I had always set store by, and whose massive intellect I had always so much admired. I certainly did not promise to take up and finish the work of such a man without hesitation and diffidence, but it was my clear duty to do my best, and this I promised Dr. Skae to do. To a certain extent, I was placed in favourable circumstances for doing so, for he had corresponded with me about the subject of lectures, and had previously sent me those that he had written that I might read them over.

the same thing as if we were to classify *deliriums* into high or raving delirium, or muttering delirium, or wandering delirium, &c., instead of classifying the diseases of which these varying forms or degrees of delirium are merely symptoms. We speak of inflammatory, and typhus, and typhoid *fevers* accordingly, and in our descriptions of these affections we mention the kind of delirium which generally appears in each.

The classification founded upon symptoms is not only unsound in principle, but most unsatisfactory and uncertain. This has been long felt—and for these reasons:—

1st.—The various so-called forms of insanity merge gradually into each other. How many experts in this department of medicine would agree in certain cases of mania, as to whether they were acute or subacute; how many would agree as to cases of chronic mania and noisy dementia? And so of the rest of their forms.

2nd.—These forms sometimes change very rapidly. What was acute mania one day may be monomania the next, and dementia the following. I had under my care for about twenty years, a gentleman who presented a very singular case of *folie circulaire*. One day he was full of fun and laughter, and talked pleasantly to all around him; the next day he was maniacal, raving, and shouting, and threatening, tearing his clothes, and striking anyone who came near him dirty and degraded in his habits, of course, the following day he

Dr. Skae's lamented death took place soon after those arrangements had been made, but the patron of the lectureship has been pleased to confirm them, and appoint me in his place for this year.

I need not crave indulgence on your part, gentlemen, for any imperfections that may exist in Dr. Skae's portion of the lectures, after what I have said of the circumstances under which they were prepared. They will always stand as a record of his devotion to his profession even when he was dying. But I do most earnestly trust that you will extend forbearance to me for the very manifest crudeness and deficiencies of my part. I have tried to carry out Dr. Skae's ideas, and it is by no means easy thus to take up another man's thoughts; but perhaps my best excuse must be the absence of that calm and undistracted state of mind so necessary for the exposition of scientific work, but so apt to be denied to anyone who is a candidate for an important office.

The subject selected by Dr. Skae for this course of lectures was an exposition of his own system of classification of the various forms of mental derangement, and as that is so clearly his greatest work for Medical Science, it forms an appropriate standpoint from which to view his position among alienists, and the results of his professional life. He would have entirely coincided in this view, and been willing to stand or fall as to his posthumous fame by his system of classification. He expressed himself strongly to me to that effect, and was most anxious that it should appear in a complete form, each of his varieties being thoroughly worked out, defined, and made clearly recognizable by any competent man in the profession who should meet with a case. All that Dr.

was profoundly melancholy, and the two succeeding days he was demented almost to fatuity. To what form under the old system would you refer such a case?

3.—Sometimes these forms, sooner or later, partake of the symptoms of other forms. All incurable forms tend to dementia, and you may have symptoms of dementia, well-marked ones, too, in the emperors, queens, and divine persons, and other monomaniacs, who are to be found in most asylums.

Dementia, you might imagine to be one of the symptomatological forms of insanity about which all writers on the subject would agree—and where the statistics of all asylums would be free from the error of putting X for Z. But it is not so. Dementia is said to be any impairment of the mental faculties, from mere loss of memory, or slight childishness, down to absolute fatuity. But many of our melancholics and monomaniacs shew symptoms of great mental weakness, incoherence, loss of memory, slow and difficult processes of thought, silliness in habits and manner, so that some people would class them among demented, while others would enter them upon their records under the head of melancholia or monomania of some kind, in consequence of some prominent delusion. That such is actually the fact, is singularly illustrated in the tables of my own asylum reports. For six years, when my senior assistants were the late Dr. Wingett, Super-

Skae ever wrote on insanity was of the most practical character, and unquestionably the chief merit of his system of classification lies in its being by far the most practical and the most useful system to us, as practitioners, that has yet appeared. While the authors of other systems have nearly all tried to go on some definite principle or other, to have their nosological pigeon-holes all of a size and all in a row, he was content to have much variety in everything about it, from the nomenclature to the essential nature of the diseases he described. But there is a very important principle at the bottom of his system, and one that concerns us as physicians more than anything else. It was never in any way reduced to a formula or defined by Dr. Skae himself, but no one can study his system and compare it with other systems without seeing it. It is the *exclusion of everything mental or psychical connected with insanity*. This may be called a principle of negation, but it is by far the most important principle that ever was adopted in this department of medicine. Any strong characteristic, provided only it was a bodily one, relating to symptoms or pathology, but above all to causes was seized on and made to do duty in naming some variety of insanity by Dr. Skae, and the result is that as to treatment and prognosis his system is a real help to us in each case that comes under our observation, and not a mere intellectual gratification, enabling us to reason out the proper niche to put it into.

I was very much struck by this practical view of his classification, when, two years ago I happened to be endeavouring to put in a short and practical form an answer to the very important and highly practical question—"What cases of insanity should be sent to lunatic asylums?" which I had so often been asked by the medical men of Cumberland and Westmoreland. I found that all the other symptoms of classification of insanity were absolutely useless in giving an

intendent of the Dundee Asylum, Dr. Grahamsley, and Dr. Sherlock, successively Superintendents of the Worcester County Asylum, the number of cases of dementia entered by them as admitted to the asylum was 406, and the number of *dements* discharged *cured*, amounted to 94! The cures being 23 per cent.

During the six years when Dr. Clouston, of the Carlisle Asylum, and my son, Dr. Frederick Skae, were senior assistants, they admitted, according to their record, 207 cases of dementia, about one-half of those admitted by the others; and they discharged *cured* only three cases! Indeed, Dr. Clouston cured *none*, although his successor claimed three, being in the ratio of 1.45 per cent of cures as compared with the 23 per cent. of their predecessors. Nothing can, I think, be more apparent from this than the inexactitude of the old terms of classification, and the variety of meaning which different alienists affix to each. All the gentlemen I have cited were persons of excellent talents and powers of observation, they were all educated in the same school—they were all devoted to the study, and all afterwards highly appreciated in our public asylums, and yet no two of them could record even their cases of dementia alike. I think I was fully warranted in the statement I made in the address alluded to, viz., that there is, in my opinion, “no two asylum reports published in the empire in which the same rules and distinc-

answer to this question, but that Dr. Skae's system was most helpful. That is merely a specimen of its practical value.

Indeed, if we wish to realize this in a decided way, we have merely to look at some of the numerous systems of classification of insanity that have been put forth. Cullen's sixteen divisions, Arnold's thirty varieties, Heinrich's numerous metaphysical distinctions, of what use are they? Not one of them is now recognised as a true and distinct disease. Even Pinel and Esquirol's five famous genera of mania, melancholia, monomania, dementia, and idiocy, though still adopted in medicine, literature, jurisprudence, and official statistics, do not help us as physicians practically to understand our cases, and above all to treat them and forecast their terminations. Now it is quite certain that even when the day comes when we shall know precisely the state of the brain cells which causes a woman to be restless, violent, and sleepless, to mistake identities, and to forget her sucking child, it will still probably help us as to the treatment and prognosis of the case, if we call it “puerperal insanity,” the puerperal state being on the whole the most important *bodily* condition connected with the case. This is the real principle of Dr. Skae's classification, and only the possession of that rare combination of qualities, the generalizing faculty and the clinical faculty, enabled him to see that as certain cases of insanity could, by the universal consent of the profession, be best described by the epithets puerperal or epileptic, so nearly all other cases had some bodily conditions to which they stand in as close relation as a woman's madness after her confinement does to her puerperal state. Perceiving this, his large clinical experience gave him materials for exemplifying nearly every variety. The idea of this classification had gradually grown upon

tions are rigidly observed in tabulating the forms of insanity under treatment." Of what possible use can this mode of classification of insanity be? Of no practical utility at all as a means of classification, but, on the contrary, a source of great mischief, by multiplying errors, and confusing all our statistics so much that they are nearly unreliable.

Do not, however, misunderstand me. I do not undervalue the old terms—mania, monomania, dementia, &c., &c.—as a classification of *symptoms*, far from it; it is an excellent classification of *symptoms*, but not a classification at all of *diseases*, or *forms* of insanity. But I shall have occasion to recur to this subject again, when I have briefly summarised the principles on which I propose to classify the forms of insanity.

The first point which has struck me in my experience, both in respect to others and myself, whether as regards cases placed under our care, or cases in regard to which we are asked to give our opinion in consultation, is the mode in which we all very soon come to look at any new case. We do not ask ourselves, nor do we seek to determine by the questions we put to the patient or his friends, what the nosological name of his particular form of insanity is, whether it is mania, monomania, or dementia. What we are solicitous to know is the *natural history* of the disease before us, and its cause. Is it a Congenital disease? Is it one associated

him as the result of his clinical observation, while his experience in treating cases had produced a strong conviction, which was always strengthening, as to the practical uselessness of the other methods of naming and classifying mental derangements. I shall always look on it with peculiar satisfaction that I was the first of his assistants to take up one of his varieties of insanity, that connected with the consumptive state and diathesis, and work it out from the records of the Royal Edinburgh Asylum. His gratification at the decided results I obtained was unbounded, and very soon after he began to arrange his system in a systematic way. Since then a very large number of his groups have been investigated with more or less precision, but it was characteristic of the man that having laid down the general plan, he left the working out of the details to others, merely giving advice and encouragement, and in the most generous and lavish way, placing his whole clinical experience at their disposal. This course of lectures was, in fact, the first systematic exposition by him of his system as a whole, and of all its varieties of insanity consecutively.

While his position in his own department of medicine will thus unquestionably be fixed by the value which posterity may attach to his classification, at the same time his papers on General Paralysis, the Specific Gravity of the Brain Substance in Insanity, and on the Legal Relations of Insanity, and his twenty-six Annual Reports of the Royal Edinburgh Asylum, show him to have been a man of close and exact observation, of clear judgment and great mental capacity. It was in his paper on the Legal Relations of Insanity that he first put forth his now famous definition of insanity that threatens to live as long as his classification, viz., that it was "a disease of the brain affecting the mind." All his

with Epilepsy, caused by masturbation, by parturition, or protracted lactation, or some other debilitating cause, or by hard drinking? Is it a case of organic Brain disease, of General Paralysis? Is it one connected with Phthisis, with the critical period, or with the atheromatous vessels of the brain of the Senile Dement? Such are the kind of questions we seek to solve, in order to form a diagnosis of the nature of the case, and in order to enable us to answer the anxious inquiries of friends as to its probable termination; and such instinctively and practically are the data upon which we classify the cases which are placed under our care, in our own minds.

The basis of my classification is essentially, although not entirely, an *etiological* one. We cannot, in our present state of knowledge—perhaps we may never be able to—say what is the proximate pathological cause; but we may very generally be able to point out the next link in the pathological chain of causes, namely, the bodily disease or condition which precedes or accompanies certain attacks of insanity, which gives a special character to its symptoms, and determines its course and duration, and from that bodily disease I would designate such attacks. It is the nearest pathological cause we can get, and it may be said to act either directly or sympathetically on the brain. We have thus cases of epileptic insanity (that has always been recognised as in some degree a special form of insanity), hysterical and amenorrhœal insanity, ovarian insanity, phthisical insanity, rheumatic, and syphilitic insanity, and so forth.

writings exhibit both power and elegance in their literary execution. His reports were singularly interesting, instructive, and suitable for their very mixed readers. This is not the place to say anything as to his practical work at Morningside, his interest in the welfare of the insane, or his many attractive personal qualities. And as to his faults, and the work he might have done that he did not do, which of us shall cast the first stone? *De mortuis nil nisi bonum.* Taking him altogether, his place among the physicians who have devoted themselves to the study and treatment of insanity in this century will certainly be a very prominent one. He sowed the seeds of what will yet be important pathological and therapeutical work in regard to derangements of the functions of the brain convolutions. He gave a strong impetus in the direction of the study and treatment of insanity, as an ordinary bodily disease, bringing it into connection with other bodily diseases, ignoring the metaphysical clouds that had obscured its nature and study. Three distinguished alienists have died lately, and the work of each of them was very typical of the countries in which they lived. Griesinger broke down the isolation of insanity, placing it among the other diseases of the nervous system which the physician has to treat every day, and actually had wards added to the Charité Hospital at Berlin, where persons labouring under insanity and all other diseases of the nervous system are placed together, treated by the physicians, and studied by the students just as the fever patients are in the wards. Morel, in France, whose death occurred almost at the

In many forms of insanity, however, we cannot point to a local *disease* as the cause, but we can point to a local disturbance or condition as essentially connected with it, such, *e.g.*, as the insanity of pubescence, of the puerperal state, climacteric insanity, &c. This I think also a fair basis of distinction and classification. Again, you may have a direct physical cause, as in sunstroke, or traumatic insanity from blows on the head. Sometimes the cause is the result of blood-poisoning, or of pure anæmia from starvation or other debilitating causes. Lastly, there may be no cause known, and yet the form of insanity may be distinct enough from other forms in its natural history. Of such a form I may mention climacteric mania, as I call it, in the male, occurring at a certain period of life, when there is no such change takes place as occurs in the female at her climacteric, and none perhaps that we can be sure of; but it is, I think, undeniable that there is a form of insanity occurring at the age referred to, having a definite type and presenting a group of symptoms quite characteristic, and like those met with in the female, and which, added to its date and course, give to it a *complete natural history*.

The same might be said of the general paralysis of the insane—its *natural history* would alone determine it to be a special form of insanity, independent altogether of the pathological changes which have of late years been so fully made out.

I asked you a few minutes ago to what form of insanity an adherent of the old classification would refer the case of a gentleman who, on every five successive days, at certain times, for twenty years, had passed through the successive symptoms of a gay monomania, a raving mania, a melan-

same time as Dr. Skae, went into the whole subject of the degenerations and degradations, physical, mental, and moral of the human species, their forms and varieties, their causes, concomitants, and laws of hereditary transmission. He treated the whole subject from a physical point of view, but no stand-point could have been better than his for bringing such phenomena as insanity, imbecility, and idiocy, within the category of ordinary bodily degenerations and diseases, for he showed how they were caused by physical agents such as poisons, unfavourable conditions of food, clothing, and climate, and that when so caused, they were transmitted from parent to child, not necessarily in the same form, but as other bodily diseases which had formerly been supposed to have no kind of connection. A drunken father would beget an insane son, while the grandchild might be an epileptic, and the great grandchild a helpless idiot, incapable of continuing the race any longer in any form. Skae went into the subject from no such wide point of view as the two others, but was led into his position by simple observation of clinical facts, founding his system on these without any sort of idea running through it, except the practical and empirical one of understanding his cases, and treating them in the best way, and on the whole his work seems to be as important to humanity and medical science as that of his two more widely known contemporaries.

cholia, and a dementia. I think I hear you ask, to what form would I refer it under my system? I would be quite content to take the name I gave it, and which such cases have received, viz., *folie circulaire*. It is sufficient to indicate its present character, and that I think is enough. If I had known the case at its origin, I might have traced it to some pathological cause or concomitant—such as frequently precedes similar cases.

Proceeding, then, from these views of the most practical basis on which to construct a classification of the various forms of insanity, I have formed the following list of the various forms of insanity.

Insanity with Epilepsy.	Rheumatic Insanity.
" of Pubescence.	Podagrous "
" of Masturbation.	Syphilitic "
Satyriasis.	Delirium tremens.
Nymphomania.	Dipsomania.
Hysterical Insanity.	Insanity of Alcoholism.
Amenorrhæal "	Malarious Insanity.*
Post connubial "	Pellagrous* "
Puerperal "	Post febrile "
Insanity of Lactation.	Insanity of Oxaluria or Phosphaturia.
" of Pregnancy.	Anæmic Insanity.
Climacteric Insanity.	Choreic.
Ovarian "	General Paralysis, with Insanity.
Hypochondriacal Insanity	Insanity from Brain Disease.
Senile "	Hereditary Insanity of Adolescence.*
Phthisical "	Idiopathic Insanity { Sthenic.
Metastatic "	{ Asthenic.
Traumatic "	

In this table you will see that all the forms of insanity can be referred either to some bodily disease, or bodily functional disturbance, or direct injury to the brain, or blood-poisoning affecting the brain, or, at least, to a form having a readily recognised natural history. As we shall presently see, these forms of insanity not only have a well-marked origin, but when we come presently to review the symptoms of each form, you will find that within certain limits each form has a group of similar symptoms, and that an expert studying insanity from this point of view could generally tell at once a case of phthisical insanity, one of puerperal mania, or traumatic or syphilitic insanity, and so forth; the cases, in fact, have all within, as I have said, certain limits, a natural history, as well as a common bodily pathological cause.

It has been objected to my system that the forms of insanity which I distinguish do not always present the same group of symptoms, but that in many of them one may be

* These three forms of insanity I added with Dr. Skao's consent.—T. S. C.

maniacal, and another melancholic, and that, therefore, you cannot diagnose the form from the symptoms. This may be true to a certain extent, if we look to certain mental symptoms only; but it is equally true of those forms of insanity which have always been designated from their bodily cause or natural history. In epileptic insanity, *e.g.*, you may have mania or monomania, or dementia. And so of the insanity of general paralysis, you may have a maniacal attack, or the delirium of inexhaustible riches and power, or deep melancholia, or dementia; yet no one ever questioned the propriety of the names epileptic insanity or general paralysis of the insane as correctly defining and indicating distinct forms of insanity. In fact, it is the peculiar merit of my system that it does classify as the same disease cases where the mental symptoms may vary from time to time, and within certain limits; and it is the peculiar and fatal defect of the old system that it cannot do this, but must change the name of the disease every day if it happens to pass from mania to monomania, or from the latter to dementia.

To the list of thirty-three forms of insanity, I have added another form—*Idiopathic Insanity, Sthenic* and *Asthenic*. *Sthenic* when combined with distinct symptoms of vascular action—suffused eye, throbbing temporals and carotids, hard and full pulse, &c. *Asthenic*, when combined with symptoms of anæmia—emaciation, feeble pulse, cold extremities, &c.

I believe all the cases of pure *Idiopathic* insanity will be found to be due to mental or *moral causes*; if they are not, then you will have discovered another pathological cause or natural order to enable you to add another form to my list. The moral cause, whatever it may be, is followed by prolonged sleeplessness and ceaseless activity of thought, until the waste of brain tissue ceases to be duly repaired, and insanity follows.

In adopting this form of insanity, I am glad to find myself in such good company as M. Morel and S. Van der Kolk. This *Idiopathic* insanity was strongly objected to, and its existence considered as a great objection to the whole system—it is described by several of my commentators as a convenient place of refuge, to which I am compelled to consign every variety of insanity that cannot be duly christened as belonging to one of my orders—a tomb for all the Capulets. Dr. Maudsley seems to think that there will be found such a number of nameless varieties consigned to this *Idiopathic* tomb that it will quite vitiate the rest of my classification by

showing its incompleteness. I do not think so. Dr. Maudsley complains that I give no definite cause, nor course, or duration or termination for the manifold varieties of idiopathic insanity. I have here given a well recognised and efficient cause, and I pause for a description of the varieties which cannot be easily and properly referred to this form.

My conviction is, that if every case of insanity were seen at its outset, and its history fully ascertained, very few cases would be found which might not be referred to the forms I have given, or some new form referable to some bodily cause or condition which I have overlooked. The remaining cases, due, as I believe, to moral causes and want of sleep, would, if carefully examined and collected, probably present a group of symptoms very like those met with in other similar cases, and the variety in them would be principally due to the *Asthenic* or *Sthenic* condition of the patient, or to some peculiarity in the constitution, or some hereditary taint.

Dr. Maudsley, and more especially Dr. Blandford, thinks that I do not make sufficient allowance for hereditary taint as affecting the insanity. In my address I had no occasion to speak of hereditary taint at all. It is neither a pathological or exciting cause of insanity, it is a *predisposition* to the disease; and I think it will be found that I go quite as far as any writer on this subject, believing, as I do, that there must be a predisposition in almost every case of insanity, although it is often difficult to find out, as the patient's friends almost always deny it. I believe, too, that the hereditary predisposition strongly modifies the form of insanity.

Some of my commentators, Dr. Mitchell and Dr. Blandford in particular, have been at some pains to show that even if my system of classification were adopted, we must still retain the old names used by Pinel and Esquirol, and every one since their time, of *mania*, *monomania*, and *dementia*. They were necessary to describe symptoms, and the present condition of a patient as far as symptoms go. Dr. Hack Tuke stated to me that this was the principal difficulty he had in adopting my classification in his Text Book, as he found that in order to make himself understood, and prevent endless repetitions, he must first describe mania, monomania, and dementia.

With all this I most fully and cordially concur. I have always held these opinions. A glance at part of the synopsis of my Clinical Lectures, which were in common use before I published this system, will shew you that I never dreamt

of cutting off the old terms, but I have used them for what they are, the names indicating different *classes* of *symptoms*. I have always begun my Lectures on Insanity by describing as such the symptoms of insanity constituting what Pinel called *mania*, or *maniacal* symptoms—the symptoms of *monomania*—with their gradations and varieties, and the symptoms of *dementia*, with its varying degrees.

In describing the symptoms of insanity, under these three classes, I first shewed what the maniacal symptoms were, and that they might be acute or violent, or subacute, and that they might become chronic, periodic, or remittent. I described them, however, always as *symptoms* of insanity, as I would describe hurried breathing, laboured breathing, irregular breathing, or slow breathing, or dropsy, or palpitation of the heart, not as diseases, but symptoms.

I pointed out at the same time that these maniacal symptoms were preceded generally by certain premonitory signs. I described their general progress, average duration, and terminations, and all the bodily symptoms and degraded habits accompanying them.

I further pointed out an important fact, very little, if at all, distinguished as yet by writers on insanity, but one which I think cannot be doubted by any careful observer, that we may meet with every degree of maniacal excitement—incessant talking and gesticulation, and destructiveness, and filth and nudifying—without any intellectual impairment, the passions and emotions alone being excited, while the intellect is preternaturally clear and active, and the thoughts perfectly coherent when roused or directed to any subject. Such cases belong to what Pinel called *reasoning madness*, and Pritchard *moral insanity*. It was first described and illustrated by many cases as a form of *monomania* without delusion, but with a strong *homicidal* impulse. It will be found, however, that in most cases of monomania the emotions alone may be affected. You have patients who are profoundly melancholy and miserable and suicidal, who have no delusions, but a simple abstract misery, without any cause but their disease, and under the influence of which they will commit suicide. The symptoms of kleptomania, pyromania, dipsomania, erotomania, satyriasis, and nymphomania are not generally accompanied by intellectual delusions, unless they are mere accidental symptoms of some such form of insanity as general paralysis or some other form. Even the symptoms of pride and fear may, and do often exist in a morbid state—

a morbid and exalted vanity without delusion, or a morbid fear of something undefined and unknown, but impending and crushing them into misery.

In describing what later writers have, as indicated, regarded as various forms of monomania, I described the various delusions of the so-called monomaniacs—shewing that the subdivision given in my synopsis did not include a tithe of them, and that any conceivable idea of the mind might go to form a delusion. The delusions of the insane cannot be classified, they are innumerable—as innumerable as the conceptions of the fancy.

The delusions of the so-called monomania are seldom *monomaniacal*. Although one delusion may be the prominent and salient feature of the case, there generally are other delusions, and very commonly a greater or less degree of mental impairment. I believe there have been very few *pure monomaniacs* in the world. There are certain delusions more common than others, and these, as we shall presently see, are associated more or less constantly with certain forms of insanity, which they help to diagnose and differentiate.

The third class of symptoms of insanity are simply those of impairment of the mental faculties and emotions. This impairment includes every degree, from simple loss of memory down to complete fatuity. In describing the stages or degrees of dementia, I have adopted those defined by Dr. Pritchard—Forgetfulness, Irrationality, Incomprehension, and Inappetency. The symptoms of dementia are commonly those which almost all forms of protracted insanity gradually and finally assume. There are, however, some forms of insanity, as we shall see, of a curable kind too, in which the symptoms are those of dementia from first to last. There are also not a few cases where the symptoms are ordinarily and persistently those of dementia, that are subject at intervals to paroxysms of maniacal excitement.

After this description of the symptomatology of insanity, I proceeded in my lectures to describe the *forms of insanity*—and pointed out as occasion required when they were those of mania, monomania, or dementia, or how and when they passed from one to the other, and what was peculiar in any other form, to shew by its history or symptoms that its bodily cause or condition could be predicated.

Permit me to say in passing that although I think that in most of my forms the symptoms, taken in a group, indicate the cause, that I do not think it necessary for my system

that they should always do so. We may not always be able to predicate the cause from the symptoms; but we may generally, in the *early history* of any case of insanity, learn the bodily causes or condition, and the modifying influences of predisposition, constitution, habits, &c., and we shall find, as I have before said, that the symptoms within certain limits, or with certain peculiarities, will be nearly the same. This has been made rather a strong objection to my classification, but I think without reason. It has never been thought any objection to the term epileptic insanity that the mental symptoms in many cases are maniacal, in some homicidal, or monomaniacal, and in others (the most numerous) those of dementia. There are peculiarities in the mental symptoms of insanity in epilepsy, although it assumes either of the three classes of symptoms, by which they differ in their mode of access, character, duration, and which render it an easily distinguished form, and never questioned as such. I do not think there will be found any greater difficulty in differentiating the symptoms of my forms of insanity, and if there is a difficulty, it does not alter the fact that the forms of insanity are different, as they can be fairly traced to different pathological causes.

To conclude this (I fear) tiresome commentary on my commentators and myself, I am perfectly content with the verdict of my friend Dr. Arthur Mitchell on the whole subject. He has done my whole work ample justice and placed my views in a clearer light than I myself had done, and in terms so laudatory as to call for my warmest thanks.

He says truly we can never do without the old terms *mania*, *monomania*, and *dementia*; they are useful for classifying patients, for a brief description of their state for practical purposes, such as indicating their mode of classification, the propriety of their isolation, and their mode of treatment; but to allow those terms to represent true *forms of mental disease* is a scientific blunder. "It must be clear to all that mania, melancholia, &c., are not *diseases*, but mere *signs* of disease, which may properly enough be compared with such signs of disease as the quick pulse, spasmodic breathing, &c."

Towards the end of his paper Dr. Mitchell says, "There is evidence, indeed, that his classification of mental diseases has taken possession of the medical mind. We cannot need a better proof of this than we find in the titles of the papers which during the last six years have filled our journals, both in this country and on the Continent—such titles for instance

as these—On Rheumatic Insanity, on Choreic Insanity, on Epileptic Insanity, on the Insanity of Pregnancy, on Puerperal Insanity, on Hereditary Insanity, on Climacteric Insanity, on the Insanity of Pubescence, on Sympathetic Insanity, on the Insanity of Lactation, on the Mania of Alcoholism, on Syphilitic Insanity, &c.”*

In addition to Dr. Mitchell I take this opportunity of thanking my other critics, especially Dr. Maudsley, Dr. Blandford, Dr. Daniel Hack Tuke, and the reviewers generally for the very handsome and impartial manner in which they have examined and commented upon this system, and to express at the same time my own gratification with the degree of success it has met, and my hope that by the labours of others it may prove ere long the basis of a thorough and complete practical classification of insanity in all its forms.

Turning to the Table before you, it will be seen that I have added to my list Dr. Ireland’s classification of the forms of idiocy based on the same etiological principles on which my table of forms of insanity was founded. This was announced by him in a very valuable paper read at the quarterly meeting of the Medico-Psychological Association in Glasgow in October last, and published in the “*Journal of Mental Science*” for October, 1872. Dr. Ireland by no means undervalues the various methods of estimating the degree of mental deficiency in each case, any more than I disregard the importance of distinguishing the degrees of mental impairment in dementia; but he maintains that the mental defect is not the disease but the result of it,—the sign of it; and that it is of the greatest consequence with reference to the prognosis, and the proper treatment to diagnose the bodily disease or condition of each case of idiocy.

The result of his observations is very interesting, and has led to the recognition of ten forms of idiocy viewed from this standpoint. They are as follows:—

1. Hydrocephalic Idiocy.
2. Eclampsic ”
3. Epileptic ”
4. Paralytic ”
5. Inflammatory ”
6. Traumatic ”

* *Edin. Med. Journal*, Aug., 1871., p. 108.

7. Microcephalic Idiocy.
8. Congenital ,,
9. Cretinism ,,
10. Idiocy by deprivation—that is by the loss
of two or more of the senses.

I have used the word insanity instead of mania for most of the forms, and have added six new forms, viz., Hypochondriacal Insanity; Rheumatic and Podagrous Insanity;—Anæmic, such as we have from starvation, Choreic, and, lastly, insanity caused by tumours, or abscesses of the brain.

The name of Rheumatic Insanity, which I had omitted to enter in my first list, reminds me of a fact which may interest some of my friends, and shew how long it is since the seeds of this classification were first sown by me. In 1845, when my friend Dr. Benbow, then an assistant to my predecessor, Dr. Mackinnon, was passing his examination as a Fellow of the Royal College of Surgeons, I advised him to take for the subject of his thesis the connection between insanity and rheumatism. This he did, and his thesis, a very good one, is in the archives of the College.

Neither Müller nor Van der Kolk led me to adopt the present method, nor to work in that direction. I had not read their works when I published my system, and had held, indeed, the same views for some time before, and promulgated them in my Clinical Lectures. I presume the great defects of the old system, and the general progress of psychological science led us all to make efforts in the right direction—each with more or less success.

(To be continued.)

The Treatment of Insanity by Electricity. By GEORGE M. BEARD, M.D., of New York.

THE application of electricity to the treatment of various diseases of the brain and spinal cord has for a number of years been a regular method of treatment with some of our best known neurologists and electro-therapeutists, and the value of such treatment, when rightly administered, is now questioned by very few advanced students in these departments. It is not, however, so well recognised that in diseases of the brain and spinal cord, where the mind is seriously affected, the electrical treatment is also indicated. In some of the asylums of England, United States, and Germany,

electricity is now, and for some time has been used as an adjunct to other remedies for the treatment of different forms of insanity; but with a few exceptions the treatment is not systematically carried out, and, partly through ignorance of the methods of application, partly through want of sufficient medical assistance to supervise the necessary details, the results have not been entirely satisfactory, and the cases have not been fully recorded.

I should except from these remarks the Alabama Asylum for the Insane. When under the superintending of Dr. Bryce both currents of electricity have been used in the treatment of the patients for the past two or three years.

I have corresponded with Dr. Bryce on the subject from the first, and have at different times given suggestions in regard to the methods of application, which suggestions have been carried out so far as possible for the already over-worked officers of that institution.

Under date of February 17, 1873, he gives the general result of his observations in the following language:—

“We like it: find it beneficial in most cases, valuable in a majority, and indispensable in certain forms of hysterical insanity, in primary dementia, and neurasthenia.”

In the April number of “*The London Journal of Mental Science*,” Dr. A. H. Newth, of the Sussex County Asylum, reports a number of cases of insanity treated by galvanic current, with results that are quite encouraging, in spite of the crudeness of his methods.

It is useless to attempt the electrical treatment of insanity, as it is useless to attempt the electrical treatment of diseases of the central nervous system of any name or form, without previous study of the general subject of electro-therapeutics, as well as of the principles of electro-physics and electro-physiology, that have a direct and practical bearing on electro-therapeutics.

The failures in this, as in other branches of electro-therapeutics, are in fact the logical result of want of familiarity with the management of batteries, of incorrect ideas on the differential action of the currents, and the general action of electricity on the body, and deficient technical skill in the details of the applications.

All these difficulties can be overcome by those who have the proper amount of leisure, or can steal time from other duties, and who will give to the subject the same zeal and

patience that they give to any other complex and difficult subject.

No man can apply electricity with the highest success until the details of the applications have become to him a matter of *routine*, so that he can use any one of the methods on any kind of a patient without fear or doubt. Skill of this sort, in any art, cometh not of observation; it is acquired only by careful, studious, and repeated experience. Just as no one can dance well who must watch each step lest he make a slip; just as no one can sing or play to our edification who trembles each moment lest he strike a false note; so no physician can apply electricity with satisfaction who is half in doubt whether he is using the right method, or whether he is using it rightly.

I make these remarks because there is a vulgar error abroad, both in England and the United States, that any "Old Granny" can make applications of electricity. The error has retarded and still retards the growth of scientific electro-therapeutics.

For those who are beginning to use electricity, or are contemplating its use in the Asylums for the Insane these general suggestions may be of service:—

1.—Let it be remembered always that electricity, in any form—Franklinic, Galvanic, or Faradic—when applied to the body acts as a *stimulating tonic with a powerful sedative influence*. It is an agent for *improving nutrition* in any condition, local or general, where improvement in nutrition is required.

The order and degree of its effects depends largely on the method and manner of application, and on the constitution and disease of the patient to which the application is made.

The primary and immediate effects are stimulant and sedative. Localized applications improve the nutrition of the part to which the application is made, and also act reflexly on other parts; central applications improve the nutrition of the central nervous system; general applications improve the nutrition of the whole system, central and peripheral. Those that adhere to the old, but fortunately dying out notion that electricity is a stimulant—in the proper sense of the word—and consequently good for nothing except to rouse the paralysed, will not, of course, attempt to use it in insanity, or indeed in any of the diseases where its success is greatest.

2. That in insanity the brain is not the only part of the body affected. Excluding those cases of insanity produced

by reflex action from the digestive and pelvic organs, there are very many cases where the spinal cord and other parts of the central and peripheral nervous system suffer as an effect of the disease of the brain. It is well known that in cerebral hemorrhage the spinal cord becomes weakened and diseased through simple disuse, and it is rational to believe that in other central diseases the spinal cord becomes more or less exhausted, even when it does not fall into a condition where it would rejoice the heart of a student of morbid anatomy.

We know still further that in certain forms of insanity the cord as well as the brain may be affected. Besides all this it is recognised everywhere that through long-continued disease of the brain and spinal cord, other parts of the body become exhausted and diseased. While these remarks may seem but common place to experienced psychologists, and while the fact of the relation of diseases of the brain to diseases of other parts of the body is continually recognised, when other remedies are employed, still in the application of electricity some experimenters have acted on the theory that the brain alone should be treated. Those who act exclusively on this theory will not gain great victories over insanity by electricity. Some applications should be made in such a way as to bring the whole central nervous system under the influence of the current, and local diseases associated with insanity as a cause or effect should receive local treatment.

The central nervous system is best brought under the direct influence of the galvanic current by the method of central galvanization.* The method may be varied by galvanization of the brain, cervical sympathetic, pneumogastric and spine; but the method of central galvanization is easier, safer, and more effective. In cases associated with debility, and especially in those forms of insanity dependent on neurasthenia or nervous exhaustion, general Faradization answers a good purpose, and may with great advantage be used alternately with central galvanization or localised galvanization of the nerve centres.

3. The first tentative applications should be very mild, and the strength of the current and the time of the sitting should be gradually increased as the patient proves himself able to bear the treatment.

* The method which I have employed for three years past was described by me in the "New York Medical Journal," October, 1872.

Individuals in health vary in their susceptibility to electricity to a degree both surprising and unaccountable. When disease invades the brain this susceptibility may become somewhat modified; but in insanity, as in the other forms of nervous disease, it is the *temperament* more than the disease that determines the susceptibility of the patient to electricity.

In some cases of disease of the brain the patient is exceedingly susceptible, and must be treated with great delicacy, but such susceptibility is not of necessity the result of the disease; it would probably appear in the same patient however afflicted. In other cases of disease of the brain the patient may be extraordinarily tolerant of electricity, and this tolerance may be the result of the pathological changes in the brain, or it may be simply the peculiarity of temperament that would appear in any disease, or it may be the result of both factors.

The practical lesson which this consideration enforces is the necessity of making the first applications with great caution, and of studying the temperament of our patient before making use of strong currents or protracted applications. Many, probably the majority of insane patients, will bear strong or moderately strong currents; some will have to be treated with considerable caution, and in a certain percentage of cases, on account of the idiosyncrasy, or on account of the acuteness of the symptoms, electricity may be positively contra-indicated.

It is impossible to determine from the appearance of the patient whether his temperament is or is not suited to electricity; this can be learned only by trial, just as in the case of all other remedial agents. Electricity may be used in almost any form of insanity, by whatsoever name it may be called, when sedative or tonic effects are indicated. In my own experience the best result has been obtained in hysterical insanity, in mania, and in melancholia dependent on change of life. Dr. Bryce speaks encouragingly of the effects of this treatment of primary dementia.

Two or three special suggestions of a practical nature may properly be enforced on those officers of asylums who are trying to experiment with electricity.

First.—Do not attempt too much at once. A few cases—two or three—carefully treated, and assiduously watched for a number of weeks, will teach us more of the details of the applications and of the general effects of electrization than

a hundred cases carelessly treated, and abandoned before the treatment has been well tried.

The time and force required to treat a large number of cases will discourage any but the boldest and most hopeful, and will almost necessarily result in failure. After the details of the methods of application are fully understood, and carried out with ease, the number of patients submitted to the treatment may be increased.

Secondly.—Do not judge of the value of electricity as a remedial agent in insanity, by the extreme results—either success or failure. The first two or three cases treated by electricity may yield so brilliantly as to suggest a doubt whether the other methods of treatment may not be dispensed with, or they may be so utterly obstinate as to confirm and clinch all previous scepticism on the subject. Either conclusion will be wrong. Electricity in its conflict with disease, like most of our active remedial agents, meets with all kinds of experience—its Waterloos and Sedans, its drawn battles and victories—sometimes won hard and slowly, sometimes by a brilliant *coup* that scatters the foe for ever.

Thirdly.—Do not judge by the immediate effects after the applications exclusively, but watch for the permanent effects that are observed after weeks and months of treatment.

It is well and necessary to take the pulse before and after the sitting, to see whether it is made feebler, calmer, and *stronger* by the treatment. It is as well to note the temperature, the expression, and general behaviour of the patient; but even when the conclusions from these observations may be unfavourable, the patient may be improved by a course of treatment. The individual effects should be studied, but they should not be the exclusive guides to treatment. A patient who at first reacts badly, may in time be made to react kindly. The unpleasant symptoms that follow the first application may be the result of overdoing the treatment; the currents may be too strong, or the sitting too long; and even when proper caution is used, time may be necessary to educate the patient to a proper tolerance of electricity.

I had intended to illustrate the views advocated in this paper by some cases of hysteria, hysterical insanity, melancholia and mania, that I treated by electricity, but these may, perhaps, be reserved for another occasion.

Five Cases of Idiocy, with Post-Mortem Examinations. By W. W. IRELAND, M.D., Edin., Medical Superintendent of the Scottish National Institution for the Education of Imbecile Children, Larbert, Stirlingshire.

I give the details of five cases of Idiocy where the observations were completed by an examination after death. The greatest advantage of such studies as can be made in an Institution for the Training of Idiots is the careful analysis of the mental symptoms, and for this I am much indebted to the teachers for their patient attention and intelligent remarks. The absence of microscopical observations in all the pathological descriptions, save one, is a source of regret to me, though I have been so fortunate as to obtain the report of so competent an observer as Dr. J. Batty Tuke in the case of K. I. The object kept in view in reporting these cases is to throw as much light as possible on the relation of the mental deficiency to the pathological lesions. It is not, therefore, to be expected that they should be reported in the same form as clinical cases published with the intention of illustrating the treatment of ordinary diseases, or the action of new remedies. It is true that the existence of idiocy often modifies the symptoms of ordinary disease, and requires a corresponding modification in treatment; but it would unduly complicate our reports, and probably lengthen the paper to a tedious degree, were commentaries of this kind introduced.

The first case, F. Q., was a boy, admitted in September, 1872. He was then thirteen years of age. He was the youngest of a family of thirteen. His father was 41 and his mother 42 when he was born. His birth took place after a very sudden labour; but there was no proof that it was premature. He was supposed to have been idiotic from birth, and began to walk when three years old. He had a chronic cough, but was thought to be improving in strength for the last few years. In expression he was dull and inanimate, with an odd face and short squab figure. In height he was 3 feet 8 inches. His gait was clumsy and awkward. The constitution was evidently feeble. There was a bruit at the heart with the first sound heard at the base. The pulse was weak and the extremities habitually cold. The fingers were clubbed. The measurements of the head were as follows:—

1. From the glabella to the occipital protuberance . . .	26½c.
2. Circumference	48c.
3. From tragus to tragus across vertex.	32c.

106½c.

The palate was not vaulted. The ears were thin and membranous.

He seemed to possess all his senses, and often smelled his food before tasting it. He could speak a few words, but only when excited. He used a spoon, could grasp an object, and could tie knots and put in buttons. In character he was somewhat wild and obstinate. His mother said that at home he used to wander away for miles, and had always to be carried back when caught. After admission he was much confined to the sick-room from various ailments, so that little was done in the way of training. He learned to thread beads, selecting the proper numbers and colours, and also to knit a little. He had been getting cod-liver oil for several months, as he seemed to be of a tubercular constitution, but the existence of tubercule could not be proved during life. When taken ill he was believed to labour under bronchitis and emphysema, as evidenced by heat of surface, increased pulse, cough, expectoration (which he always swallowed), pain in the chest, and breathlessness, sonorous, cooing, and liquid râles, with clearness in percussion. At one spot on the lower side of left lung percussion was almost tympanitic. The heat of skin and increased pulse diminished; but he still continued to be affected with cough, dyspnoea rising into paroxysms, want of appetite, and wasting. No rise of temperature at night was remarked. He died, after being confined to bed four weeks, apparently from asthenia. He had been in the Institution seven months. During the inflammatory stages of illness he used to make signs as if for a dog, and look for or at it. This was supposed to be a delusion.

The examination of the body was made two days after death. The bronchi were found to be congested. The lungs emphysematous and speckled through their whole extent, with tubercular spots about the size of grains of sago and rice. There were no cavities nor large masses of tubercule, and, from the presence of the emphysema everywhere, no dulness on percussion could be expected.

The bronchial glands were full of cheesy tubercular matter. The thymous gland was filled with a white, softened mass of tubercule. The valves of the aorta and pulmonary artery were deficient; the membranes of the valves unusually thin, and the corpøra Arantii wanting. In one of the aortic valves there was a slit in the membrane.

The mesenteric glands were tubercular. The spleen had a porphyritic appearance of purple and white from concretions

of tubercular matter, about the size of barley-corns. The liver was reduced in size, with specks of tubercule thinly disseminated. Some specks were also noticed in left kidney.

HEAD.—The dura mater was strongly adherent at posterior part of hemispheres, above the occipital tuberosity.

There were about three ounces of fluid in the base of the brain.

The pia mater was adherent on both sides to the hemispheres over the region of vertex.

The encephalon weighed	36 $\frac{3}{4}$ oz.
The cerebrum	32 $\frac{3}{4}$ oz.
The cerebellum, pons, and medulla oblongata	4oz.

The convolutions were broad and simple, but not shallow; they were not symmetrical. The grey matter was as broad as usual. On the left side the radiating convolutions of the island of Reil were replaced by one simple convolution about a half inch broad, running from centre to circumference. On the right side there were two convolutions.

The cleft of the fourth ventricle seemed unusually wide. This appeared to be owing to deficient size of the uvula and amygdalae.

The weights of the following organs were noted:—Right lung, 23oz.; left lung, 22 $\frac{1}{2}$ oz.; heart, 7oz.; liver, 2lbs.; thymus gland, 1 $\frac{1}{2}$ oz.; right kidney, 2 $\frac{1}{4}$ oz.; left kidney, 2 $\frac{1}{2}$ oz.; spleen, 6 $\frac{1}{4}$ oz.

This boy seems to have had meningitis either before or immediately after birth, which, probably, injured the growth and nutrition of the brain. The mutism was, no doubt, owing to the mental fatuity and paucity of ideas.

K. U., ten years old on admission, was the eldest of three children. I could not learn anything about his birth and parentage which threw light upon his malady. Nothing particular was noticed about him till the eighth month, when he was believed to have become paralytic, and had always been very delicate since. The measurements of head, taken in 1871, were—

1. From glabella to occipital protuberance	31 $\frac{1}{2}$ c.
2. Circumference	51c.
3. Transverse	33c.

It required very little attention to see that there was partial paralysis of the arm and leg on the left side. The arm was scarcely ever used; the leg was weak, and dragged after the other. There was also some paralysis of the face on the right side. He slavered a little from weakness of the right

lip, and was unable to pronounce the letter K. If asked to say "cask," he would say "as;" if asked to say "cuddy" he would say "uddy," and so on. He also pronounced the letter G imperfectly, and his voice had the peculiar quavering character often met with in paralytics. When he spoke it seemed as if the organs of speech were not under ready control. The inability to pronounce the gutturals properly was, no doubt, owing to deficient power in the pharynx and soft palate. On being made to try to pronounce K with the mouth open the uvula was seen to be drawn to the side opposite to that on which the leg and arm were paralyzed. Sensibility was deficient on the paralyzed side, both to ordinary impressions and to electricity. He could use a spoon and grasp with the right hand. During the time this boy was in the institution, which was about two years and three months, he seemed to improve in general health. Both motor power and sensibility increased on the paralyzed side, and he learned to use the right hand with more expertness. He could write half text on a slate; but was never able entirely to dress himself. He walked better, and could go further. He was regularly exercised in pronunciation, and learned to speak better. He learned to read words of one syllable, and could count and add small sums together. He picked up some notions in physical geography, such as the shape of the world and its relation to the stars, and seemed to have some power to attaining to general and abstract ideas. He was attentive, anxious to learn, of an affectionate disposition, with a strong sense of duty, and was good tempered, though sometimes obstinate. He appeared to me to have the intelligence of a child of five years of age. He was regarded as a pupil likely to improve mentally, but who would always remain physically weak and incapable. K. U. was taken ill in the month of January of bronchitis. There was great prostration throughout the illness, which only lasted five days. The patient became more and more comatose, and during the last two days could scarcely swallow. The bowels remained confined for three days, in spite of injection, and the last day the urine accumulated in the bladder.

The right lung weighed $17\frac{1}{4}$ oz.; the left, 16oz.; the heart, $4\frac{1}{4}$ oz.; the liver, 29oz.; the right kidney, 3oz.; the left kidney, $3\frac{1}{4}$ oz.; the spleen, $4\frac{3}{4}$ oz.

The examination was made two days after death. There were old adhesions of the pleura on the left side, but none on the right. Both lungs shewed lesions of acute bronchitis,

and some pneumonia at the base. In both lungs there were deposits of miliary tubercule, the size of barley-corns. The bronchial glands were enlarged and of a cheesy consistence. There were white deposits of miliary tubercule found in both kidneys.

HEAD.—The encephalon weighed 48oz.; the cerebrum, 42oz.; the cerebellum, medulla, and pons, 6oz.

The skull-cap was very thin, the sutures open. The cerebral hemispheres were evidently flattened. The grey matter paler than usual. The lateral ventricles were much distended with fluid; about two ounces were taken out and measured, but some escaped. On the roof of the left ventricle, above the posterior corner, there was a spot of white softening about the size of a walnut. No traces of apoplectic clot could be found in any part of the encephalon. There were deposits of tubercule along the course of the middle cerebral arteries.

It seems to me probable that the softening in the brain as well as the amount of fluid in the ventricles was increased during the boy's illness, which, however, was of short duration. No change had been noticed in his symptoms before the bronchitis, but he had been treated for a milder attack about three weeks before.

J. G., aged 46, was believed to be a congenital idiot. He could speak freely, was well grown and strongly made, and for some time managed to get a living by delivering parcels from the railway. In the end he found himself in the lunatic wards of a poor-house, and becoming affected with carious disease of the foot he was transferred to the Stirling District Asylum, where the foot was amputated. He died some months after of pleurisy. The examination was made on the 29th of November, 1871, by Dr. Frederick Skae and myself. The head measured from glabella to occipital protuberance 13 inches. The circumference was 22 inches. A serous effusion was found in the chest, pushing the lungs to the middle line, and a little black pigment was found at the apices of both organs, which were deeply congested. The spleen was enlarged, weighing $12\frac{1}{2}$ ounces. The liver fatty. Peritoneum was speckled by tubercular granules. Both kidneys were lobulated in an unusual manner, divided by shallow furrows on the outer surface, as in the kidney of a new-born child. Both organs seemed fatty. The right kidney weighed 6 ounces; the left $6\frac{1}{2}$ ounces.

The skull was somewhat thicker than usual, and very hard

and solid. The encephalon weighed 52 ounces; the cerebrum $41\frac{1}{2}$ ounces; the cerebellum, pons, and medulla $7\frac{1}{2}$ ounces. The convolutions were rather simple, and the grey matter seemed somewhat shallower than usual; but on the whole the brain might have passed for an ordinary one, at least to the naked eye, save that the tubercular quadrigemina were unusually small and indistinctly defined.

This was, as far as the examination went, one of those cases noted in idiocy as well as in insanity, where the appearance of the brain threw little or no light upon the symptoms during life.

A. L. was sent to the Stirling District Asylum the 5th June, 1871. As his friends did not come with him, very little information about his history was obtained. Though supposed to have been an idiot, there was no exact proof of it. But it appeared from the certificates which accompanied him, that he had been in a state of the deepest fatuity for two years. When he first came into the Asylum, I am told he seemed to notice things, and shewed signs of being scared or terrified. Dr. F. Skae thought he was weaker on one side, as if paralysed, and did not appear to see with one eye. During the month of August, when in charge of the Asylum in Dr. Skae's absence, I studied this boy's case. At that time he might be truly said to show no more intellect than a newly-born child. He possessed only the passive intellect, that is, he was sensible to outward impressions, but did not seem to draw inferences from them, much less recollect them. It could not be made out that he attended to sounds; but he seemed to notice lights. He had several bed-sores, and shrank and moaned when they were dressed; but he made no use of his hands, and had to be fed with a spoon. He never voluntarily altered his position. His knees were bent upon his body, and his arms were bent, the forearm upon the humerus. He remained in this condition, it might be said of vegetative life, for several months, requiring great care and attention on account of the difficulty of feeding him, dressing his bed-sores, and arranging his position so that new ones might not form.

He died on the 22nd September, 1871, and the examination of his body was made on the day following by Dr. Skae and myself. I may here notice that all the pathological examinations in this paper were made along with Dr. Skae, whose friendly co-operation has been of great advantage to me.

A. L. was 4 feet 8 inches in length ; the girth round nipples was 2 feet 1 inch. The features were regular, and not unpleasing. The measurements of the head were—

1. From glabella to occipital protuberance	31½c.
2. Circumference	50c.
3. Transverse	30½c.
	<hr/>
	122c.
	<hr/>

The kidneys were slightly granular.

In the frontal part of the hemispheres especially there were found two ounces of fluid, and there were seven ounces in the lateral ventricles. The substance of the hemispheres was much hardened. The anterior cerebral arteries were somewhat atheromatous.

This case illustrates the relation of chronic hydrocephalus, external and internal at once, with complete idiocy or fatuity. It ought to be remarked that the size of the head was not enlarged, nor the shape altered.

K. I.* had been four years in the Larbert Institution. On entry he was sixteen years of age, could speak and read a little. He learned to walk at 18 months, and is said to have begun to speak at the usual time. From the information given in the Case-book, it appeared that his parents dated the imbecility from his fifth year, when he had gastric fever.

The young man, however, had much the appearance of a congenital idiot. He had a thick hanging under lip, and a very red face, which became purple when enraged. He had a keel-shaped palate, with teeth bad and ill-placed. Apparently 28 teeth had come out; but many of them were decayed. The head was small. He was tolerably strong and active, and had the free use of his limbs. The senses seemed normal; both taste and smell had been tried, and noted to be good. He improved a great deal in the Institution, where he made himself useful. He was willing to learn, and had a marked sense of moral and religious duties, but was irascible and pugnacious. He had a high opinion of his own powers, and would have accepted any task, however difficult. He had attained to considerable skill in filling brushes, used to ring the school bells, and set the tables for dinner. He could read

* The rest of this paper formed part of one read to the Meeting of the Medico-Psychological Association held at Glasgow, 10th June. 1873.

the New Testament, and could add and multiply small sums. He had been four years in the Institution when he took ill. He kept his bed on the 24th December, but made no distinct complaint. It soon appeared that he had pleurisy on the left side; and on the 31st decided symptoms of pneumonia were detected on the same side. The tongue was very dry; the mouth and teeth foul, and there was from the beginning a marked aversion to food.

On the 31st December the *tache meningitique* was noticed. It had been sought for as early as the 27th. Up to this date, in spite of the difficulty in getting the patient to take food, I had not despaired of recovery, knowing that the inflammation was mainly confined to one lung. But now I suspected the supervention of meningitis, and had little hopes of recovery. On the 1st of January he totally refused his food, and it was necessary to insist firmly on his taking some. He vomited part of what was given to him. It was difficult to say exactly when derangement of the mind had commenced; but on the night of the 31st, and on the 1st January, 1873, he had some delusions. He said that a boy had stuck wires in the roof, and asked another boy why he had stayed so long out of his bed, although it was only four o'clock in the afternoon. On the 2nd of January he could still speak a little, and answer simple questions. I told him he would die if he did not take food. He said he did not care. His tongue was red and dry; the papillæ were much enlarged; the pulse 130, respirations 44 in the minute.

Dulness was over whole lung behind, with increased vocal resonance and crepitant râles; percussion clear in front. On right side there was blowing respiration, and clearness behind. The patient had always swallowed his expectoration. The *tache meningitique* appeared on every part of the body and on the neck and forehead, but was absent on the arms — and on the legs below the knees. On touching the skin with the hand, the red discoloration appeared in about 40 seconds, and passed away in about the same time. He laboured very much for breath, but seemed conscious of what was being done around him. He hid his bread, and pretended he had eaten it. A slight drooping of right eyelid had been noted for two days.

About noon he began to be comatose, and died at 11 p.m. the same day.

An examination of the body was made on the morning of the 4th January.

The following measurements of the head were carefully taken :—

1. From glabella to occipital protuberance	-	-	-	-	-	33c.
2. Circumference	-	-	-	-	-	51½c.
3. Transverse	-	-	-	-	-	33c.
						117½c.

About the ordinary size of the head of a child of four or four-and-a-half years old.

The pleura of the left lung was adherent, especially behind, where there were layers of recent lymph; but not more than an ounce of fluid was collected. The entire lung was blocked up by the inflammatory exudation, save at the apex and at the anterior surface of the chest, where there was a shallow layer of pulmonary tissue still admitting of air. Softening had commenced at the base of the lung. The right lung was adherent to the pleura, and its tissue was somewhat congested behind. The left lung weighed 51½ ounces; the right 24½ ounces. The heart weighed nine ounces. The aortic valves were hardly competent; the corpora Arantii rudimentary almost wanting. The right suprarenal capsule was much enlarged, and weighed one ounce.

Head.—The sutures of the cranium seemed obliterated on the external surface. On the internal, they could be traced; but were nearly effaced, and quite closed. The spheno-basilar suture could not be seen; but, owing to difficulty of paring off the membranes, its traces might have escaped observation.

The great wing of the sphenoid bone was larger than the left, and different in shape. The left wing, though shorter, seemed a segment of a larger circle than the right. The capacity of the cavity, of which the greater sphenoid wing forms the upper lip, was thus larger on the right. The right jugular foramen was twice as large as the left. The basilar portion of occipital bone descended at an unusually acute angle to the foramen magnum.

The arachnoid was not adherent, but some yellowish-coloured fluid was seen in the sulci of the hemispheres, and a drachm or two of straw-coloured serum was seen collected at the foramen magnum, but escaped on cutting the cord. The pia mater was much congested, being of a deep, continuous red over the hemispheres. The arachnoid was opaque and thickened below over the corpora mamillaria tuber cinereum and optic tract.

The convolutions were simple, not much divided, of normal

breadth; the grey matter somewhat paler than usual. Five layers could be counted with the naked eye. There were no convolutions on the surface of the island of Reil on the left side.

The weight of the encephalon was $35\frac{1}{2}$ ounces; that of the cerebrum, $30\frac{3}{4}$ ounces; of cerebellum, medulla, and pons, $4\frac{1}{4}$ ounces.

On interrogating the young man's friends, who are people of good intelligence, they stated that he had begun to speak about the usual time. The mother was a well-grown and good-looking woman, but said not to be very strong. She had a good deal to put her about during confinement, and the child was born somewhat before the usual time. They, however, all agreed in the statement that the boy was not imbecile before the age of four, when he was seized with what they called gastric fever, with marked head symptoms. From this fever he was long in recovering, and, when he recovered, was found to be imbecile.

In considering the lesions found in the body we ought to separate those which were of recent from those which were of older date. The pleurisy and inflammation of the lungs and of the pia mater were obviously of recent origin, and were the causes of his death. Respecting the meningitis, it was probably no older than two or three days, and followed upon the inflammation of the lungs.*

On the other hand, the closure of the sutures at the base of the skull and the thickening of the arachnoid were no doubt of earlier date. The size of the head and the weight of the brain† approached that of a boy of about four years of age, and there was nothing in his intellectual powers to gainsay the idea that the brain had never grown after the period of his illness, when probably the sutures had closed in,

* I have during my short experience found reason to agree with the remark of Dr. Wilbur (Nineteenth Report of the New York State Asylum for Idiots, Albany, 1870, p. 9). "Death in the case of idiots usually results from one of two causes. Where the idiocy has originated in disease of the nervous centres in infancy, death comes at last by a renewal of disease in the organ or part originally affected, no matter what the character of the final sickness at the outset. Again, where there is a congenital defect or infirmity of the brain, or general nervous system, the case succumbs at last by the failure of vital power at critical periods of the life of the individual."

† Dr. Peacock, in his *Tables of the Weights of the Brain and some other Organs of the Body*, London, 1861 (reprinted from the monthly "Journal of Medical Science, 1847"), gives the weight of the encephalon in a boy of 4 years 6 months as 39ozs. 12 drachms, and a female child of same age as 34ozs. 8 drachms.

save the spheeno-temporal one, which had remained open a little longer, and allowed the superjacent convolutions to increase a little.

It is possible that inflammation of the membranes was the cause of the synostosis of the sutures, and we may fairly assume that the inflammation extended to the brain substance, and was thus a farther cause of mental hebetude.

I sent some sections of the hemispheres to Dr. J. Batty Tuke, and this distinguished microscopist subjected them to a very careful examination. The following were the changes noted by him, which I give in his own words :—

- 1st. Considerable exudation deposits.
- 2nd. Considerable thickening of the muscular coats of the vessels.
- 3rd. Thickening of the pia mater with lymph deposits.
- 4th. Scattered colloid bodies.
- 5th. Deficiency of nerve cells.
- 6th. A few crystals of phosphate of lime in the brain substance.

This appears to me the most probable explanation of the evidence laid before you, though it might be argued that the anxiety of parents to avoid the suspicion of a hereditary taint, often renders them unfaithful observers; and the form of the palate and the teeth lead one to suspect congenital idiocy. The early history of idiocy is rarely studied in a scientific manner, and a few connected cases by a careful observer would be of great value.

I venture to add a few remarks upon some signs or concomitants of idiocy present in the case just related, in the hopes that they will be useful to those who study the subject. In K. I. the palate was vaulted, and the teeth were bad, and I hoped that the examination of the skull would throw some light upon the cause of these appearances, but the examination was, of necessity, a hurried one, no sections could be made of the bones of the cranium, and the only abnormalities noted were the synostoses of the sutures and the irregular and unsymmetrical form of the base of the skull.

The most common deformity in congenital idiocy is a peculiar conformation of the palate, which has been described as highly vaulted or keel-shaped, resembling the impression of the keel of a ship, or it might be compared to the inside of a saddle viewed from below, the pommel being turned backwards, for the arch is sharper behind than in front, and there is occasionally a narrower furrow running along the middle. The cleft palate, which I have seen in three cases of idiocy,

seems to be an exaggeration of this deformity. In many born idiots the palate appears quite normal; but I have found this malformation in thirty-seven out of eighty-six cases of idiocy in this Institution. Many of the other cases were, of course, not congenital. Often the arching is confined to the posterior half, or three-fourths of the palate, and the development of the alveolar processes is not interfered with, but congenital idiots have very often teeth deformed in shape, irregularly placed, and prone to early decay. This is especially the case in the upper jaw; out of 37 cases found to have a saddle-shaped palate, 11 had good teeth, and 21 had teeth much decayed or irregular. The remaining five had a few decayed teeth. Two of the 37 cases had fissure of the hard palate; 14 had what may be called the Grecian aspect of the face, the forehead and the nose running in an uninterrupted slope. One, if not two, of the cases where the saddle-shaped palate was found was of hydrocephalic origin; at least, hydrocephalus was present.

There seems some connection between idiocy of all types and the healthy nutrition of the teeth. I have noted cases in which the teeth have fallen out and decayed in youth where the idiocy was the result of hydrocephalus, meningitis, or traumatic injuries of the brain. As far as my reading goes, the only writer who notices a highly vaulted palate occurring in Cretins is Dr. Blackie* who mentions this characteristic in two out of six cases of Cretins which he describes. In Cretins the teeth are generally bad,† and Morel has proposed to found a distinction between Cretinism and sporadic idiocy in the slowness of the appearance of the second teeth in Cretins,‡ but idiots, too, are often slow in getting their second teeth. As they are very apt to decay, it is rare to see a complete set of twenty-eight. The wisdom teeth do not commonly appear at all. In many cases the teeth commence to decay two or three years after they have

* "Cretins and Cretinism," by George S. Blackie, M.D., (Edin., 1855, pp. 63-68.

† Sardinian Report, p. 11, "Après la chute des dents du lait il n'en repousse plus chez quelques Cretins." Stahl says (Beitrag zur Pathologie des Idiotismus Endemicus genannt Cretinismus in den Bezirken Sulzheim, and Gerolzhofen in Unterfranken des Königreichs Baiern, 1843)—"Es tritt die Zahnbildung zur normalen Zeit und ohne Beschwerden ein, p. 337. Die Zähne sind in der Regel verdorben, cariös, nach aussen gedrückt, mangelhaft, hie und da aber auch vollzählig und perlweiss, p. 341."

‡ Morel, *Traité des Dégénérescences de l'Espèce Humaine*, Paris, 1857. See the "Atlas," p. 23.

appeared. They first turn black at the margin of the gums, then rapidly become hollow, and break in pieces. Very often before idiots have grown up only two or three rotten stumps remain. This process often goes on with great rapidity, three or four teeth being lost in as many months. It is not generally accompanied with much pain, though the gums become swollen, and purulent matter is found round the carious stumps. I am not able to offer any adequate explanation why bad teeth should be so common with idiots. If I may trust my own observation, lunatics do not seem to have worse teeth than the classes from whom they are drawn. But to return to the point from which we started, I have examined some preparations of the bones of the fœtus as well as the skulls of monkeys, in the expectation of finding that a highly vaulted palate was the result of arrested development. I found, however, that in the human embryo the portion of the palate formed by the upper maxilla and palatal bone was flatter than in the adult. The palate of most monkeys appears also to be flat. That of the gorilla has a trough-shaped form, similar to what I have seen in a few idiots; but this in the ape seems to be dependent upon the prognathism of the powerful upper jaw and the great strength of the alveolar processes, whereas, in the cases with which I have compared it, the jaw, though narrow and trough-shaped, is not generally prominent, the narrow appearance being owing to diminution of the normal breadth rather than to increase of length. In the first years of childhood, however, the arch of the palate is higher and less rounded than it is in the adult. In the fœtal, as in the infantine skull, the pillars of the nares seem proportionally shorter than they are at a later age. I am not possessed of exact information how often a vaulted palate may occur in individuals of ordinary intelligence. Bad teeth are, unhappily, very common, especially with some nations, as the Americans; and a cleft palate has no necessary connection with idiocy. In the "Westminster Review" of April, 1873, there is a notice of a pamphlet on "Alveolar Contraction," by C. R. Coffin, printed for private distribution. "We write from an imperfect knowledge of dentistry, and it may well be that its contents are familiar to all informed practitioners, but they are in a measure new to ourselves, at least in a practical point of view, and we hasten to say a few words in reference thereto. What Dr. Coffin states is, that dentists find themselves, as practical men, face to face with a peculiar change in the roof of the mouth and in the alveoli

of the jaw which is greatly on the increase, and which, if ill-managed, results in a state of much discomfort and disfigurement, to say nothing of any ulterior consequences in the health. This change, which Dr. Coffin speaks of in terms of "consternation," is a tendency to contraction of the sockets, especially in the upper jaw, with narrow and high vaulted roof or palatine cavity, alterations in the dimensions of the antrum or maxillary sinus, and contracted nasal passages. This gives the feature of acute angular, or "prognathous" facial aspect, and close approximation of the canine, bicuspid and true molar teeth. Thus mastication, speech and beauty are interfered with, and dental caries and neuralgia, on the contrary, are encouraged."

It would be useful to know in what proportion of cases this abnormal appearance of the jaw is present with those not mentally affected. I had designed making some remarks upon the abnormal shape of the spheno-basilar bone described by Virchow and others in the crania of Cretins, and the enlargements of the jugular foramina occasionally described in those afflicted with the same disease, but fear that this would require more space than I could at present venture to claim.

The Functions of Brain and Muscle, considered in relation to Epilepsy. By J. THOMPSON DICKSON, M.A., and M.B. (Cantab), Lecturer on Mental Diseases at Guy's Hospital.

The object of this paper is to discuss some of the opinions which have recently been expressed as to the nature of Epilepsy; and in particular, the views of Dr. Hughlings Jackson, who regards the epileptic phenomenon as the result of a "discharge" from a damaged portion of the brain, which he speaks of as a "discharging lesion."*

In November, 1867, I published a paper in the "British Medical Journal" on a case of "Petit Mal" in a girl who cut her throat whilst passing through the phase of mental disturbance which is frequently associated with that form

* "On the Anatomical and Physiological Localization of Movements in the Brain." By J. Hughlings Jackson, *Lancet*, January 18th, 1873.

"Anatomical, Physiological, and Pathological Investigation of Epileptics." By J. Hughlings Jackson, M.D., West Riding Lunatic Asylum Reports, Vol. III., 1873. Also a paper in the *Medical Times and Gazette*, November 30th, 1873.

of Epilepsy, and in that paper I attempted to illustrate two ideas; the first, that the seat of the lesion to which the epileptic phenomena are due is the surface of the brain, whence we get derangement of thought and disturbance of motion; the second, that these phenomena are the result of a "loss of control."

These ideas, which were drawn from a long series of observations, I stated more definitely in a paper entitled "Matter and Force in relation to Mental and Cerebral Phenomena," published in the "Journal of Mental Science," July, 1869, in which paper I remarked—"When the writhing agony of tic, the violent spasm of tetanus, or the hæmorrhagic congestion of the second stage of epilepsy are witnessed, it is not perhaps to be wondered that the *prima facie* inference should have been undue excitement and over action," but it is evident that such an idea would never have been formed had all the phenomena been carefully noted, and the evidence afforded by each carefully weighed.

"Again, what is termed nervous excitement, as instanced in the delirium of fever, the restless delirium of delirium tremens, and the apparent over action in several forms of insanity, particularly in paroxysms of mania and the excited stages of general paralysis, the ultimate exhaustion renders it evident that the over-action was not real, but due to the arrest of activity, or the diminution of the vitality of those cells wherein the function of control is vested."

"It may be laid down as a rule, that the amount of action the muscular system is capable of performing, and the amount of control which the central nervous system is capable of exercising, are in the healthy animal accurately and perfectly balanced, while any undue excitement visible to us in the former is to be received as evidence of a diminution of power or loss of vitality in the latter."

And again, in a paper summing up the results of a series of experiments on rabbits and Guinea pigs,—published in the "British Medical Journal," June 4th and 11th, 1870,—I advanced the following propositions:—

1.—Epilepsy is a contraction of the cerebral capillaries and small arterial vessels; the order of its stages in epileptic attack are, 1st, irritation of the brain, either direct, or secondary to exhaustion; 2nd, contraction of cerebral capillaries and small arterial vessels; 3rd, cerebral anæmia, and consequent loss of consciousness.

2.—The muscular contraction and spasm, together with

all the varying phenomena associated with epilepsy, are altogether secondary, and not at all essential or constant, but they are all manifestations of imperfect nervous (cerebral) control, or a loss of balance between the nervous and other systems, and after reviewing the evidence I had adduced I concluded with the statement—"Epilepsy is loss of consciousness, the result of contraction of the cerebral smaller arteries and capillaries, induced by irritation, either direct or secondary to exhaustion. Epilepsy may be attended with an endless variety of phenomena, all of which are manifestations of an arrest of control. None of them are essential, and all are dependent upon accidental cause."

The same view I have advanced in several later papers, and in one, "On the Dynamics of Epilepsy and Convulsions" in the Guy's Reports, 1873, I generalised further on the subject of local epilepsy, of local lesions, and loss of control from circumscribed portions of the brain surface, and I commented upon Dr. Jackson's view of "discharges from a pathological seat," or "explosions of nerve force." In the commencement I would briefly enumerate the general points of argument upon which practical physiologists and pathologists are now generally agreed in regard to epileptic phenomena. and it is but due to Dr. Jackson to record that his careful observations have added largely to our knowledge on the subject.

The first point to be noticed is the seat of the lesion or lesions upon which the epileptic phenomena depend, and this seat we know with certainty to be the surface of the brain. Some of the earliest observations were made by Dr. Bright. Afterwards Dr. Wilks pointed out that tumours of the surface of the brain were associated with epilepsy. Dr. Hughlings Jackson stated the same fact. After recording numerous observations confirming this general view in the dead-house, I searched the *post-mortem* books at Guy's for ten years, and the cases therein detailed also bear witness to the same truth, and my experiments in the artificial production of epilepsy led me to the same conclusion. The fact has been made plainer still by Professor Ferrier, who, with the view of putting to experimental proof the statement of Dr. Jackson, that "epileptiform seizure may be looked upon as experiments on the brain made by disease, revealing to us the localisation of special classes of movements in the cerebral hemispheres," following up the researches of Fritsch and Hitzig (who have shown the brain to be susceptible of galvanic stimulation)—lately undertook an investigation, the details of

which are recorded in the West Riding Lunatic Asylum Medical Reports for 1873. He induced epilepsy in cats and rabbits by faradisation applied to the cerebral surface, and demonstrated at the same time that certain convolutions are associated with special muscular movements. By Professor Ferrier's experiments certain convolutions have been proved to preside over definite muscular regions, as the lips, the paws, the mouth, &c.; and it is but a step to the association of the convolution presiding over the movements of the tongue and lips in articulation with the thoughts expressed in the utterance, and thence to thought generally. Professor Ferrier's experiments, in addition to producing local epilepsies, frequently induced general epilepsies, but as the stimulus of electrolization produces intense local hyperæmia he did not observe, nor indeed was it possible for him to observe in his experiments, the condition of anæmia which goes with the attack. That the brain does become anæmic, by the sudden contraction of the smaller arterial vessels has, I think, been sufficiently shown—it obtained in the experiments of Kussmaul and Tenner, it appeared in my own experiments, and it has been observed by numerous experimenters, whilst the pallor associated with the invasion of Epilepsy, which goes with the cerebral anæmia, has been remarked by all recent clinical observers; and, in particular, it was insisted upon by Jules Falret and by Trousseau. The absence of evidence from Ferrier's particular and exceptional experiments on this head cannot be taken as any proof of the correctness of the theories of those who regard congestion of the brain as essential to the production of Epilepsy, the nature of the experiments being a bar to the observation much in the same way as the black skin of a nigger is a veil to the nigger's blushes.

The fact of the contraction of the vessels at the time of the seizure may be demonstrated by examining the brain by Donders' method.

I now propose to review some of Dr. Jackson's statements in his paper "On the Anatomical, Physiological, and Pathological Investigation of Epileptics."

In the first place Dr. Jackson starts with the statement that the "Normal function of nerve tissue is to store up and expend force," and he says, "It is true that this is the function of *all* organic matter, but it is *par excellence* the function of nerve tissue. There are *but two* kinds of alteration of function from disease. Saying nothing of degrees of each, there is

on the one hand loss of function, on the other over-function (not better function). In the former, nerve tissue ceases to store up, and therefore to expend force. In the latter, more nerve force is stirred up than in health, and more is therefore expended; the nerve tissue is "highly unstable."

But we may ask, what is the proof that the normal function of nerve tissue is "to store up and to expend force?" By what means does it store it up? how is it expended? and by what mode of motion is this force to be expressed? Dr. Jackson answers some of these questions; he says "there are many varieties of discharges. Defined from paroxysm, an Epilepsy is a *sudden*, excessive, and rapid discharge of grey matter of some *part* of the brain; it is a local discharge. To define it from the functional alteration, we say there is in a case of epilepsy grey matter which is so abnormally nourished that it occasionally reaches very high tension and very unstable equilibrium, and therefore occasionally 'explodes.'

Now this statement involves the notion that the nerve forces behave as statical electricity, that it is capable of being accumulated in the cells of the grey substance of the brain, as the electricity is accumulated on the surface of the glass plate, and that it discharges or explodes in the same manner as electricity discharges from an electrophorus or a Leyden jar. That such should occur is not only improbable, but impossible. The brain is not even a voltaic battery. Still less is it a statical electrical machine. Those who would consider it as a galvanic apparatus have only to compare it with the electrical lobes of the torpedo, to see that there is no alliance; and though certain deflections of the galvanometer needle have been obtained in experiments upon brain and nerve, there is no proof that these deflections resulted from galvanic currents proceeding from the brain as a battery; indeed, it seems much more likely that they were Thermo-electrical currents developed in the course of the experiments. In whatever way nerve force may be correlated, it certainly is not identical with galvanism; still less is it identical with electricity. Therefore, the idea of sudden and rapid discharges, unstable equilibria, and explosions must be put out of the category.

Dr. Hughlings Jackson quotes Herbert Spencer ("Psychology," vol. i, p. 90), in support of his view, and states that "the following remarks, referring to healthy discharges, would, with a few modifications, apply to some of the trifling degrees of instability of disease." The longer repair goes

on unopposed by appreciable waste, the greater must become the instability of the nerve centres, and the greater their readiness to act; so that there must at length come a time when the slightest impressions will produce motions. "In fact," says Dr. Jackson, "there is at the time Spencer is speaking of a healthy and yet random discharge. On awakening from refreshing sleep there commonly occurs an involuntary stretching of the whole body, showing an immense undirected motor discharge" (Spencer, *op. cit.*, vol. i, p. 90). "And," Dr. Jackson adds, "then a sneeze is a sort of healthy epilepsy." From this it would seem that Spencer holds somewhat the same, though the untenable view, that nervous force can be accumulated by and discharged from the brain like statical electricity. The involuntary stretching of the muscles on awakening from sleep is not due to electrical mandates discharged at random from the brain as electricity from a highly charged machine. The stretching of the muscles is not altogether involuntary, but results from the feeling of necessity of changing the position—the muscles ache from the weight of the body pressing upon them whilst the body is in the recumbent position—also from having been long in one position, and a semi-voluntary movement or general extensor contraction takes place or is permitted in consequence. To ally this condition to epilepsy is to associate two almost opposite conditions; but to make sneezing "a sort of healthy epilepsy" is to make every one epileptic, which cannot be admitted.

That the nerve-cells are capable of storing up motion (I use the word in its abstract sense, meaning thereby that which we can correlate and express in modes, as heat, light, chemical force, &c., &c.) in some mode or modes is only in a very limited sense true; nerve tissue, like every other tissue, undergoes the changes of wear and repair, but whatever be the mode of motion which regulates these changes, whether it be termed vital—regarding vitality as a mode of motion—or whether it be called by any other name, we have positive evidence that the principal modal changes which go on in the brain are chemical. Material is taken up in nutrition, and material is expended in wear and tear, but by processes so uniform that they hardly vary with the changes of rapidity in the circulation.*

* This fact alone is additional evidence on the point of control: increase the circulation, there is no loss of control and no epilepsy; cut off the blood supply to the brain, and the immediate result is epilepsy, the arrest of blood supply paralysing the control by discontinuance of the nutrient supply and materials for chemical change.

In epilepsy we get violent muscular manifestations, but there are no violent changes going on in the tissue of the brain. The utmost degree of violent motion the brain is capable of is the sudden contraction of its vessels, and this is a muscular movement. Explosive discharges such as Dr. Jackson's view involves would soon shatter the brain and kill the patient; but epileptics commonly recover from their attacks, and they recover because the violence we witness occurs not in the brain, but in the muscles and limbs.

The function of muscle is contraction and movement, and when muscles are perfectly normal they will, if liberated from control, perform their function spontaneously, and they will continue to perform it until their potential energy is exhausted.

The new-born infant moves, and the young cow or the young horse move, not from mandates sent to their muscles from their untutored brains, but from spontaneity, or the tendency of the healthy muscles to perform their function.

The infant muscles move from spontaneity, and the movements are, so to say, noted by, or form impressions upon the brain. Spontaneous movements are repeated, and again an impression is conveyed to the brain, and noted in the brain-cells; the direction is noted, a specific pleasure is derived from a certain motion which is also noted, and the pleasure and the movement become thereby associated, and grow together, till at length they, together, develop that which we call volition or will, and thus, by schooling and tutoring, the muscles come under voluntary control. Undoubtedly the seat of control over each muscle is the region or spot in the grey matter of the brain wherein its first motions were recorded, and which thenceforth was destined to become the controlling centre of its motion. It is highly probable that to spontaneity of movement, and to the registration of movements by the brain, we owe not only the rudiments of volition out of which all controlled and directed movements are differentiated, but we owe our thoughts also to the same, or to analagous phenomena in a greater or less degree.

The familiar illustration of Aphasia is valuable in showing the association of the local seat of verbal expression, and the control over the muscles, brought into play in articulation; destroy the seat of these expressions (the seat appears to be the third frontal convolution of the left side), and not only is articulation impossible, but the knowledge of the words is gone, and is not recovered, unless, as Dr. Moxon* has shown,

* *British and Foreign Medico-Chirurgical Review*, April, 1866.

the other side be educated. You may get spasmodic movements in the muscles of articulation after the seat of control is lost, but the directed movements of speech from the muscles cannot, except under certain conditions, be recovered.

That we may have loss of function of any organic tissue is perfectly true, but that we ever have over function does not seem to me to be strictly physiological or possible. It is true that we may get compensations—one organ will increase in size to compensate for the loss of some other organ, as in the case of one kidney increasing in size when the other has been lost; or we may have increase in size to overcome obstruction, as in the case of the heart. But that a tissue like the brain should “store up more nerve force than in health” seems to me to be impossible. The moment you overstep the limit of health you pass into the region of weakness, you do not increase the strength; and any storing up will be, not of material capable of exercising an excess of function, but of effete material, as fat or salts. I was asked one day, by a doctor, whether the hypertrophy of the heart, in one of his patients who I saw with him, was due to over-nourishment, the patient being rather a large eater. The two ideas are very much on a level. The patient had bad vessels.

The heart of a highly fed, indolent man may become large and fatty, but it certainly will not gain strength or capacity for function thereby; on the contrary, it is badly nourished, it will become weak, and the performance of its function will become irregular and imperfect in consequence. In the same way the brain, when badly nourished, becomes weak, and if it stores up any material, that material is fat or amyloid substance, or perhaps calcareous salts; certainly not material for increased function.

The function of such a brain is interfered with, and is irregular (or ceases), and as the healthy brain's function is not to give out discharges, but to maintain control, so the badly nourished brain, or, as I have commonly found it in epileptics, the atrophied brain loses its power of maintaining control, and the function becomes imperfect or irregular, and, under some circumstances, altogether ceases. A fact which is distinct and clear is, that the seat of the expenditure of force in any movement is in the muscles, and not in the brain. Another fact, which numerous observers appear to have overlooked, but one which bears importantly on the subject of epilepsy, was recorded by Galvani, and afterwards verified by

Niobi, is, that the set of the current in the nerves, during muscular contraction, is not in a direction from the brain to the muscle, but from the muscle to the brain. Whatever these currents may be, whether they be galvanic or vital (they can be measured with a galvanometer), the fact that they all have one direction, viz., towards the brain, at once negatives the possibility of discharges or explosions of force from the brain into the muscle.

We have seen muscles contract from spontaneity in the infant, and they would continue to perform this function spontaneously and indirectly, did they not come under the control of volition, the seat of which is the surface of the brain. It is, then, but a logical conclusion that if you remove the control, the muscles will, as in infancy, perform their function and contract by indirect effort. It requires no direct nervous stimulus from the brain to cause muscles to contract. Healthy and well-nourished muscles will contract, as is their wonted function, when the brain is removed altogether, the simplest illustrations being that of the decapitated. In such the muscles contract violently! Why? Certainly not because mandates are sent to them from the brain; but because their controlling organ has been removed. This used to be called reflex action. In a certain sense it is, for it is a reflexion from the muscles towards this controlling centre, which has been lost, but nothing more. What is more is, that the muscles, in such a case, will continue to contract as long as they remain sufficiently alive, or as long as the chemical change, associated with muscular contraction, can be maintained.

The due performance of the function of muscle appears to be dependent, in a great measure, on conditions of nutrition, partly upon innervation, and, in some measure, upon the circulation and the animation of the vessels supplying the muscles. In man, and in many other vertebrate animals, the time during which the muscles retain their function, after their nervous supply has been cut off, is short—but that they do retain it for a short time is remarkably seen when a man is beheaded; he will kick and strike his arms out violently after the head has been severed from the trunk. When the neck of a bird or fowl has been dislocated the muscles always contract convulsively several times, and some degree of general convulsion invariably occurs when the brain of any animal is separated from the cord; in other words, when the control is taken off the muscles. In some few animals certain

muscles will continue to contract for a considerable time after they have been removed entirely beyond the influence of the brain or of nervous stimulus. The heart of a rabbit will continue to beat long after the spinal cord and brain have been severed from one another, and the hearts of *Batrachia* and some *Reptilia*, as *Tortoises* and *Turtles*, will beat for a considerable time after they are removed from the body, and, as Professor *Marey* has lately shown, the force of the contraction is directly proportionate to the amount of resistance, and not to nervous stimulus.

We may, therefore, from the evidence we have, conclude definitely that the muscular contraction and spasm in epilepsy is the necessary consequence of a loss of cerebral control. If the damage be in one convulsion only, we may have a local muscular contraction; if the lesion be in more than one, we may have contraction in several regions, and if the exhaustion, which determines either the periodical or the irregular attacks, becomes considerable, the whole brain may become anæmic, and the convulsions may then become general.

In the event of the local convulsion, the muscular contraction will cease when the potential energy of the muscle is exhausted, and it may begin again when the potential energy has been restored by rest and nutrition, but this depends upon circumstances, for some amount of control may be in the meantime restored. If in the course of the phenomena arising out of the local affection the brain generally becomes weakened, we may expect the further phenomenon of the general contraction of the cerebral vessels and loss of consciousness. General convulsions may follow.

It may be asked, If the muscular contraction in *Epilepsy* is due to a loss of the control exercised by a convulsion, or by the convulsions generally, why do we not get similar contractions of muscles with what *Dr. Jackson* calls "destroying lesions?" for instance, a cerebral hæmorrhage which breaks up the white matter and cuts off the convulsions from their connections. I answer that practically we do—in the first place muscular contractions are common epiphenomena of cerebral hæmorrhage; and in the second place, jactations are common enough in limbs recently paralysed. It may again be asked, Why, then, is the phenomenon of contraction of the muscles only occasional? why do not the contractions continue as permanent manifestations of the permanent loss of control? The answer is plain, the muscles only perform their functions when under normal conditions

of nutrition; as long as they remain healthy *they may store up material capable of manifesting "force" in its change*; but when the nutrition is no longer healthy or normal, the exhibition of function ceases. Thus in old paralysed limbs, jactations are uncommon, because the muscles are partially wasted. And the moment we get muscular wasting, or such a lesion in the brain as interferes with the healthy nutrition of muscle, or a lesion which damages the centres controlling the nerves governing the nutrition of the muscles, at once we get loss of function in those muscles. This will explain many of the paralyses resulting from cerebral hæmorrhage. It is at all events nearer the truth than the theory that supposes that telegraphic messages are sent from the convolutions or from the corpus striatum to the muscles prior to each contraction.

In the case of local muscular contraction or twitches, a lesion of a convolution may be slight, so that general control is maintained by the portion that remains intact, or by the help of others in the immediate vicinity; when, however, the brain begins to be exhausted (from any cause), the muscles over which the damaged portion presides will show by contraction that the control over it is lost, and the contraction of the muscles will go on until they are exhausted too. A very slight lesion in the brain's surface is sufficient for the manifestation of these phenomena, and a very little more than will allow these will permit the more profound manifestation of general contraction of the smaller vessels of the brain, and any or all of the numerous phenomena which may be included in a dramatic description of epilepsy. I think that Professor Ferrier's experiments confirm this view. He applied electrodes to various convolutions, and got contractions of corresponding muscles. Why? Not because mandates were sent from the convolution to the muscle, but because the Faradization exhausted the convolution, and the muscles contracted because they were deprived of their control. Then, again, general convulsions occurred from time to time in the course of Ferrier's experiments, these general convulsions being the result of a more or less general exhaustion of the brain from the experiment performed upon it. They certainly did not proceed from electrical force stored up in the brain. And I cannot conceive how a current of Faradization passing through the brain or through any part of it can do otherwise than effect chemical change and therewith exhaustion.

Epilepsy, however produced, whether by artificial experi-

ment or by nature's experiment (to use Dr. Jackson's language) from disease, is not a display of sudden and ruthless expenditure of stored up force, but is the manifestation of a condition of weakness and exhaustion, the primary seat of which is the surface of the brain; the exhibition of strength we further see is the loss of the potential energy of muscle, which it is the function of the nervous tissue to control and guard, and in the muscular exhaustion is to be sought the cause of temporary paralysis which often succeeds epilepsy.

There is one portion of Dr. Hughlings Jackson's paper, which I would endorse, viz., his remarks as to treatment, though I fancy we follow the same course from different starting points. I place epileptic patients upon a simple and more or less restricted diet; first, because epileptics are generally inclined to eat too much of everything, particularly of meat and highly seasoned food, and as we have to nourish brain rather than muscle I apprehend that vegetable food, and in particular cereal food, will effect that object better than meat. But I cannot go with Dr. Jackson in his view of the chemical change of the grey matter, whereby a "more explosive nervous substance is formed," nor does it seem to me to be probable that in the epileptic brain nitrogen should have displaced the normal constituent, phosphorus—chemical analysis might answer this question. But even supposing we found a deficiency of phosphorus and an excess of nitrogen, surely the nitrogen cannot have rendered the brain an explosive substance, such that its changed condition can bear any sort of comparison, even by way of illustration, to gun-cotton—and yet Dr. Jackson has hinted at such an idea in a foot note.

Before leaving the subject, I would note one interesting fact. An able paper, from the pen of Dr. J. Crichton Browne, appears in the West Riding Asylum Reports for this year, 1873, on the use of nitrite of amyl in the treatment of epilepsy. Dr. Browne's success is highly encouraging. I have used the drug with singular and striking results, and I believe that further observations will demonstrate that we have in nitrite of amyl a drug of singular value in the amelioration of the sufferings of the miserable victims of epilepsy.

Antiquarian Scraps Relating to Insanity. By T. W. McDOWALL, M.D., Edin., F.S.A. Scot., Assistant Medical Officer, and Pathologist, West Riding Asylum.¹

Some time ago I employed my leisure in hunting up all facts which might throw some light on the condition of lunatics in Great Britain in former times. In my then position it was extremely difficult to obtain access to the class of books most likely to yield me the information desired, but from such as did fall in my way all matter of the least value for my purpose was excised. The labour connected with this pursuit was much greater than most might be inclined to credit, and some men of a utilitarian frame of mind may be inclined to believe that labour on such a subject was wasted, and might have been much more profitably expended on other branches of research.

At present it is not my intention to examine the origin of the various superstitions and peculiar practices connected with cause and treatment of insanity. To do so properly would require an amount of information on various subjects to which I can make no pretensions; I must be content with the more humble occupation of simply arranging such facts as have come under my notice.

Except Dr. Mitchell's, I know of no paper in the English language on this subject. So far as can be ascertained, any writers who have paid any attention to the history of insanity and its treatment have been content to make a few allusions to cases of mental derangement referred to in the classical or biblical writings; and have, it is found, passed on to consider the state of the insane, when Pinel and others began their great work little more than half a century ago. Perhaps they have been deterred from a more minute consideration of the subject by the great difficulty which exists in collect-

¹ The materials of this paper were collected some time ago, and were thrown aside when I found that much of what I had obtained had already been utilised by Dr. Arthur Mitchell, one of the Commissioners in Lunacy for Scotland, in a paper entitled, "On Various Superstitions in the North-West Highlands and Islands of Scotland, especially in relation to Lunacy." His paper appeared in the *Proceedings of the Antiquarian Society of Scotland*, vol. iv. (1862), and he most kindly furnished me with a reprint upon finding that I was interested in, and had been working at a subject which had engaged his attention now several years ago. Much of the information in Dr. Mitchell's paper I had already obtained from original sources, but in arranging my materials for this communication I have used his pamphlet to verify my references, and, with his permission most freely granted, to supply information which I had previously failed to obtain, and which might be useful for my present collection of "Scraps."

ing the necessary information. Be that as it may, the fact remains that most men know absolutely nothing of the condition of the insane in this country from the time of Alfred the Great up to comparatively recent times. To some minds this would prove a most fascinating subject for investigation; and it is with the purpose of doing what little I can to the collection of the necessary information that this paper is now prepared.

Without attempting anything like a scientific or chronological arrangement I shall proceed to recount various superstitions relating to the causation of insanity.

Insanity caused through Witchcraft.

Among the manifold evils which witches were supposed to be able to inflict on those who fell under their displeasure, insanity is one. Dalryell gives several instances from the Records of the Court of Justiciary of Scotland.

On 11th Dec., 1644, Agnes Finnie was indicted of witchcraft. Her daughter, Margaret Robertson, had quarrelled with a Mawse Gourly, spouse of Andrew Wilson, and having been called "ane witche's get," she "in grit furie and raidge," made this answer—"Gif I be ane witche's get, the devill ryve the saul out of ye befoir I come again," according to quhilk crewall, and devillische imprecatione,—Andro Wilson,—within aucht houris thereafter, be your sorcerie and witchcraft practeizet be yow wpone him, be your dochteris instigatione,—became frenatick, and ran stark mad, his eys standing out in his head in maist feirfull and terrible manner,—evir uttering thir wordis, as his ordiner and continuall speiches pronuncit in that his madness, 'the devill ryve the saule out of me.'"² In this case a malediction was supposed to have been sufficient to bring about the result recorded; the following is another example of a similar kind. "Christian Porteous coming over the style, her kitt negligently fell off her heid on another, who exclaimed, 'God let her never gett a good marriage, and lett her hands doe the never a better turne thereafter.' The offender was blown over in consequence of these malevolent anticipations, lost the power of her hand, then of her whole body, and died distracted."³

In Scotland at the end of the sixteenth and during part of the seventeenth centuries, when gross ignorance and credulity

² Dalryell's "Darker Superstitions of Scotland," p. 35.

³ *Ibid*, p. 36.

abounded, and the popular amusement appears to have been witch-hunting, insanity was supposed to result from very simple causes when employed by a witch. Thus, a woman accused by a man of being a sorceress, threw "a wall peit at his face, and bled him therewith. Immediatlie thairefter he past to and fro, as ane man wanting discretioun and knowledge, and knew not what he did."⁴ Witches could cause very transient attacks of insanity, if the following is to be credited:—"One complained that a woman came to his nurse and took a grip of her hand, who thairefter became distracted for the space of two hours."⁵ Janet Coek, a noted witch, caused a woman to go mad from a simple blow; and having been rebuked by the minister of Dalkeith for the same, she bewitched him, so that "he took ane terrible foot of madness, so that the whole household could not get him laid in his bed."⁶ Dalzell gives an instance in which a patient lay "in ane feirful madness for the space of ten oulkis (weeks) togidder." He also mentions the case of a John Souter, who recovered from "ane phrenzie and madness" when the supposed sorcerer had been captured.

Sometimes the attacks of insanity caused through witchcraft terminated fatally. Thus, one Beatrix Sandilands became "mad and bereft of her natural rest; and in end, be occasion of the said madness sua (the accused) laid upon the said Beatrix—she was deprived of hir natural lyfe."⁷ The following is a very interesting example of the same. Through witchcraft a man fell "into a phrainsie and madnes, and took his bed and never rase agane, but died within a few dayes; and in tyme of his sicknes, he allwayis cryed out, that the said Cristian (the witch) was present befor him in the lyknes of ane gray eatt."⁸

In the cases of insanity recorded as due to witchcraft, we have nearly every form of mental derangement. Symptoms somewhat resembling hysterical mania occurred in the daughter of the Earl of Dumfreis Stair. The patient "did frequently fly from one end of the room to the other, and from the one side of the garden to the other—whether by

⁴ Quoted by Dalzell from Trial of Marable Couper, 13 June, 1616, in MS. Records of the Sheriff Court of Orkney.

⁵ Dalzell's "Darker Superstitions of Scotland," p. 52; quoted from Halyrudhous Kirk Session Register, 27th March, 1655.

⁶ *Ibid.*, p. 53, quoted from the trial of Janet Coek *ut supra*.

⁷ Dalzell, p. 53, trial of Jean Craig, 27th April, 1649. *Rec. Just.*

⁸ *Ibid.*, p. 53.

the effects of witchcraft upon her, or some other way, is a secret."⁹

Many of the instances of insanity said to have been caused by witchcraft must be attributed simply to the terror which ignorant and superstitious people experienced when placed in circumstances calculated to inspire them with peculiar fear. Sometimes, however, weak-minded people endangered their remaining senses by clothing the simplest occurrences with supernatural significance. Thus, Isobel Greiron, "in the likenes of her awin cattie, accompanied with ane grit number of vther cattie, in ane devillish maner enterit within the hous (of Adam Clark), quhair they maid ane grit and feirful noyis and truble, quhairby the said Adam, than lying in his bed, with his wyfe and seruand, apprehendit sic ane grit feir that they wer liklie to gang mad."¹⁰

The following is a most curious and interesting case:—Marioun Ritchart was accused that when "ye cam to Stron-say, and asking almes of Andro Coupar, skipper of ane bark. he said, 'Away witch, carling; devil ane farthing ye will fall,' quhair vpoun ye went away very offendit, and incontinentlie, he going to sea, the bark being vnder sail, he rane wode, and wald have luppen (leaped) ourboard: and his sone seeing him, gat him in his armes, and held him; quhairvpoun the seiknes immediatelie left him, and his sone ran made, and Thomas Paiterson seing him tak his madnes, and the father to turn weill, ane dog being in the bark, took the dog and bladdit (struck) him vpoun the tua schoulderis, and thairefter flang the said dogg in the sea, quhairby these in the bark were saiffed."¹¹

It cannot be doubted that in many cases of insanity, where the disease was supposed to be due to witchcraft, the patients were already mentally deranged at the date of the operation of the imaginary supernatural cause. They certainly suffered from hallucinations of one or more of the senses. Thus, the appearance of a large black dog, with flashing eyes (probably believed to be the devil), caused the Papal legate at the Council of Trent to faint, and rave incessantly till he died.¹²

So strongly did the belief in witchcraft colour the opinions held in former days that there appears every reason for be-

⁹ Ibid, p. 54, from *Woodrow* Analecta, in MS., January, 1712, vol. iii., p. 2.

¹⁰ Ibid, p. 560, trial of Isabell Greiron, 1607.

¹¹ Ibid, p. 182—3. From trial of Mareoun Ritchart, 29th May, 1629 or 1633. *Rec. Crk.*

¹² Ibid, p. 587.

lieving that the delirium of acute disease was attributed to that power. The patients, in some cases, professed to see the images of those who had bewitched them; and there are good grounds for believing that some poor women lost their lives because, unfortunately, their names were mentioned by some delirious patient, who, perhaps, also indicated, by an expression of terror, that the persons mentioned were present to his sight. A witch Beigis God was tried, 27th May, 1608, at Longniddry. She was accused of having "cuist ane heavie and unknawin seiknes vpon Alexander Fairlie, quha vanischt away with vehement sueitting and continuall burning at the hairt; quhilk seiknes endurit with him the space of twa monethis, that nane luikit for his lyfe,—and nichtlie the said Beigis appeirit to him in his awin similitude, vpone quhome he cryit continuallie for help; and in the day scho appeirit to him in the schape of a dog, quhilk put him almaist out of his wittis."¹³

In another case, indeed, a witch pleaded that various phenomena, of which she was the accused cause, were really "in the persone's brayne that saw the sich — for he was mad."¹⁴

The evil effects of witchcraft were not limited to man, but were supposed to influence the lower animals most injuriously. In his recent writings on the "Physiology of Mind in the Lower Animals," Dr. Lauder Lindsay has not brought forward, so far as I have noticed, any of the cases of former times, in which animals were believed to have become insane through supernatural means. Except for literary ornamentation they can be of little use to Dr. Lindsay; but the fact remains that many such cases are on record; indeed, so numerous are they that Dalzell remarks that in former times madness appears to have been more prevalent among the larger animals than it is now. He mentions the case of two cattle having been made "to ryn woid and ranmisch to deid." Another instance occurred when one Helen Gib got "ane inchantit bounoock of meil;" this "falling out of hir hands, brak in twa peices, quhilk was tane vp be twa dogis and swallowit be thame; thai both went mad and deit."

When cattle had become mad, as the owners supposed, and it was desired to discover through whose influence the calamity had befallen the herd, very cruel methods were occasionally adopted to effect this purpose. Dalzell (p. 324) gives the case of some cattle having become mad and killed themselves

¹³ Ibid, p. 50.

¹⁴ Ibid, p. 594.

against trees. The owner cut off the ears of the bewitched beasts and put them in the fire; but the witch "could not rest until they were plucked out of the fire; she accordingly appeared and removed the ears from the flames."

Some of the instances of madness in the lower animals are said to have occurred through transference of the disease to them from the human subject. We have already given an example of this; that of Andro Coupar who, in attempting to commit suicide by leaping overboard, was restrained by his son, who became insane. To save him from his affliction he was struck between the shoulders with a dog, which was immediately cast into the sea.

The case of a woman is recorded who recovered from insanity by the transference of her disorder to a cow. The animal, it is said, "soon ran woid and deit."¹⁵ Another woman was seized with a strange distemper and frenzy, which was transferred "to the catt of the hous," with the result that, "within two houres thairefter the catt was found deit."¹⁶

In the Highlands of Scotland, at the present time, various superstitious practices are resorted to to cure cattle of their ailments, but so far as I know, no special treatment exists for the removal of madness from the lower animals, probably for the simple reason that cases of this disorder almost never occur. In former times, however, there existed one John Brughe, a celebrated man in his day, who received considerable sums for curing animals of various diseases, madness among the others. He received nine shillings for curing a mad cow. His method consisted in taking from the owner "thrie turnouris (shillings) rubbing thame vnder the lap of his cot, and putting thame out-throw and in-throw his belt head; and causing thame to be cassin in a tub full of cleane water, not suffering it to tutsche the ground." After this necessary preliminary preparation it was required that the cow being "braine wood for the tyme, should drink" of the water.¹⁷

So universal was the belief in witchcraft in former days that we find learned men, even dignitaries of the church, affected by the superstition.

When Bishop Jewel preached before the Queen, he said:—"It may please your Grace to understand that witches and

¹⁵ Ibid, p. 107. From trial of Thomas Greive, 1642.

¹⁶ Ibid, p. 108. From trial of Margaret Hutchesone, 10th Sept., 1661.

¹⁷ Ibid, p. 154.

sorcerers within these last few years are marvellously increased within your Grace's realm. Your Grace's subjects pine away, even unto the death, their colour fadeth, their flesh rotteth, their speech is benumbed, their senses are bereft. I pray God they never practice further than upon the subject." In Styrpe's opinion these remarks by the learned Bishop were the occasion of bringing in a Bill, the next Parliament, for making enchantments and witchcraft felony.¹⁸

Insanity caused by Visiting the "Twelfth Rig."

This is a curious superstition, and, so far as I have been able to discover, only described by Hugh Miller, the celebrated geologist. Of course, his opportunities of becoming well acquainted with the folk-lore of Cromarty and the surrounding district were peculiarly ample, and he was not a man who threw away any chance of picking up information. In describing the customs and superstitions connected with Halloween, he says:—"The other north country charm, which, of Celtic origin, bears evidently the impress of the romance and melancholy so dominant in the Celtic character, is only known and practiced (if, indeed, still practiced anywhere) in a few places of the remote Highlands. The person who intends trying it must steal out unperceived to a field whose furrows lie due south and north, and, entering at the western side, must proceed slowly over eleven ridges, and stand in the centre of the twelfth, when he will hear either low sobs and faint, mournful shrieks, which betoken his early death; or the sounds of music and dancing, which foretell his marriage. But the charm is accounted dangerous. About twelve years ago I spent an autumn in the mid-Highlands of Ross-shire, where I passed my Halloween, with nearly a dozen young people, at a farmhouse. We burned nuts and ate apples; and when we had exhausted our stock of both, some of us proposed setting out for the steading of a neighbouring farm, and robbing the garden of its cabbages; but the motion was over-ruled by the female members of the party; for the night was pitch dark, and the way rough; and so we had recourse for amusement to story-telling. Naturally enough, most of our stories were of Halloween rites and predictions, and much was spoken regarding the charm of the rig. I had never before heard of it, and, out of a frolic, I stole away to a field whose furrows

¹⁸ Styrpe's *Annals of the Reformation*, vol. i., p. 8. Quoted in Brand's "*Popular Antiquities*," 1849, vol. iii., p. 11.

lay in the proper direction, and, after pacing steadily across the ridges until I had reached the middle of the twelfth, I stood and listened. But spirits were not abroad. I heard only the wind groaning in the woods, and the deep sullen roar of the Conan. On my return I was greeted with exclamations of wonder and terror, and it was remarked that I looked deadly pale, and had certainly heard something very terrible. "But whatever you may have been threatened with," said the author of the remark, "you may congratulate yourself on being among us in your right mind, for there are instances of people returning from the twelfth rig raving mad, and of others who went to it as light of heart as you, who never returned at all."¹⁹

Another of the observances of Halloween was supposed to produce insanity. It consisted in eating an apple before a looking-glass, with the object of discovering the inquirer's future husband, who, it is believed, will be seen peeping over her shoulder. This superstition is referred to by Burns in his celebrated poem on Halloween. A young girl, anxious to try the spell and yet afraid to do so alone, is thus represented by the poet:—

"Wee Jenny to her granny says :
 'Will ye go wi' me, granny ?
 I'll eat the apple at the glass
 I gat frae Uncle Johnny.'"

The old woman is indignant at the request:—

"She puff't her pipe wi' sic a lunt,
 In wrath she was sae vap'rin',
 She notic't na, an aizle brunt
 Her braw new worset apron
 Out through that night.

"Ye little skelpie-limmer's face !
 I dawr ye try sic sportin',
 As seek the foul thief ony place,
 For him to spae your fortune ;
 Nae doubt but ye may get a sight !
 Great cause ye hae to fear it,
 For mony a ane has gotten a fright,
 And lived and died deleeret,
 On sic a night.'"

Idiocy due to the Evil Eye.

The belief in the power of the Evil Eye is still prevalent in the more remote parts of Scotland. Any sickness or mis-

¹⁹ "Scenes and Legends of the North of Scotland," by Hugh Miller. Edit. of 1869, p. 65, 6.

fortune to man or animal may, according to the superstition, be due to this form of witchcraft, but I have been able to discover only the following case of mental unsoundness attributed to this cause :—

Dr. Arthur Mitchell states: "I saw a girl in U——, in whose case idiocy was attributed to this cause. An evil eye had fallen on her in childhood, and this was the result. Time and place were mentioned with precision. The *gold and silver water* was, in her case, tried as a cure. A shilling and a sovereign were put into water, which was then sprinkled over her, in the name of the Father, Son, and Holy Ghost. So said her mother, a seemingly pious old woman, who told me in all seriousness that, though her child's mental health was still as bad as ever, her bodily health had been much improved." It is added that in the parishes of the west of Ross-shire, in order to give greater efficacy, the water is taken from a rivulet through which a funeral procession has lately passed.²⁰

Very various charms have been employed to protect men and animals from the blasting effects of the Evil Eye, and to counteract these effects once they have appeared. "Cattle are subject to be injured by what is called *an evil eye*, for some persons are supposed to have naturally a blasting power in their eyes, with which they injure whatever offends or is hopelessly desired by them. Witches and warlocks are also much disposed to wreak their malignity on cattle. Charms are the chief remedies applied for their diseases. I have been, myself, acquainted with an anti-burgher clergyman in these parts, who actually procured from a person, who pretended skill in these charms, two small pieces of wood, curiously wrought, to be kept in his father's cowhouse, as a security for the health of his cows. It is common to bind into a cow's tail a small piece of mountain ash wood, as a charm against witchcraft."²¹

Various modifications in the preparation and use of the *gold and silver water*, mentioned by Dr. Mitchell, existed; but of these it is necessary to mention only one, as detailed by a correspondent of the "Athenæum." As might have been expected, superstitious practices and beliefs have become more or less modified in process of time, as the result of

²⁰ "On Various Superstitions in the North-west Highlands and Islands of Scotland, especially in relation to Lunacy," by Dr. Arthur Mitchell. In the "Proceedings of the Antiquarian Society of Scotland," vol. iv.

²¹ "Heron's Tour Through Part of Scotland," vol. ii., p. 228, quoted in "Brand's Popular Antiquities," vol. iii., p. 46, 7.

various circumstances, such as locality, race, &c., but their leading features have been, on the whole, wonderfully preserved. The following, therefore, may be accepted as describing with sufficient accuracy a ceremony for the removal of various diseases, insanity among them, due to the "evil eye." "Your interesting papers," says the correspondent, upon "Folk Lore," have brought to my recollection a number of practices in the West of Scotland. The first is a test for, as a charm to prevent, an 'ill e'e.' Any individual ailing not sufficiently for the case to be considered serious, but lingering, is deemed to be the object of 'an ill e'e,' of some one 'that's no canny.' The following operation is then performed:—An *old* sixpence is borrowed from some neighbour, without telling the object to which it is to be applied; as much salt as can be lifted upon the sixpence is put into a tablespoonful of water, and melted; the sixpence is then put into the solution, and the soles of the feet and the palms of the hands of the patient are moistened three times with salt water; it is then tasted three times, and the patient afterwards "scored aboon the breath," that is, by the operator dipping the forefinger into the salt water, and drawing it along the brow. When this is done, the contents of the spoon are thrown behind, and right over the fire, the thrower saying at the same time, 'Lord preserve us frae a' scathe!' If recovery follow this, there is no doubt of the individual having been under the influence of an evil eye."²²

Other Superstitions as to the Causation of Insanity.

These are so various that, without attempting anything beyond the roughest classification, we simply recount them very much in the same order that we encounter them in our MS. notes.

It would appear that, in some parts of America at least, the flesh of the owl, the rattle-snake, and the prairie-dog is believed to produce insanity in those that eat it. Hepworth Dixon, in his "New America," says—

"It may only be a superstition; but the teamsters and drivers across the Plains have a fixed belief that flesh of the prairie dog is poisonous in a peculiar way, and that men who eat it become insane. Once, in a stress of hunger, I was obliged to kill one.

"'Lord!' cries the boy at the ranch, 'you will never eat that, sir.'

²² "Brand's Popular Antiquities," vol. iii., p. 46 7.

“ ‘Why not? I am hungry enough to eat a Cheyenne.’

“ ‘Well, sir,’ says the lad, ‘we prairie folks consider the owl, the rattlesnake, and the prairie dog to be all of a kith and kin, the devil’s own spawn, and that anybody who eats them will go mad.’ ”

Not alarmed at such dreadful prospects, the traveller had the animal cooked, found the flesh delicious, with something like the taste of squirrel; and the prairie boy, seeing him suck a savoury morsel, instantly seized and devoured a leg without any evil consequences to his mental condition.²³

Several curious superstitions refer to the hare. References to several of these have been collected by Brand in his “Popular Antiquities.” On this subject he says:—“A hare was formerly esteemed a melancholy animal, probably from her solitary sitting in her form; and thence, in the fanciful physicks of the time, its flesh was supposed to engender melancholy. It was not eaten by the Britons in Cæsar’s time. It was not only in England that the hare had this character; La Fontaine calls it ‘le mélancholique animal.’ ”

Prince Henry tells Falstaff that he is melancholy as a hare (1 Henry IV., 1, 2). In the old play of the *White Devil* occurs:—

“ Like your poor melancholy hare,
Feed after midnight.”

Drayton sings:—

“ The melancholy hare is found in brakes and briars.”

An old medical writer says—“Hare fleshe engendreth melancholy bloudde,” and “more melancholy than any other, as Galen sayth.” This was not quite forgotten in Swift’s time: in his *Polite Conversation*, Lady Answerall, being asked to eat hare, replies—“No, madam; they say ’tis melancholy meat.”

We are not surprised to find that a hare crossing a person’s way was supposed to disorder his senses; the ground of which conceit, Sir Thomas Browne says—“Was no greater than this, that a fearful animal passing by us portended into us something to be feared;” but Wren illustrates it more practically—“When a hare crosseth us, wee thinke itt ill lucke shee should soe neerly escape us, and wee had not a dog as neere to catch her.” The bone of a hare’s foot was considered to be a remedy against cramp—

“ The bone of a haire’s foote closed in a ring,
Will drive away the cramp when us it doth wring.”

Withal’s Dictionarie, 1608.²⁴

²³ Hepworth Dixon’s “New America,” 5th edit., vol. i., p. 47-8.

²⁴ The preceding quotations are from “Things not Generally Known,” by Timbs, 2nd series, p. 25-6.

Shakspeare's references to insanity and all connected therewith are almost innumerable. Charles, the Dauphin of France, says to Alencon and others—

“ Let's leave this town ; for they are hare-brained slaves.”

1 *Henry IV.*, 1, 2.

As we proceed we shall refer to several other passages in the works of Shakspeare in which he notices various superstitions and practices relating principally to the causation of insanity.

Superstitions regarding the influence of the moon in mental diseases are so well known, that it is almost unnecessary for me to refer to them. I shall, therefore, content myself by reproducing Brand's short notice of them. He says:—“ The influence of the moon over mental and corporeal diseases, its virtue in all magical rites, its appearance as predictive of evil and good, and its power over the weather, and over the many minor concerns of life, such as the gathering of herbs, the killing of animals for the table, and other matters of a like nature, were almost universally confided in as matters of useful and necessary belief in the sixteenth century, and it is stated on reasonable authority that the relics of this belief are still to be traced among our rural population.

“ Shakspeare has many allusions to these impressions, but they have not been quite so fully illustrated by the commentators as might have been anticipated from the extent of their researches. Perhaps we are in some measure indebted for them to the poet's own imagination. He alludes to the moon as the ‘ sovereign mistress of true melancholy,’ informs us that she makes men insane when ‘ she comes more near to the earth than she was wont,’ and that, when ‘ pale in her anger, rheumatic diseases do abound.’ ”²⁵

Various curious superstitions have been connected with Midsummer Eve.

“ Some, by a superstition of the Gentiles, fall down before his (St. John Baptist's) image, and hope to be thus freed from the epileps; and they are further persuaded that if they can but gently go unto this saint's shrine, and not cry out disorderly, or bellow like madmen when they go, then they shall be a whole year free from this disease; but if they attempt to bite with their teeth the saint's head, they go to kisse, and to revile him, then they shall be troubled with this disease every month, which commonly comes with the course of the

²⁵ Brand's “ Popular Antiquities,” iii., 142.

moon, yet extream juglings and frauds are wont to be concealed under this matter."²⁶

"Midsummer Eve was formerly thought to be a season productive of madness. So Olivia observes, speaking of Malvolia's seeming frenzy, that it 'is a very Midsummer madness,' and Steevens thinks that as 'this time was anciently, thought productive of mental vagaries, to that circumstance the "Midsummer Night's Dream" might have owed its title.' Heywood seems to allude to a similar belief, when he says: ²⁷

"As mad as a March hare; when madness compares,
Are not Midsummer hares as mad as March hares?" ²⁸

Insanity is said to have been caused by use of a mystical number. "Katherine Grant was charged with approaching a house, 'knocking thrie severall tymes at the door, and one houre betwix everie tyme—and she not getting in, went away murmuring. Thrie days after the guid-wyff becam mad.'" ²⁹

(To be continued.)

The Morbid Psychology of Criminals. By DAVID NICOLSON, M.B., Medical Officer, Her Majesty's Convict Prison, Portsmouth.

(Continued from page 232, vol. xix.)

Emotional Display in Prisoners.—In proceeding with our investigation into the *rationale* of their angry and destructive outbursts, it will be necessary for us to keep in view the exceptional circumstances in which prisoners are placed, and the fact that their passionate demonstrations are frequently but repetitions of the same series of acts in consequence of the limited scope of action afforded by prison life. The readiness with which such emotional conditions are stirred up, and the extravagant results to which they lead, are among the best evidences of mental inferiority among criminals as a class. Indeed, wherever we find such a relative want of proportion and adjustment between states of feeling and their cause on the one hand, and states of outward ac-

²⁶ English translation, fol. 1658, p. 28, of "Levinus Lemnius;" quoted in Brand's "Pop. Antiq.," vol. i., 305-6.

²⁷ Halliwell's "Introduction to a Midsummer Night's Dream," p. 3.

²⁸ Brand's "Pop. Antiq.," vol. i., 357.

²⁹ Dalyell, p. 390.

tivity and their consequences on the other, we must look upon it as an indication of inferiority.

We have in the first place an over-susceptibility to such impressions from without as are likely to arouse the irascible emotion; but the high emotional current generated under such circumstances, and its destructive tendency, would, in ordinary individuals, be resisted, or, at least, moderated, by the group of influences which Professor Bain puts down as "our sympathies, our fears, and our conscientious feelings generally"—*i. e.*, where fellow-beings are concerned. But such moderating influences as sympathy and conscientious feeling occupy but a small space in the criminal nature; and, consequently, they afford a proportionately slight aid in resisting tides of passion. Nor is it fear in its moral aspect which would help to restrain the criminal in its outbursts; it is rather the selfish fear or dread of physical chastisement and pain, more or less immediate, with which he will be visited.*

His unfitness to cope with a protected warder is for the most part sufficient to prevent him from trying to put the violent, I might say murderous, promptings of his mind into execution; and this only adds another stimulus—that of disappointment—to the already over-excited state in which he is shut up in his cell. Being unable to gratify his revengeful desires on the person of the offender, he extends his baffled rage in a senseless destructiveness, accompanied by frantic gesticulations, blasphemings, and threats.

It is no matter of surprise that prisoners give way to passion and commit themselves when they meet with real or imaginary injustice or ill-treatment; but they bring themselves into a special prominence when their ill-temper rises so far out of proportion to the occasion, and when their conduct is so unreasonable and purposeless. The ill-cultivated mind of the criminal is wanting in that speedy exercise of reflection and volition which should step in at such a moment and control the emotional activity which is urging him to the commission of foolish, if not dangerous, deeds. Although such extravagant actions indicate a certain want of control and a certain

* It is frequently asserted, and on the authority of experienced warders, that a good "drubbing" on the spot is the most effective plan of treating an insolent and violently-disposed prisoner. It comes more home to his insensitive nature than the roundabout method of official routine, which, by the notice taken of him, gives to him something of a heroic importance. The summary method, however, is unwarrantable under all the circumstances, and could never meet with the sanction of authority.

deficiency in the mental tone, we cannot, taking them by themselves and in criminals, accept them as evidence of the irresponsibility of the agent. They may be estimated as manifestations more or less morbid in character; and in extreme cases it would be difficult and even rash in anyone to say that they were not due to insanity. But as a rule, before looking upon such emotional displays as the outcome of insanity, it is necessary for us to have some other concomitant indications of mental unsoundness to bear us out. Each case, therefore, has to be investigated on its own merits; we have to find out the nature and extent of the provocation or other probable cause of excitement, as well as the general character of the individual. Generally speaking, the more trivial the occasion the further the departure from a normal standard of mind. But even in this direction we may find ourselves deceived, owing to the difficulty of fathoming the motives of prisoners. The following case will show how we may be misled:—J. F., a military prisoner of bad character, having been reported and awarded a punishment, became annoyed, and on returning to his cell he smashed all the furniture and utensils it contained. Some time after, without any provocation or apparent cause of excitement, he did the same thing again. As the condition of his mind became a matter of question owing to a great sullenness of demeanour, he was in a measure let off, and not punished for the offence. He went on quietly for a few weeks and seemed to promise better; and the principal warder in whose charge he was endeavoured to encourage him to behave well. But without any noisy demonstration or hint of his intention he a third time gave way to his destructiveness. I found that no words or quarrelling had occurred to give rise to this, and when I questioned him as to what he meant by such conduct, he preserved a dogged silence. As he had a peculiar appearance and manner, and as he was thought by the warders to be a little “off his head,” I took him into hospital under observation; and here, besides a general strangeness of behaviour, he once became destructive and once at least dipped his clothes in a bucket of water. But he went a little too far with it, and I at last made him out to be a thorough impostor, feigning insanity. Besides failing in his object, which was to gain his discharge from the army, he was punished for the imposture. Ordinary convicts sometimes begin their attacks of feigned insanity by this smashing process, but they generally get up an appearance of excitement with noise at

the same time. These outbursts are almost invariably traceable to some immediate cause of excitement, or to some motive which may or may not be easily made out.

The Breakings-out of Female Prisoners.—It is not among male prisoners only that such conduct is met with. Female convicts are not only liable to give way to destructive emotions when disappointed or irritated; but they afford, in what has been termed their “breakings-out,” an illustration of a state of mind whose aspect is even more distinctly morbid than that which we have been considering.

A writer under the style of “A Prison Matron” describes* these breakings-out as being “peculiar to English female prisons,” and says they are “altogether distinct from the raving and violence of the inmates of a lunatic asylum, and appear very often to be a motiveless frenzy.” They consist of a frantic outburst, in which destructiveness is the main feature, a special partiality being displayed for the shivering of window panes and the tearing of blankets and sheets into fragments.

The “Prison Matron” gives an illustration which I cannot do better than quote in full—

“I have known women address their matrons in a style similar to the following; ‘Miss G., I’m going to break out to-night.’

“‘Oh! nonsense. You won’t think of any such folly.’

“‘I’m sure I shall, then.’

“‘What for?’

“‘Well, I’ve made up my mind, that’s what for. I shall break out to-night, see if I don’t.’

“‘Has anyone offended you, or said anything?’

“‘No, no. But I *must* break out. It’s so dull here. I’m sure to break out.’

“‘And then you’ll go to the “dark” (cells).’

“‘I want to go to ‘the dark,’ is the answer.

“And the breaking-out often occurs as promised; the glass shatters out of the window frames, strips of sheets and blankets are passed through or left in a heap in the cell, the guards are sent for, and there is a scuffling and fighting, and scratching, and screaming, that Pandemonium might equal, nothing else.”

We can scarcely realize the possibility of such conduct, and yet I can bear witness to it.

In seeking for an explanation of these occurrences when

* Female Life in Prison, 1864, p. 72.

not due to provocation, angry excitement or disappointment, we find it most referable to a restless craving for change—change even for the worse. Arising out of the irksomeness, the restraint, and the monotony of prison life, we can discover in wilful, self-indulged, and ignorant minds the growth of an irritability which even well cultivated intellects can scarcely subdue or shake off. We can see how this irritability involves a restiveness and a longing for some change or variety of circumstance; and the only means at the prisoner's command for the immediate gratification of this desire lies in misconduct. When once given way to, the excitement leads to most unreasonable acts of destruction, in committing which there doubtless arise strange and pleasurable feelings of a triumphant nature (the prisoner being temporarily in command of the situation). We are thus (especially if the mental process is strengthened by repetition) brought into proximity and contact with that attractiveness which "breakings-out" seem at times to possess, and which is apparently so morbidly fascinating and irresistible as scarcely to be distinguished from a manifestation of insanity. The possibility of anticipating and averting the "breaking-out" of a prisoner by granting the desired change of scene (which is in point of fact an intelligible motive), will help us in drawing a distinction between it and the incoherent impulse of a lunatic.

The female prisoner much more frequently gives way to this destructive impulse on trivial, if not inexplicable, grounds than does the male, and a portion of this greater frequency is attributable to functional causes which present themselves in connection either with the normal menstrual flow or with its derangement. I believe, and it is no more than we would naturally expect, that a certain periodicity on this account frequently attaches to the occurrence of these "breakings-out" (and of minor demonstrations as well); not necessarily that it can be shown that they happen regularly, date after date; but that at dates corresponding with the menstrual period, there is a greater likelihood of their occurrence. Besides having verified this in several cases myself, I have the testimony of experienced prison matrons to the same effect. Another reason for their frequent occurrence is found in the notion of companionship which prevails so much among female prisoners; one prisoner deliberately getting into trouble in order that she may be near to her "pal," and bear her company in punishment.

These violent outbursts, which serve, both amongst the men and the women, to break the monotony of prison life, remind us of that "exceeding fierceness" which was displayed by those who in Gospel times were "possessed of the devil;" and it would appear, from what St. Matthew says,* that some distinction was drawn between such characters and "those which were lunatick." Now-a-days, the individual who indulges in such demonstrative and purposeless conduct in the midst of his usual social surroundings can scarcely fail to be looked upon as a madman. But when the individual is a prisoner it does not follow that he should be so looked upon; and this for two reasons—first, because the circumstances in which he is placed are altogether altered; and secondly, because, when dealing with minds of a criminal cast, we are compelled, as I have already pointed out, to accept certain inferior and unusual manifestations without interpreting them as being, of themselves, insane. But if we do not accept such manifestations, *per se*, as evidences of insanity, we have to put a certain value upon them in individual cases; and it becomes our duty to watch for other abnormal signs and indications, as for example the approach of delusion, or the frequent alteration of mental excitement and depression.

The bearing which such emotional displays have in reference to the exercise of volition is a matter of practical interest.

Speaking of the relations of the emotions to the will, Dr. Maudsley † thus puts the case:—"Independently reacting, as an emotional idea tends to do, it so far weakens the will; duly controlled and co-ordinated, as is the case after a just mental cultivation, it strengthens the will. Before many ideas have been acquired and their multitudinous associations fixed, as in the young child; or where the state of the development of the brain precludes intellectual development, as in the idiot and in the animal—the emotions excited immediately expend their energy in outward manifestation; and when in the cultivated adult there exists, from some cause, an unstable condition of nervous element, or when the tension of the emotion or passion is exceedingly great, it will also re-act directly outwards in spite of the will."

We have here two methods whereby expression is given to the emotions in their direct outward activity. In the first,

* Chap. iv., ver. 24.

† "Physiology and Pathology of the Mind," 1st edition, p. 161.

the will may be said to be unformed, leaving the emotions to a free play; in the second, the presence of the will is granted, but the power which it is capable of exercising is thrust aside by the strength of the emotion. In the group of prisoners at present under consideration—viz., those who give way to extravagant and destructive impulses—it most frequently happens that the emotions override the will, in consequence of their greater strength; they act for the most part *in spite of* the will. But there are on the other hand cases—as where the presence of only a very slight emotion leads up to the outburst—in which it would appear that the will is so weak or so imperfectly formed as to be incapable of exercising an effectual resistance, even where but little energy on its part would be requisite. And there are, of course, cases of an intermediate description where it is difficult to estimate the precise balance of relationship between the emotions and the will. But taking this general relationship as a basis, evidence is afforded that criminals of the highly emotional type serve to illustrate the progressive series of manifestations by which are connected the fairly cultivated intellect of the ordinary adult, and that imperfectly developed and ill-adjusted intellect which stretches down towards idiotic vacancy. The practical proof that the lower standard of relationship, with its unhindered and almost animal-like play of the emotions, is reached, lies in the fact that our prisons contain, as we shall see by-and-by, a certain proportion of criminals whose impulsive acts, while they cannot be treated as due to insanity, have yet their origin in minds so ill-fashioned and defective in tone as to render their unfortunate possessors not always fully responsible, and, therefore, not always punishable to the full for their misdemeanours.

But the abeyance of the will in the presence of emotional conditions will not unfrequently be referable rather to the want of that reflection which forms the link between the feelings and the will, and which is demanded in its subtlest form when action, or restraint from action, must be speedy. And this quality of reflection is certainly feebly represented in criminals generally. Many of them do not, and some possibly cannot, comprehend their own position or realize their true self-interest as social and responsible beings; and their actions are but too frequently prompted by what appears to them the expediency of the moment. Speaking proverbially, they form a class of fools, whom even experience fails to teach. The lessons of the past profit them not as guides

for the future. Apart from the question of their natural proneness to evil, the frequent misdemeanours of criminals, whether in prison or out of it, in spite of such punishment as ought to prove deterrent, is either an evidence of a strange indifference to pain, or else it shows that the impression left by the punishment, if it has not faded altogether, is at least so weakened as to be useless, even if recalled, when the individual is again about to commit himself; *i.e.*, the memory has no record of the pain, or the feeble residue which it preserves of it goes for nothing in the face of the emotion, or other cause of misconduct.

Professor Bain, working out the balance of actual and ideal motives in reference to the repeated commission of crimes, says:—“ We must suppose, what is probably true of the criminal class generally, a low retentiveness for good and evil—the analytic expression of imprudence; perhaps the most radically incurable of all natural defects.” This formula, “ a low retentiveness for good and evil,” is well adapted to form a groundwork for the explanation of many of the vicious displays of imprisoned criminals. It implies scant powers of reflection, and indicates a state of moral weakness, and possibly of moral depravity; and upon such a basis a healthy or strong exercise of the will can scarcely be looked for. Hence it follows that in some cases, even an ordinary emotion, in the absence of the moderating influence which a deliberative volition should exert, leads to the commission of acts as unreasonable and as destructive as those committed at the instigation of a violent emotional impulse, whose course an ordinary will is found to be incapable of resisting or controlling.

I have dwelt at some length on the more important general consideration in connection with the subject of emotional display in prisoners, as it is one whose bearings are ever coming before us in our practical work among them. Indeed, their excitability and their liability to sudden outbreaks of impulse not only give rise to the chief difficulties in the matter of prison discipline, but they stir up significant questions as to the probable or exact condition of mind at the time, and as to what forms of treatment are most advisable and warrantable in the circumstances.

Besides this, by investigating these and other phases of mind in criminals during their imprisonment, we necessarily increase our acquaintance with the character of mind from

* “ Mental and Moral Science,” p. 353.

which are evolved, day after day in our midst, criminal acts varying much in gravity and complexity.

I have spoken almost solely of the violent and destructive emotions, because they are the most troublesome and most prevalent which occur in prison life; but I may have occasion, as I proceed, to refer to strangeness of behaviour due to emotions which are more pathetic in their nature.

The inborn national characteristics of individual prisoners are strongly represented in reference to the occurrence of impulsive demonstrations, but I need not here dwell upon this matter.

The suppression of these angry emotions when they urge to personal violence can only be effected by a powerful effort of the will; and in the criminal the transient gleam of hate and murderous longing which, involving the whole face at once, yet seems to pass across it as a dark cloud, is too remarkable to be allowed to pass unnoticed. It would rank as an illustration of Darwin's First Principle of Expression—that, namely, of serviceable associated habits—and it seems to consist of a concentrated movement or shiver of the group of facial muscles which come into play when angry violence is given way to. Its presence is doubly "serviceable" in such cases; for, if it serves to "relieve or gratify certain sensations, desires," &c., in one individual, it serves also to put another on his guard by the production in him of sensations anything but comfortable.

I now pass to the consideration of the other form of idiosyncrasy which makes itself prominent in imprisoned criminals.

Simple Perverted Ideation.—By this term I wish to express the existence of certain misconceptions or erroneous impressions which, while they do not possess the gravity and proportion of positive delusion, are yet nothing else than the early phase or stage of delusion. As the boy, by growth and development, will become a man, so will this misconception become a delusion if it lives and grows. I have adopted the abstract term, simple perverted ideation, not only to indicate the general mental process, but also to convey the idea of a certain amount of duration or persistence, as well as of misdirection, in that process, which a single word such as misconception, caprice, &c., could not do. A misconception may or may not be rectified immediately in the mind of the individual himself; and it may or may not be so manifested out-

wards as to attract the notice of others. It is of misconceptions which are more or less persistent and noticeable that I am about to speak.

The minds of some prisoners, I might say of prisoners generally, are apt to receive untruthful impressions of the most ordinary circumstances of prison life. It is not expedient to tell the prisoner the why and the wherefore of all the transactions, official or otherwise, connected with his disposal or treatment in prison; and he, searching for an explanation, sometimes of the most commonplace occurrence, displays a remarkable fertility of theory in divining the probable cause; and also manifests a tendency to exaggerate the importance of a simple occurrence, and to arrive at and fix upon some wrong interpretation—and this misconception or misinterpretation of the circumstance forms itself into a cause for complaint or an occasion of grumbling which may be more or less persistent. From this it will be observed how such misconceptions are for the most part disagreeable, and apt to create difficulty. The broad principle upon which simple perverted ideation rests is the establishment of a grievance which may or may not have some foundation in fact.

The limited range of thought in a shallow and uneducated mind ministered to by a monotonous prison experience involves a limitation in the supply of individual ideas; and as a consequence the groups of associated ideas are circumscribed in their extent. But this restricted sphere of ideation implies concentration in certain directions; for the frequent repetition of a chain of ideas necessarily intensifies (at least up to a certain point of healthy endurance) the whole chain as well as the particular ideas of which it is made up. From this it happens that an idea which is more or less general in its application, and which is frequently called up with various associations, has a tendency, from being almost constantly present in the mind, to "fix" itself there, and extend its influence and character to minor ideas which are being formed on particular occasions. The tendency of any one or more ideas to become fixed will depend upon their original vividness, and the occasion there may be for their frequent recurrence.

Now the most comprehensive idea of this sort generated in the mind of prisoners (especially those given to perverted ideation) is that which puts down the general prison system as a species of Rosicrucian league, in which all the officials

make up a sworn brotherhood for the annoyance of the victims in their charge.*

The relative position occupied by warder and convict from a disciplinary point of view tends, no doubt, to give a semblance of truth and reality to this general impression; and the notion is apt to grow upon an individual prisoner when actual differences arise between him and his warder. The particular circumstance receives a colouring from the general pre-conception with which the prisoner starts out. I would not have it thought, however, that the grievance of the prisoner is *always* due to such misconception on his part—of that aspect of the question I am not speaking. I deal merely with cases where the grievance is set up on grounds which, if not absolutely erroneous, are so trivial and unwarrantable as to be the evidence of a perversion of the imagination. Such cases come up every now and again in something of the following way:—A prisoner, for some misdemeanour, is “reported” and punished. He “takes it into his head” that he has been unjustly treated, and that the official who reported him has resolved to annoy him and “run him in” to the punishment cells on the slightest opportunity, or even without occasion. He therefore refers any unfavourable occurrence befalling him to the efforts used by this officer against him. The notion, by recurring over and over again, becomes strengthened, and he persists that he knows “b——y well who’s at the bottom of it all,” and does not hesitate to say that he’ll “be even with him yet.” The idea takes such possession of his mind that some of the ordinary restrictions of his imprisonment are laid to the charge of the official, and in this way the grievance becomes established, and he is constantly harping upon it. The Chief Warder, or some other discipline officer, is “down on him;” or, “it’s no use speaking to the Governor, he won’t hear what I’ve got to say;” or he tells the doctor that he knows “very well the Governor and he have put their heads together to prevent him having his rights;” and so on. In whatever circumstance the difficulty arises, some one or more individuals have to be blamed for it.

Now the existence of a somewhat persistent misconception

* A convict, one of the “grievance” class, said to me one day in a spirit of bitterness, “Oh! you know you are upon oath, so that you are obliged to swear to what any of the rest of you may say against us prisoners,” alluding to the difficulties he had to contend with in proving a minor grievance which was quite fanciful, and well known throughout the prison. Others, if they do not say it in so many words, imply that there is some more or less general bond of the sort.

of this sort in the mind of a prisoner does not necessarily prevent him from doing his work or going through the usual discipline—beyond, perhaps, a certain license which is allowed him in retailing the grievance. So long as it keeps in the one groove, a sort of chronic growl, and does not become obnoxious and necessitate the suspension of discipline, and special observation as to the state of the mind, I would include it in the term simple perverted ideation.

These misconceptions refer to a variety of subjects, but they have mostly to do with the events connected with or arising out of their prison life—as that their food is tampered with, their “time” is up, they are “due” for a visit or a letter, and the like—prison matters, upon which the thoughts of the prisoner are most likely to dwell.

(To be continued.)

PART II.—REVIEWS.

The Lunacy Blue Books.

1. *Twenty-Seventh Report of the Commissioners in Lunacy, 1873.*
2. *Fifteenth Annual Report of the General Board of Commissioners in Lunacy for Scotland.**

The annual account of their stewardship rendered by the Commissioners in Lunacy is always interesting, both to those who make Lunacy a study, and to those who make it a living. Many persons go to these reports keenly interested in the facts and figures set forth, and their medical significance; others see only the social and economic bearing of the statistics, while perhaps a still larger number look with anxious eyes at the praise or blame of themselves or their institutions that is published to the world in those volumes. No thoughtful man can take up one of these reports, however, without having some new ideas suggested to him. To see the records of the mere numbers of our poor human kind of every class and in every place affected with the direst of all diseases has a very saddening and humbling effect on most minds. Who can think of 63,145 insane men and women—the number in the United Kingdom at the end of 1872—and endeavour in the

* The Irish Blue Book has not yet been received.

remotest degree to realise the broken hearts, the blasted hopes, the blighted ambitions, the unfinished work, the dead affections of this great army of stricken ones, and their belongings, without feeling very sad at heart? And these things do not half express the true seriousness of the case to the medical mind. The latent and milder cases not included in this list, the vast mass of nervous and bodily disease that has necessarily accompanied so much insanity, the mental eccentricity and obliquity, the degeneration, the immorality, and the crime, which we know must have existed in so many of the families where the insanity occurred—all these things help to darken the picture that rises in one's mind when thinking of the sixty thousand. Two or three bright spots there are it is true. All this misery has roused up a pity that is almost divine, a pity that has assumed a most practical form, and done very much for the care and cure of the disease. Medical science has not been idle in the study of the nature of the disease, and of the best means of its prevention and treatment. Through—as some would say in consequence of, as we would say in spite of—all this disease, we have in every generation a great light rising, a genius among the degenerate, a god among those that are tending to the brutes, to repay all the compassion and care that have been expended on his blood relations by giving new ideas and great thoughts to all the world. The last, and most unquestionably the truest comfort in the matter, though it may seem to the unthinking to savour of the cold heartlessness of pure science, is that all this mass of disease of man's highest organ is one of Nature's ways of keeping the general mass of human kind brain-whole. She cuts off a hand that the whole body may not be destroyed; that the fittest may survive, the unfitting must die.

In noticing these reports this year we shall chiefly confine ourselves to a *resumé* of some of the principal facts contained in them, and a few extracts of general interest.

In the beginning of the year there were 66,539 persons known to be of unsound mind in the United Kingdom (England 58,810, Scotland 7,729); in the end of the year there were 68,145 (England 60,296, Scotland 7,849); thus showing an increase of 1,606 (England 1,486, Scotland 120).

There were, not including transfers from one asylum to another, 12,526 admissions into asylums, &c., during the year (England 10,660, Scotland 1,866), against 12,594 in the previous year, thus showing an actual decrease. The new pro-

duction of insanity during the year shows a considerable decrease, therefore, for the year, taking the increase of population into account.

The recoveries amounted to 5,104 (England 4,228, Scotland 876), against 4,961 last year, being an increase of 143. The percentage of recoveries on the admissions was, therefore, 40 (England 39, Scotland 47). This is an increase of 1.4 per cent. for England, and a diminution of 3 per cent. for Scotland, the general increase for Great Britain being .6. The percentage of recoveries was 43.6 in English, and 42.6 in Scotch public asylums.

The deaths among the insane numbered 4,115, as compared with 4,361 in the previous year, the death rate on the average numbers resident living in public asylums in England, 9.6, and Scotland 8.5. To institute a fair comparison, however, the mortality in registered hospitals in England should be included with that of public asylums, which reduces the rate to 9.4 per cent. The rate of mortality in England had diminished by over one per cent. as compared with the previous year, while in Scotland it had remained the same.

Looking at those statistics, it cannot be said that they are unsatisfactory. A diminished proportion of new cases of lunacy to the general population, an increase in the recoveries, and smaller number of deaths, are facts calculated to give pleasure to all who have the welfare of the insane at heart.

The average weekly cost of each pauper lunatic in the public asylums of England was 9s. 10 $\frac{3}{4}$ d., being an increase of 2 $\frac{1}{2}$ d. over the previous year, while in Scotland it was 9s. 5 $\frac{3}{4}$ d., being a decrease of 1 $\frac{3}{4}$ d. Curiously enough, in Scotland the cost of keeping pauper lunatics in asylums has diminished since the year 1869. Surely they are a happy people whom high prices have not yet reached. We should mention, however, that it is the cost for the year 1871 only that is given in the Scotch reports. Now it is very unsatisfactory and unbusinesslike that such a simple matter as the cost of patients in public asylums should not be given for the year of which this is a report. This lateness of all the statistical information, when the interest of the figures has died out, and the general unsystematic way in which some of the tables and subjects treated of are arranged, are serious blots on the Scotch report. It gives the impression of its compilers having taken a whole year to get up the tables and write the report, doing a table and a paragraph now and again, and throwing them together without much reference to order or arrange-

ment. There are several amusing instances of repetitions and desultory moralizing in it coming in without having the least connection with the context. We would instance that at the foot of p. xxvi. An unusual number of suicides (29) occurred in England, and a still larger proportional number of deaths from suicides and accident (15) in Scotland.

We shall now quote some of the chief passages of interest from each report. The views of the English Commissioners as to the disposal of incurable lunatics are thus expressed:—

The patients in county and borough asylums on the 1st of January last were 30,473, being an increase of 833 upon the number at the corresponding date of 1872.

The extent to which these institutions are from year to year becoming receptacles for chronic lunatics will be evident from the fact that out of the 30,473 patients therein on the 1st January last, only 2,476, or 8·12 per cent. were deemed to be curable.

Although amongst the incurable residue large numbers require, in consequence of their dangerous propensities, excitement, degraded habits, or from other causes, an amount of care and treatment which a well-organised asylum can alone afford, it is equally clear that the patients consist in large proportions of harmless imbeciles, idiots, and epileptics, demented persons, and those labouring under chronic insanity, requiring, no doubt, varying degrees of care and supervision, but who, under proper regulations, might be treated elsewhere.

It is only by eliminating such classes from asylums that the rapid extension of these costly institutions, which has been going on for some years, can, in our opinion, be arrested.

To some extent asylums might, we think, be relieved by discharging to their relatives patients in a fit state for home treatment, and where, upon inquiry, the Visitors have reason to think that they would be properly dealt with. In such cases a liberal weekly allowance should be made by the Guardians; and we look upon it as a matter of the greatest importance that, in all cases of single pauper patients, the relieving officers should be required to satisfy themselves that the relief is adequate in amount, and properly applied; that the diet, clothing, and bedding are sufficient; and the personal condition and treatment of the patients satisfactory.

The risk of placing such patients to board with strangers is so great that, in the existing state of the law, we think it would be unwise materially to extend the practice. The infrequent visitations by the District Medical Officers at present provided for, and the vague nature of their duties, powers, and responsibilities in reference to these patients, are matters urgently requiring amendment by the Legislature.

We are glad to find that the views we expressed in our

notice of these reports three years since as to relatives being the best custodians of the insane, are now the views of the English Commissioners, who have the power practically to carry them out. In fact, it appears to us that in various things both the English and Scotch have been amenable to our humble criticism, which was expressed with much diffidence at the time. When one does venture to make suggestions to persons of great age, experience, and wisdom, whose chief function in the world is to make suggestions to others there is a strong temptation at first to be over diffident, and then, we suppose from catching the spirit that pervades the volumes, to be even over censorious. There is a sort of instinct in our fallen nature that prompts retaliation on those who seem to have it too much of their own way in the world, an instinct that does not always benefit its possessor, but still, there it is.

Their ideas as to the classification of patients in the wards of asylums are stated here :—

From the entries made upon our visits to the County and Borough Asylums during the past year (the whole of which are printed in Appendix C) their condition will be seen, with few exceptions, to have been satisfactory, and very creditable to the governing bodies and superintendents. Progressive improvements are noticed as having taken place in many of these asylums, and there is a more general recognition than formerly of the humanising and beneficial influence which cheerful and well-furnished wards have upon the worst and most degraded classes of patients. These, at one time considered to be fit only to be congregated together in the most dreary rooms of the Asylum, with tables and benches fastened to the floor, and with nothing to interest or amuse them, are now in many asylums placed in wards as well furnished as those occupied by the more orderly patients, with birds, aquariums, plants, and flowers in them, and pictures on the walls; communicating also with such wards are now very generally to be found well-planted and well-kept airing-courts. The less strict classification of the patients is also advantageously followed in many asylums, and in them what are termed “ refractory wards ” are properly abolished.

Where arrangements for this purpose have been judiciously made and carried out with energy, the best results have followed, in the way of an improved condition and more orderly demeanour of those disposed to be turbulent, whilst the comfort of patients of a more tranquil character has not been prejudicially affected.

As we have on more than one occasion before stated our strong conviction that the Commissioners, with the very best of motives, are wrong in thus laying too much stress on

the means taken to benefit the incurable and degraded, and countenancing the notion that curability or incurability, the active treatment of the recent cases individually, and the comfort and welfare of the convalescent are matters that are subsidiary to the appearance of quiet in the wards, thus elevating the boarding house and general management idea, as the great one to be kept in view in the conduct of an asylum, and ignoring the medical and therapeutical idea, we shall not again revert to the subject. The universal instinct of all non-asylum people, and especially of all relatives of patients, as to the disagreeableness, discomfort, and injury to the timid, the recovering, the well conducted, the respectable, and the pure minded, from association with the excited, the violent, and the obscene patients, cannot surely be entirely wrong.

The opinions of the Commissioners as to mechanical restraint are thus expressed, and will be read with interest by foreigners:—

The use of mechanical restraint in County and Borough Asylums, unless for surgical reasons, such as to prevent patients removing dressings or applications to wounds or injuries, or during the forcible administration of food, is, with few exceptions, abolished. In 38 of the 54 asylums visited during the past year, there was no record whatever of its employment. In the cases of 22 patients distributed over 10 asylums it had been resorted to for the above-mentioned reasons, and in six asylums it had been used to counteract violent, suicidal, or destructive propensities. The number of patients restrained for these latter reasons (exclusive of Colney Hatch and Wandsworth), having been one in the Macclesfield; nine in the Glamorgan; six in the Prestwich; and one in the Norwich Borough Asylum.

Dr. Sheppard thus defends the practice in Colney Hatch:—

Setting aside the mere question of expense, manifestly unjustifiable, it is impossible to conceive a more galling and irritating kind of restraint than the ceaseless surveillance of a paid attendant of uncertain temper. A false estimate of the uncomfotableness of 'gloves' and other mechanical restraint is frequently formed by assuming that the condition of the sane (who judge) is identical with that of the insane (who are judged). As a rule, with but few exceptions, the enjoyment of the latter is not in any way lessened by a process which would be as disagreeable and degrading to the former as the habits for which it is the obvious corrective.

The same remarks apply to the subject of "canvas dresses." No one maintains that they are sightly objects to the eye of a Commissioner, a magistrate, or a medical superintendent; but as pinafores

for dirty children, they are useful, and satisfactorily meet the requirements for which they have been designed. If a patient persistently undresses himself, or destroys the ordinary clothing, I should be no more justified in withholding from him a canvas suit than I should be in giving a knife to a patient of ascertained suicidal propensities. It is an utter misuse of terms to call any treatment humane and philanthropic which violates the first principles of decency and safety. It may be as well to mention, that the epileptic patient alluded to as having his hands fastened to his side is frequently visited by his wife, and she declines to approach him unless he is so restrained.

To which the Commissioners reply :—

We felt called upon strongly to protest against opinions in our judgment both erroneous and retrograde, and which, if allowed to prevail, would be subversive of the system of non-restraint now happily so generally followed in the asylums of this country.

A letter was accordingly ordered to be sent to the Committee of Visitors, intimating that we did not propose entering upon the general question as to the employment of mechanical restraint in asylums, further than to observe that as a means of treatment it is liable to the greatest abuse. Our letter proceeded to state that, "if employed at all, it should only be in the most exceptional cases, and its effect should be narrowly watched and tested, so that it might not be unnecessarily prolonged. The experience of the Commissioners for many years past affords, happily, no parallel to such a case as that of the man who had at Colney Hatch been restrained every day for nine months previous to the last visit of two members of this Board; and I am instructed to observe that such an uninterrupted use of mechanical restraint, if not unjustifiable, is at least indicative of great poverty of remedial resources, which is not creditable to the superintendent of a county asylum. With regard to the use of strong special canvas dresses, I am directed to observe that such dresses must be uncomfortable as well as unsightly, but they are mainly objectionable because they lead to the permanent degradation of the patient by tending to confirm bad habits, and by accepting such habits as incurable, instead of attempting their improvement or correction. Experience has shown the fallacy of the views on this subject expressed in the report of the medical superintendent, and the good results which have, in the best managed asylums, followed persistent efforts at treating and curing, even in the most unfavourable cases, habits of a destructive and dirty character."

The question of seclusion is thus handled :—

Without questioning the utility of seclusion in certain cases of excitement, especially amongst epileptics, we think that in a remedial point of view its value has been much exaggerated, and that in many instances it is employed unnecessarily and to an injurious extent, and for periods which are quite unjustifiable.

By patients themselves, seclusion is no doubt usually regarded as a punishment, and besides being most objectionable on this ground, it is too often resorted to in cases of temporary excitement, which might be readily subdued by treatment of a less repressive character. Upon the attendants themselves also, its frequent use has a most injurious effect, by leading them improperly to seek through its means relief from the duties and responsibilities involved in a constant and vigilant supervision of those placed under their charge.

The frequent resort to seclusion in the treatment of the insane we can only attribute in most cases to defective organisation or management of the asylums, more especially as regards an adequate staff of properly-trained and diligently supervised attendants, and we think that in all such instances persevering efforts should be made by improved arrangements to diminish its employment, and keep it within the narrowest possible limits.

Great importance is properly attached by them to *post mortem* examinations:—

We are glad to state that there continues to be an increase in the number of post-mortem examinations which are made in these asylums, after notice to the relatives of the deceased. During the year 1871, 3,139 patients died in these institutions, and in 1,576 cases post-mortem examinations were made, being in the ratio of 50·20 per cent. During the past year the total number of deaths was 2,901, and there were 1,618 such examinations or 55·77 per cent.

There is still, however, the greatest variation in different asylums in the practice of making post-mortem examinations; in some the omission to do so being the exception, while in others the reverse is the case. We continue to attach the greatest importance to this subject, considering that post-mortem examinations, apart from their great value in a scientific point of view, and in reference to detecting fractures or other injuries, are in many cases absolutely essential, in order to enable the medical officers of asylums accurately to certify the precise cause of death. In too many instances, when these examinations are not made, some general cause of death is assigned, such as "exhaustion."

The night watching of the epileptics is strongly insisted on:—

The number of epileptics found dead in bed during the past year has been very considerable, and must continue to be so until suitable arrangements are made in every asylum for the proper supervision and care during the night of this large class of patients.

So satisfied are we that in a large proportion of these cases the fatal result is preventible, that we endeavour constantly to press the subject upon the medical officers and visitors of asylums, and in many instances with good effect. When special personal supervision during

the night over the epileptic and suicidal patients by trustworthy attendants shall have become the rule in asylums, we may hope that accidents amongst these classes will become very rare.

Turning to the Scotch Report, we find the following very satisfactory discussion of a fact which is often lost sight of:—

We shall see as we proceed that the results afforded by the individual asylums vary greatly according to the manifold influences which affect the condition of the patients before admission, or which react on their bodily and mental health after admission. The operation of these influences is illustrated by the different rates of mortality which prevail in different asylums. For instance, on an average of many years, the mortality in the Dundee Asylum, when calculated upon the average numbers resident, is only about one-half of that which occurs in the Glasgow Asylum. But it does not on this account follow that the patients in the Dundee Asylum are placed in more favourable circumstances than those in the Glasgow Asylum. Before this conclusion could be adopted, it would be necessary to determine, not only that the condition of the patients on admission was identical, but also that the numbers admitted stood in an equal relation to the numbers resident. A community which receives a large accession of unhealthy members must, it is evident, suffer from a higher mortality than a community of similar size which admits a smaller proportion of unhealthy members. Dundee and Glasgow are both manufacturing towns, and the physical condition of the population, from which the patients sent to the public asylums of each are drawn, may be assumed from the figures given in the Eighth Decennial Census of the population of Scotland, to be pretty much alike. From these figures it appears that there is a remarkable coincidence in the proportions of the lower, middle, and upper classes in the two towns. This is shown in the following Table:—

COUNTIES.	Proportion per cent. of Families occupying Houses of		
	One or Two Rooms.	Three or Four Rooms.	More than Four Rooms.
Glasgow . .	78.46	16.03	5.51
Dundee . .	79.46	14.44	6.10

From the social position of the population of the two towns being so nearly alike, it may be fairly assumed, on general and physiological grounds, that their sanitary condition will also be nearly the same. And in accordance with this supposition, we find that the annual percentage of deaths among the population during the ten years,

1858-1867, was 3·032 in Glasgow, and 2·916 in Dundee.* Supposing, now, that the admissions into the Asylums of the two towns stood in the same relation to the numbers resident, we should have reason to expect an identical rate of mortality in each. But a comparison of this kind is inapplicable; for while on an average of the ten years 1862-1871, the admissions into the Royal Asylum of Glasgow amounted to 53 per cent. on the average numbers resident, those into the Royal Asylum of Dundee reached only 27 per cent. In this difference lies, we are inclined to think, the main cause of the comparatively low mortality, which, when calculated on the numbers resident, characterises the Dundee Asylum. And this view receives confirmation from the results which present themselves when the mortality is calculated, not upon the numbers resident, but upon the admissions. It is then found, on the average figures of the same ten years, that the mortality in the Dundee Asylum amounts to 23·01 per cent., against a mortality of only 20·12 per cent. in the Glasgow Asylum.

It is thus seen that any arguments which might be founded on the low rate of mortality in the Dundee Asylum, when calculated on the average numbers resident, and without reference to the number of admissions, would be apt to mislead. In themselves, they afford no adequate evidence either of good accommodation or of good management. Indeed, the condition of the establishment might, notwithstanding the lower mortality, be far from satisfactory. When we find from the figures quoted in the Table on page lxvii, that of the patients who die in the Glasgow Asylum, 46·7 per cent. of the males, and 47·4 per cent. of the females, die within the first year; while of those who die in the Dundee Asylum, only 36·2 per cent. of the men, and 39·9 per cent. of the women, die within the same period, we have reason to think that the condition of the Glasgow patients on admission was worse than that of the Dundee patients; and yet, as we have seen, the total mortality on the admissions is lower in the Asylum of Glasgow than in that of Dundee, being 20·12 in the former, against 23·01 in the latter. Does this fact indicate that, notwithstanding the worse condition of the Glasgow patients on admission, the scale is afterwards turned in their favour by the more satisfactory circumstances in which they are placed?

The comparatively low mortality of the Dumfries Asylum disappears before a similar scrutiny. Besides, the pauper patients in this establishment are furnished by a community in much better physical circumstances than that from which the inmates of the Asylums of Glasgow and Dundee are drawn.

We direct attention to these speculations, not because we attach any great weight to the results brought out, but because they convey a warning against the too ready adoption of the idea that the accom-

* Fourteenth Detailed Annual Report of the Registrar-General for Scotland, p. xxix.

modation of an asylum, and the management and treatment of the patients, must of necessity be satisfactory whenever the mortality, when calculated in the ordinary manner, presents itself as low.

This would seem to show that the mode of calculating the mortality in the Medico-Psychological Association's tables is not quite satisfactory. To indicate the whole truth, it would require to be calculated separately on the average numbers resident, and the admissions. Is not the old method of calculating it on the total number under treatment a better one than that now almost universally adopted? By this means we would get the general population and the admissions taken into account in fair proportions.

The influence of poverty and overcrowding in cities is referred to.

In previous reports we have inferred, from the preponderating numbers of the insane maintained at the public expense over those maintained from private resources, that insanity is essentially a disease affecting the less affluent classes. We pointed out that a healthy condition of the nervous system affords protection at one and the same time against pauperism and insanity; whereas an unhealthy condition of the nervous system leads directly to pauperism by destroying the capacity for useful employment. The number of pauper lunatics will thus, we stated, always largely exceed the number of the private insane, for pauper lunacy is in a very large proportion of cases the expression of incapacity for independent productive labour. The tendency of those whose brains are abnormally constituted, if without hereditary fortune or friends willing to assist them, is to sink step by step through the various grades of society, until they reach the final sedimentary deposit of pauper lunacy. The conditions which promote this descent are simply those which destroy health; namely, abuse of the passions, intemperance, unhealthy habitations and occupations, improper diet, overwork, and deficient exercise and recreation. The increase of insanity is not, we maintained, a result of modern civilization, save in so far as modern habits have led to a departure from the conditions of healthy existence, by overcrowding in cities, by exhausting labour, by breathing vitiated air, by over-indulgence in stimulants, by inappropriate food, and by neglect in the training of children. The unhappy results thus produced are recognised by the Legislature, and our lunacy system is one of the consequences of this recognition.

But although adhering most fully to the physiological views here expressed, we are nevertheless doubtful whether, in our comparisons between the numbers of the private and pauper insane, we formerly made sufficient allowance for the small proportion which the independent or affluent classes bear to those which must necessarily sink

into dependence whenever they are struck by such a calamity as insanity. In the Report of the Eighth Decennial Census of Scotland, to which we have already referred, it is stated (p. xxxiii) that "very nearly a third of our population lives in houses of one room. Much more than two-thirds, viz., 69·54 per cent. of our population live in houses of one or two rooms, while 82·11 per cent. live in houses of three rooms and under ; and if we reckon all the persons living in houses of one, two, three, or four rooms, it is seen that 88·05 per cent. of the population live in such houses. Few, if any, of the class of population who inhabit such houses pay national taxes ; so that from the above statement it may be inferred generally that the remaining 11·95 per cent. of the population constitute the wealth and support of the country, while the 88·05 per cent. constitute the artisan, labouring, and pauper classes."

These details show how difficult it must be to improve the condition of the lower orders through the instrumentality of philanthropic associations or police regulations. Indeed, agencies of this kind not infrequently serve but to increase the evils they were designed to palliate. No doubt, the improvement of dwellings is calculated to ameliorate the condition of a population. We see this fact illustrated in our own special experience by the manner in which the condition of the insane is modified by the nature of their accommodation. Nevertheless, we are satisfied that, in order to achieve permanent success, improvement should begin with the training and education of the people, and not with the size and arrangement of their dwellings. In the Census Report, from which we have been quoting, the question is raised whether the building of tenements divided into houses of three or four rooms with light closet, for the accommodation of the labouring and artisan classes, is effecting the purpose for which they were provided. "They were built with the idea that the sexes would be better separated, and the decencies and moralities of life would be better observed ; but, on the other hand, hard stubborn facts prove to us that very nearly a third of the families living in houses of three and four rooms let their spare apartments to strangers, and thus, within the door of the same house, the sexes of two different families meet, instead of each house being inhabited by one family alone. Nothing will stop this but building houses to meet the real wants of the class for whom they are intended. They will not spend on house rental anything like the proportion of their income which is spent by the middle and upper classes ; and in order to spare money for dress and better food and drink, they never hesitate to crowd their families into as confined a space as possible, that they may sublet one or two rooms. . . . The new style of houses does not seem to have had the effect of diminishing the overcrowding ; and more evil effects must follow when the sexes of different families are crowded in the same house, than when one house contained only the sexes of one family" (p. xxxvi). The result is that in Edinburgh, of 12,521 persons who

occupy houses of two rooms, 8638 are members of the family, and 3883 lodgers; and that of 10,593 persons who occupy houses of three rooms, 7181 are members of the family, and 3412 lodgers. In Glasgow, again, of 62,705 persons who occupy houses of two rooms, 42,173 are members of the family, and 20,532 lodgers; and of 26,557 persons who occupy houses of three rooms, 17,259 are members of the family, and 9298 lodgers. Indeed, this system of receiving lodgers is a common practice even with families living in houses of no more than one room. For instance, in Glasgow, of persons occupying houses of this kind, 12,143 are members of the family, and no less than 7638 are lodgers.

The more these details are considered, the more hopeless will appear the task of remedying the evils which they shadow forth, until measures be adopted for raising the character of the masses, and training them to higher aspirations. And success in this object would involve, not merely an extension of school teaching to every member of the community, but a radical change in our ideas of the nature of education. The important fact must be recognised and acted upon, that the moral faculties of the human mind require to be as carefully trained as those of the intellect; and that without moral training, intellectual training may but serve to increase the aptitude to do wrong.

The last remark is a truism which we think we have seen in the Scotch Reports before—not that it can be too frequently repeated, or too widely known—but how is the moral training to be done? According to what code of morality are the children to be educated? Looking merely at the production of insanity in its relation to moral training, and accepting the simple facts of the case, as we are surely bound to do, we find that in savage and Mahometan countries there is little insanity at all. Have the children received a better moral training than those of Britain? And on the other hand, is not insanity of common occurrence in families that have not only been morally trained themselves, but whose ancestors for many generations have been so? We find that by far the largest number of persons in this country would deny that moral training could be carried out except by calling in the aid of religion. It is exceedingly questionable whether even a half-truth or any part of a truth is expressed in the definition that “pauper lunacy is in a very large proportion of cases the expression of incapacity for independent productive labour.” Does this really teach us more than saying it is the expression of incapacity for common sense, or the incapacity for seeing all things as the majority of men see them? Such definitions are to many minds very tempting things to construct, but in a report so practical as

this is, they are as much out of place as an epigram or a poem.

In regard to the mortality among private and pauper patients the following remarks occur:—

The general result is 1·4 per cent. in favour of the private males, and 1·9 per cent. in favour of the private females. But the comparison shows much greater differences when it is restricted to individual asylums. The mortality of both classes, and of both males and females, is highest in the asylums of Edinburgh, Glasgow, and Montrose. In the asylums of Dumfries and Glasgow, the unusual phenomenon presents itself of the mortality of the female pauper lunatics exceeding that of the male pauper lunatics. The causes of this departure from ordinary results were considered in our last report.

From the statistical returns of English and Scotch Asylums, it appears that the mortality in the former is on an average considerably higher than in the latter. In our Tenth Report we showed that the average percentage of mortality, on the average numbers resident, in the five years, 1862-66, was in Scotch asylums, 8·84 for males, 7·69 for females, or 8·24 for both sexes; and in English asylums, 12·51 for males, 8·50 for females, or 10·39 for both sexes. Again, for the 12 years, 1859-1870, the average rate of mortality in the English County and Borough Asylums was 10·85 per cent. for both sexes, on the average numbers resident, while in the Public Asylums of Scotland, the corresponding rate for the ten years, 1861-1870, was 8·33. These figures show that the mortality in English asylums is about a fifth higher than in Scotch asylums.

It is usually supposed that the strong opinions of the Scotch Commissioners on the subject, together with the special provisions of the Scotch lunacy law, have had the effect of increasing greatly the number of discharges of unrecovered, harmless patients from asylums. This appears not to be the case, taking the three years, 1869, 1870, and 1871. 1,727, 1,632, and 2,455 were in these years respectively so discharged in England, and 318, 290, and 377 in Scotland. It may seem a hard thing, but we think that few who take all the tendencies of our modern civilization into account can doubt that instead of keeping those whose mental state is that of disease, weakness, and abnormality more in its midst, the tendency must go on strongly in the opposite direction of segregation and seclusion. Modern society and modern life will not tolerate them in its midst. The old barbarous society killed some and petted the rest; the new will lavish all that money can buy on them, but it will not

live with them, and will in time no doubt prevent them from propagating their kind.

The following is one of many partial attempts in the report to throw some light on the difficult question of the different lunacy rate in different parts of the kingdom:—

The proportion of pauper lunatics to registered paupers varies materially in different counties, but in all Scotland it is in the ratio of 8,189 to 100,000. The counties in which, in proportion to the population, the largest number of pauper lunatics is placed in establishments, are those of Argyll, Edinburgh, Kinross, Forfar, Perth, and Peebles, in which the proportion is respectively 193, 189, 236, 205, 211, and 227 per 100,000 inhabitants. This proportion is 112 in Ayrshire, 122 in Lanarkshire, and 93 in Renfrewshire. It is lowest in Orkney and Shetland, where it is respectively 64 and 70. These results are not altogether what might *à priori* have been expected. This remark is especially applicable to the high proportion of patients sent to asylums in Argyllshire and Perthshire, which are both back-going counties so far as population is concerned. Reasons have been already given on p. xiv. to account for the large amount of their pauper lunacy; but with a poor and sparse population it might have appeared natural to expect a high proportion of patients placed in private dwellings, and a low proportion in asylums. But, on the other hand, the poor character of the accommodation in the houses of the peasantry of Argyllshire and Perthshire, and the small allowance generally made for the maintenance of extra-mural patients by parochial boards, might, by adding to the difficulties of home-treatment and diminishing the interest of relatives in its success, have appeared adequate causes for the greater accumulation of patients in asylums, had not similar causes been in operation in Orkney and Shetland without producing a similar result. But there is this difference between the counties thus compared, that recourse to asylum treatment is, for geographical reasons, a much easier matter in the two first named than in the two last.

It must, however, be kept in view that in contrasting the lunacy of an active, busy, and increasing population with that of a community which is less busy, standing still, or perhaps even decreasing, two different things are brought into comparison. There can be little doubt that active and acquired insanity is more prevalent among the former, and idiocy or imbecility among the latter; and while acquired insanity may be curable, idiocy once established remains for evermore. Besides, it has to be considered that the great centres of business attract the more energetic and pushing members of back-going communities, who, by transferring their domiciles, at once increase the ratio of lunacy among those they leave behind, and decrease it among those they join. The one community gathers strength from the infusion of new and healthy blood, the other deteriorates from the

inferior material left behind for its propagation. Thus, as a rule, the proportion of lunacy will be less in a new community than in an old one; and on this principle we should look for a higher ratio of lunacy in Midlothian than in Lanarkshire, and in Perthshire than in Forfarshire. But again, it has to be taken into account that the increase of manufacturing towns is largely caused by an influx of the lower classes, whose health, bodily and mental, is apt to give way under the unsatisfactory conditions in which they are placed. The explanation of the reason, why different degrees of lunacy should be found in different localities, is thus seen to be a very difficult and complicated problem.

The fact that pauper lunacy has a double origin, in pauperism and in lunacy, adds greatly to the difficulty of determining the conditions which lead to the intimation of pauper lunatics, and renders comparisons of their number in different counties without a full knowledge of all the concurrent circumstances of but little practical value; in one county pauperism may be the predominating element, and in another lunacy.

It has further to be kept in view that insanity is not a simple disease, like pneumonia or hepatitis, but that it is the indication of a disturbed or abnormal action of the brain which may have its origin in a hundred different conditions. Accordingly, the insanity of a large town represents a very different state of matters from the insanity of a rural district. The former comprises a larger proportion of those fatal forms which are the result of the manifold influences comprehended under the general term of fast living, and of which general paralysis is the type; and the latter a larger proportion of those forms which depend on imperfect development and imperfect training, but which are not incompatible with long life. Of these idiocy is the type. Comparative statistics in which these differences are overlooked cannot fail to be utterly misleading.

They say in regard to the accumulation of patients in asylums:—

One of the main causes of the less rapid increase in the number of patients in establishments which is now taking place, is the growing conviction among superintendents of asylums and inspectors of the poor, that no extraordinary appliances are required for the proper care of patients whose mind is merely enfeebled, or who are affected with harmless delusions. Accordingly, there is among the former less disposition to regard asylums as the only satisfactory method of providing for the insane; and among the latter greater inclination to grant adequate alimentary allowances to those who are placed in private dwellings.

We have been led to think that one cause which exercises con-

siderable influence on the accumulation of chronic and incurable cases in asylums lies in the impediments placed by asylum authorities in the way of the removal of patients. When difficulties are experienced by friends and by Parochial Boards in regulating the disposal of those in whom they are interested, an unwillingness naturally arises to denude themselves of the power of control; and they accordingly hesitate to have recourse to asylums, until either through a failure of funds, or through other circumstances, they are compelled to adopt this step. In this way, an inducement is held out to put off having recourse to asylum treatment; and the delay no doubt frequently involves incurability. Indeed, complaints by medical superintendents are not unfrequent that patients are not placed under their care while the disease is still in its early and curable stage; but it would be well for them to consider how far this result is owing to the power of control which they assume, and the difficulties they place in the way of removal. The proper policy, in our opinion, would be to facilitate equally the admission and removal of patients. Detention in an asylum is at the best a grievous calamity, which necessity alone can justify; and the necessity of the step should be determined, not solely, or even mainly, from the point of view that it can be justified by the existence of some form of mental aberration, but from the conviction that it is really required, either for the good of the patient, or for the safety of the public. It is only in very clear cases that the wishes of friends or of Parochial Boards to remove their patients should be withstood. The behaviour of a patient in an asylum is by no means a safe criterion of his behaviour under other circumstances, and it has to be kept in mind that detention may have a prejudicial as well as a beneficial effect; and most superintendents will recall instances in which, contrary to their expectations, removal was followed by excellent results.

It is, therefore, we think, by no means a matter of regret that the removal of unrecovered patients, with the view of disposing of them in private dwellings, is being more systematically and extensively carried out than formerly, and in some districts to a very considerable extent.

Their opinion as to the size of Asylums is very decided:—

A great difference of opinion exists, among those who have given attention to the subject, as to the limit in size which asylums should not surpass. Our own experience leads us to give the preference to small establishments, as being more tranquil and home-like than those in which large numbers of patients are congregated together. But we do not forget that the condition of a large asylum is greatly dependent on management and classification. Where it is the rule to bring

all the noisy and unmanageable cases together in so-called refractory wards, a large asylum almost necessarily presents great difficulties in its administration; and it then becomes almost impossible to secure to the patients of these wards that degree of comfort and tranquillity which is readily attained under other circumstances.

It has often been suggested that there is a great difference between the forms of insanity received into urban asylums and those admitted into rural establishments. But, granting that to a certain extent this is the case, we are not inclined to attribute the difference in the condition of the patients in urban and rural asylums nearly so much to the former being drawn from a more excitable and degraded class of the population, as to the latter being generally grouped together in smaller numbers; and our opinion is accordingly very decided, that if our larger asylums were so arranged that each ward should become as it were a small independent establishment, admitting its patients in rotation as they presented themselves, a very great increase of tranquillity would be likely to follow. It is not meant, of course, that a mere change of classification would effect this result. The wards must be regularly visited by the superintendent, in whom all authority centres, who should show himself to be in reality, as well as in name, the friend and guardian of the patients, and their shield and protection against the roughness and caprice of the attendants.

It has frequently been argued that large asylums are able to secure to their patients advantages which smaller asylums cannot afford—such as medical attendance of a higher order, the services of a chaplain, and more extensive and more varied means of amusement. These advantages are certainly not to be contemned, but they seem to us to be more than neutralized by the baneful results of the association of large numbers of the insane—results which are due, partly to the increased risk of neglect to which the patients are subjected by the difficulty of individualizing them, and partly to the tendency of large establishments to become mere places of detention instead of hospitals or places of treatment. The argument that economy is promoted by the association of large numbers is shown by experience to be fallacious. The difficulty of efficient supervision increases with the extension of the establishment, and the waste which follows in the wake of increased accommodation and increased numbers more than counterbalances any saving which might result from the expenses of the medical staff being thrown upon a larger proportion of patients.

The suggestion that each ward of a large asylum should in turn receive so many of the new patients does seem a very retrograde one, and the notion that acute general paralytic or epileptic excitement would at once disappear if placed in small wards is inconsistent with pathological fact. The tradition among Commissioners in Lunacy that “tran-

quillity" is the one grand aim in an asylum is very strong. We confess that we should like to see the idea of active individual medical and moral treatment more spoken of and believed in. Is it not possible to apply discipline, order, amusement, and work scientifically to each case? If mere liberty and home life would cure insanity the patients would never be sent to Asylums at all. It ought to be the next amendment of the Lunacy Acts that each Commissioner should himself have the entire charge and treatment of at least twenty cases every year.

The Scotch Commissioners throw cold water on inebriate asylums and Dalrymple's Bill.

One of the most original and interesting parts of this report is the following able and careful discussion of the question of the connection between the lunacy of a county and its wealth, by Dr. Sibbald:—

The amount of pauper lunacy varies greatly in the different counties. In the year 1871 the total number of registered pauper lunatics in Scotland was 6,286 or about 187 in every 100,000 of the population. In the county of Renfrew during the same year it amounted to only 101 per 100,000; while in that of Inverness it reached 262 per 100,000. Had the country generally been in the condition of Renfrew, the total number of pauper lunatics in Scotland would consequently have been about 3,392; while a general condition similar to what is found in Inverness would have presented an aggregate of 8,800. Equal diversity is exhibited by the proportions in which the different modes of provision for patients are resorted to in different districts. Thus in Renfrewshire 85 per cent. of the pauper lunatics are placed in public establishments; while in Wigtonshire 50 per cent., and in Sutherland only 47 per cent. are provided for in that way. But perhaps the most remarkable contrast is presented by the proportion registered as pauper lunatics in private dwellings in one county as compared with another. For instance, in the county of Fife there are only 38 per 100,000 so registered, while in Wigtonshire the proportion rises to 124 per 100,000.

These variations are the result of many social forces acting in different directions; and it would be difficult, if not impossible, to analyse them and estimate their separate elements; but every approach to a solution of the question must aid in adapting the administration of the Board to the circumstances and necessities of each district. I have therefore attempted to classify the counties, regarding which I have specially to report, in groups, so as to associate, as far as possible, those in which similar conditions prevail.

The most natural grouping seems to result from a consideration of the degrees of wealth of the respective counties. In accordance with

this I have taken as a basis the taxable wealth per head of the inhabitants, as represented in the Parliamentary Returns of Income and Property Tax under Schedules A, B, and D, for the year 1869-70.*

The following Table exhibits this arrangement in detail:—

GROUPING OF COUNTIES ACCORDING TO THEIR RESPECTIVE WEALTH.

DISTRICTS.	COUNTIES.	Population, 1871.	Whole Tax- able Wealth of each County in Pounds Sterling.	Average Taxable Wealth of each Inhabi- tant, in Shillings.
HIGHLAND AND INSULAR ...	Shetland	31,605	66,134	42
	Orkney	31,272	117,917	75
	Sutherland	23,686	118,466	100
	Caithness	39,989	239,953	120
	Banff	62,010	407,201	131
	Nairn	10,213	73,133	143
	Inverness	87,480	730,417	167
	Elgin	43,598	389,626	179
Bute	16,977	132,317	157	
LOWLAND MANUFACTURING	Renfrew	216,919	1,820,903	168
	Fife	160,310	1,586,944	198
	Kinross	7,208	109,231	303
	Clackmannan	23,742	192,034	162
	Ayr	200,745	1,944,619	193
SOUTHERN AGRICULTURAL	Dumfries	74,794	1,025,043	274
	Kirkcudbright	41,852	614,489	293
	Wigtown	38,795	432,966	220
BORDER	Roxburgh	53,965	817,116	300
	Selkirk	14,001	214,239	306
	Peebles	12,314	219,252	356
	Haddington	37,770	624,798	331
	Berwick	36,474	668,496	367
SCOTLAND	3,358,613	38,062,981	226	

* This basis is not in every respect satisfactory; but I believe that the result which it gives is fairer than can be obtained by the adoption of any other statistical basis. The direction in which the figures chiefly fail to indicate accurately the real wealth of the respective counties is probably in understating the opulence of those included in the Lowland Manufacturing Group. An endeavour might be made to give an approximate estimate of their true position, and this would present a result bearing out more fully the conclusions arrived at in the following remarks. But I have preferred to give the calculations in the simplest form, and leave to others to attach such weight to this consideration as they may think it deserves.

DISTRICTS.	Average Taxable Wealth for each Inhabitant, in Shillings.	Proportion per 100,000 of Population.			
		PAUPERS OF ALL KINDS.	Pauper Lunatics.		
			TOTAL.	In Establishments.	In Private Dwellings.
Highland and Insular } Lowland Manufac- } turing... .. } Southern Agricul- } tural } Border	131 185 266 355	3223 2183 3271 2375	218 147 239 199	127 111 163 142	92 33 76 57

We here find a broad correspondence between the amount of pauper lunacy and that of ordinary pauperism; but it is evident at the same time that neither the amount of ordinary pauperism nor of pauper lunacy bears any constant proportion to the general wealth of the community. In the Highland and Insular group, both kinds of pauperism are less than in the Southern Counties, where the general wealth is more than double. The smallest number both of ordinary and lunatic paupers is found in the Lowland Manufacturing group. The cause of the small proportion of each which is exhibited in this district is probably the same:—the high rate of wages, and the greater abundance of remunerative employment which is found there, in spite of the comparatively low average taxable wealth of each inhabitant. In drawing any inference from the apparent wealth of this district as shown by the Returns of Property and Income Tax, it must therefore be kept in mind that the counties included in it are really richer than they appear, on account of their containing so large a proportion of working men who, though receiving high wages, are not subject to the tax. The influence of density of population in this district also deserves notice. It shows itself chiefly in the comparatively large proportion which the number of patients in asylums bears to the total number of pauper lunatics on the roll. The rich Border district appears chiefly distinguished by showing a comparatively small proportion of ordinary pauperism; while a very considerable number of lunatics are supported by parochial funds, both in asylums and in private dwellings.

If we now proceed to analyse the first group, which includes the Highland and Insular district, we find that there are marked differences between the statistics of the mainland and those of the insular coun-

ties of which it is made up. The wealth of the latter is much less; and though a contrary anticipation might have been entertained, we find that pauperism of all kinds is much less also. But the county of Inverness, which is included in the mainland portion, consists really of two parts, a very considerable one being insular. In order therefore to compare justly the Insular with the Highland region, we must divide Inverness into two, and place each portion with its natural associates. The effect of this, as shown in the following Table, is to increase the difference between the proportions of pauperism in the two districts, but this is chiefly apparent in the proportions of lunatic pauperism.

COUNTIES.	Proportion per 100,000.			
	PAUPERS.	Pauper Lunatics.		
		TOTAL.	In Establishments.	In Private Dwellings.
Shetland	3211	127	51	76
Orkney.....	2552	157	64	93
Inverness (Insular)	3191	193	98	95
TOTAL	3002	160	72	88
Sutherland	3356	198	93	105
Caithness.....	3461	245	115	130
Banff	3082	231	153	78
Nairn	2556	186	137	49
Elgin	3216	220	156	64
Bute	2922	224	136	88
Inverness (Mainland) ...	5028	299	189	110
TOTAL	3563	342	146	96

The smaller number of pauper lunatics actually registered in the insular districts does not by any means imply that lunacy does not exist to as high a degree among the island population as elsewhere, nor that there is less need for assistance from public sources. It would be difficult, if not impossible, to exhibit documentary proof of the frequency with which feebleness or unsoundness of intellect occurs in these districts. But it is consistent with my observation, as well as with that of all competent observers, including the officers of the Board, that such occurrence is rather above than below the average.

It results from the arrangement in the Table, that we discover an exact correspondence between the comparative wealth of a county and the amount of its expenditure on lunacy. The wealthier the county, the more does it spend in providing for pauper lunatics. A Shetlander,

whose average taxable wealth we find to be 42 shillings per annum, pays only $\frac{4}{10}$ of a shilling, or about fivepence, towards the cost of pauper lunacy; while an inhabitant of Inverness, where the average taxable wealth is 210 shillings per head, pays $1\frac{4}{10}$ of a shilling, or about eightpence for the same purpose. But the relatively small payment made by the Shetlander is a much heavier burden on his resources than a payment three times as high is to the Inverness man. This is brought out in the next column of the Table, where we find that the Shetlander contributes $\frac{9\frac{4}{10}}{100}$ per cent. of his taxable wealth, and the Inverness man only $\frac{6\frac{1}{10}}{100}$ per cent.; so that the tax is to him only two-thirds as heavy as it is to the islander. The inference to be drawn from the next column is of the same kind. The localities where least is paid for the maintenance of each lunatic pauper are those where the cost of pauper lunacy presses heaviest on the ratepayers. And this rule, which we have found to hold in regard to the general expenditure for pauper lunacy, is shown by the next column of the table to be also applicable when the consideration is restricted to the cost of lunatics in private dwellings.

Several important deductions may be drawn from this Table. The most remarkable appears in the steady increase of pressure on the resources of each district in proportion to its inability to bear such pressure. This is evident from a comparison of the first and third columns. And this relation exists, although, as was found when considering the previous Table, the actual cost of providing for a pauper lunatic is much less in the poorer districts than in the richer. The bearing of this may perhaps be clearer if we suppose the cases of two persons, each possessed of £100 of annual taxable wealth, one resident in one of the northern islands, and the other in one of the Border counties. Let us suppose further that each is resident in a parish burdened with the support of only one pauper lunatic, but that this represents for the respective populations of each parish the average amount of pauper lunacy in its district. How would these two persons be affected by the addition of a pauper lunatic to the roll in each of the parishes? In the poorer parish it would make an addition to the annual taxation of the resident there of 15s. $4\frac{3}{4}$ d.; while a similar addition to the roll of a rich Border parish would only imply an additional tax of 5s. 7d. to its resident. And this is in spite of the fact that only $11\frac{1}{4}$ d. per diem would be the expense of supporting the lunatic in the poorer locality, while 1s. $3\frac{1}{4}$ d. would be expended by the richer parish.

It may be supposed that the smaller sum expended in the support of a pauper lunatic in the Highland and Insular counties is due to the cost of living being less; and to some extent this may be true. But the chief cause is without doubt that for both sane and insane a lower standard of comfort is accepted as sufficient, and that the very lowest sum that will suffice is all that is given.

The generalisation to be made from the whole inquiry seems to be,

that what may fairly be regarded as suitable provision is made for pauper lunatics at present in those districts only where the total expense does not exceed about $\frac{6\frac{1}{2}}{100}$ or 13 shillings in the £100, of the taxable wealth of the inhabitants; but that, where the burden falls with greater weight than this upon the ratepayers, their resistance is powerful enough to restrict both the numbers placed on the roll of pauper lunatics, and the amount expended on those who are so placed. Thus if we look down the list of counties possessing *greater average wealth* than the county of Inverness, we may, as has been already noticed, trace a general correspondence between the amount of ordinary pauperism and lunatic pauperism; and these both increase, where the conditions are similar in other respects, in proportion to the general poverty of the districts until they culminate in the mainland of Inverness. The total pauperism of the country, exclusive of the Highland and Insular district is 2361 per 100,000 inhabitants; and the lunatic pauperism is 187 per 100,000. In the mainland portion of Inverness, however, the total pauperism reaches 5028 per 100,000; and the proportion of lunatic pauperism reaches 299 per 100,000. But if we now carry the eye down the list of counties *poorer* than Inverness, we find that the total pauperism and the pauper lunacy, instead of still further augmenting, both exhibit a decrease; so that the averages in the Insular district are only 3002, and 160 per 100,000 respectively.

It may be thought that in this discussion a tedious array of figures has been presented for the purpose of proving what was obvious enough without any such call upon the attention of the Board, or at least that it is a threshing again of thrice threshen straw for all who have already given thought to the subject. I believe, however, on the contrary, that very erroneous opinions regarding it are held even by persons supposed to have had exceptional opportunities of making themselves familiar with the facts. As an instance of this may be cited a statement made last autumn by a member of the Legislature, that the support of lunatics by the public is a matter independent of local circumstances: "In regard to this affliction, his auditors knew that its existence was due to the hand of God. Human power could not multiply or modify the lunacy in the country. It is scattered unequally over the country; and how should one district of the kingdom, which happened, from circumstances over which it has no control, to have a percentage of lunatics out of proportion to the population, be made to bear the whole cost of their keep? Why should there not be an equalization throughout the country?" A reference to the foregoing discussion will help to answer these questions.

Suppose, however, that such an equalization were brought about; what would be the financial effect? With equal taxation, all districts would be entitled to have their lunatics boarded in equal comfort. Let us suppose that all were to have as much expended on them as is the case with those belonging to the county of Lanark, and the effect would be to add £26,000 per annum to the cost of pauper lunacy in

Scotland. But if a national fund were provided for the support of lunatics, what reason have we to suppose that claims for their support would not then be successfully made in every county, to at least the same extent as is now done where such claims are scrutinized, and often resisted, by persons having an immediate and appreciable interest in their rejection. We may hence infer that the percentage of pauper lunacy over the country would be raised at least to the proportion at present existing in the county of Inverness. Should such a result take place, the *addition* to the annual expenditure on pauper lunacy would amount to over £90,000. But the whole statement which I have quoted rests on an unstable basis. "Human power," it is said, "cannot multiply or modify the lunacy in the country." And this is asserted, though the existence of lunacy, in so far as it is officially recognised or requires to be dealt with by the State, is at present decided by the certificate of two medical men; and, indeed, it must always be determined in that or some similar manner. If there be persons who imagine that a uniform standard of mental soundness is accepted by all medical men, or by any one medical man in all circumstances, they must have little experience to guide them. Such certificates are always signed after a consideration of the social as well as medical circumstances of each case. And it is scarcely open to doubt, that in actual practice the source from which the required expenditure is to be obtained is, rightly or wrongly, a common element in this consideration. I express no opinion as to whether a national rate for lunacy is, or is not, a desirable arrangement; but no one can wish that it should be adopted without fully estimating the probable consequence.

Lectures on Madness, in its Medical, Legal, and Social Aspects, by EDGAR SHEPPARD, M.D., &c., &c. London: J. and A. C. CHURCHILL. 1873.

The *raison d'être* of this work may be sought for in the opening sentence:—"Gentlemen, this is a new chair, and I am a new professor." The intimation of these two facts in the second column of the "Times" would have served the purpose of the newly developed professor far better than the publication of his "Lectures on Madness." This volume purports to contain the seven lectures which constituted the course given from the recently erected chair of Psychiatric Medicine, in King's College, London. Complaints are and have been numerous, that teachers of science extend their courses unnecessarily. Professor Sheppard has certainly not fallen into this error; on the contrary, to him is due the credit of condensing the prelections into the very smallest

compass which ever vindicated the establishment of a "chair." We have heard of professors who never lecture, and of professors who "in twelve lessons" teach an entire science, but never of one who could bring the magic numerals seven to bear upon the number of his prelections.

These seven lectures are not unpleasant reading; they are written in an easy style; they are full of broad generalisations unsupported by premises, and of good quotations unaccompanied by references. If the Professor had contented himself with calling his chapters "Roundabout Papers on Insanity," instead of "Lectures on Madness," we would have been no less pleased, as the former title would have indicated better what they really are, and the term insanity would have been more in consonance with the dignity of his subject. What would he think of a syphilographer, for instance, advertising lectures on the subject, employing on the title page the vulgarly conventional, rather than the scientific terms of the various diseases he enters on? "Medicine in the Madhouse," or "Physic for the Furious," would have been titles hardly more reprehensible than "Lectures on Madness." Such titles only serve the purpose of catching the eye of the public.

The abrogation of science expressed on the title page pervades the whole volume. We have heard much lately of a conservative re-action in politics, but we were not aware that it had extended itself to Psychiatric Medicine. Disregarding all modern attempts to advance our speciality, speaking of them indeed in a manner which could only lead the students who attended throughout the course to regard them with contempt, the Professor, in a jaunty, chatty style, gives a queer *mélange* of etiology, sociology, personal prejudices, vague psychology, treatment, physiology and pathology. His power of condensation is wonderful, for in four pages he is able to overcome the complex subjects of cerebral anatomy, physiology, and morbid histology. New nomenclatures are condemned not so much on their principles as on the difficulties of their application. The relieving officer is, in Professor Sheppard's opinion, the lion in the path of Psychiatric nosology, the Frankenstein whose pervading presence stands in the way of all advance. This important personage *will not* fill up his schedules properly, he will not take the trouble to ascertain thoroughly the etiology of each case he sends to the asylum; and, *therefore*, we have, and must for ever have, the old sing-song of Mania, Melancholia,

and Dementia—Dementia, Melancholia, and Mania, a string of words which is fast becoming as offensive to the scientific ear as the old story of “pain, heat, redness, and swelling.” The Professor, in his attempts to differentiate between these so-called diseases has not succeeded any better or failed more signally than his predecessors in the attempt.

We are under a debt of gratitude to Professor Sheppard for honestly speaking out as to mechanical restraint. He certainly holds himself erect, and thanks God that there is not such a thing as a strait-waistcoat in Colney-Hatch Asylum; but he strongly recommends the *wet sheet* as a good and easily employed form of restraint, and cites a case which admirably illustrates the good effects resulting from its use.

Why is it that so many writers on insanity interlard their essays with quotations from the poets and the Bible? This is not the case in the literature of other forms of disease. But it is the fact, and Professor Sheppard is well up to the mark in this respect. Shakespeare and the Bible serve their turn here as elsewhere; the former, in fact, is recommended as a text-book on insanity; this we do not object to, but we must deprecate the lugging in by head and shoulders of a perfectly inapt quotation from the latter to indicate the habits of a dirty maniac (p. 56). It is no mitigation to the offence of using unnecessarily a coarse expression to instance the fact that it occurs in a book which by most of us is held sacred.

The author does not pretend that the book is a manual, indeed he has to refer his students to the “recognized text-books;” so that he cannot even plead ignorance of the existence of standard works on insanity as an excuse for committing himself. The book is retrograde in theory and practice, and is in no way likely to bring about the consummation hoped for by the Professor in his concluding paragraph.

Asylum Reports for 1872.

(Continued from page 280.)

GLAMORGAN.—The feature of this report is the Medical Appendix. Although short, it is interesting, and embodies Dr. Yellowlees' experience of asylum management, &c., during the past five years.

To reduce suicides to a minimum, it is believed that attendants should sleep in the dormitories with the patients, and not in side rooms. “The mere presence of an attendant,

and the knowledge that he might awake, or would be roused by some wakeful patient, seems a powerful deterrent from suicidal attempts; it secures, too, more effectually that individual safeguard—the co-operation of other patients in watching the suicidal one.” It can scarcely be doubted that the best method of supervision of suicidal cases is to place them in dormitories under special night attendants. Any attempt at strangulation must be observed, because, though the patient cover himself with bedclothes, he cannot prevent the usual convulsions coming on, and attracting attention.

In one case it was found that Chloral seriously interfered with the action of the heart. Dr. Yellowlees is “strongly of opinion that chloral should not be given, except at bedtime, or when sleep is absolutely necessary for the patient; that the dose should not exceed thirty-five grains, commencing with half that quantity; and that in weak patients a stimulant should be given with the draught.”

Restraint is such an important subject, and occupies so largely the attention of all interested in asylum management, that we give Dr. Yellowlees’ remarks in full.

The views formerly expressed as to Restraint have only been confirmed by longer experience, and I do not hesitate to use it when I think it needful.

I have only two appliances for this purpose, which it seems absurd to call instruments of restraint;—canvas gloves which envelop the whole hand, and a jacket such as that worn by all the patients, but of stronger material and with the ends of the sleeves sewed to the pockets.

The very rare cases, besides surgical ones, in which I think it right to use these are of three kinds:—

1. *In suicidal cases* where the impulse is very strong, and the attempts at self-injury desperate and persistent. Modified restraint is then far safer and far kinder to the patient than to run constant risk or trust to the vigilance of attendants. In a case of this kind which occurred elsewhere, restraint was recommended by the Lunacy Commissioners themselves, as necessary to the patient’s safety; their advice was not followed, and the patient, although watched night and day by two attendants, succeeded in gouging out both his eyes.

2. *In violent cases* where the fury is such that it cannot be calmed by sedatives, nor modified by seclusion nor controlled without danger by attendants. Such cases are extremely rare, but one occurred here last year which would have convinced the most devoted worshipper of non-restraint. I quote from my report of this case, written in August 1872:—

“There is no improvement in this patient, and his case is entirely

an exceptional one. He is treacherous, dangerous, and violent to a degree rarely seen, with a persistency fortunately as rare. He at first imagined himself Jesus Christ, and assaulted every one under the idea that they denied or doubted his divinity. He now is liable to strange delusions, *e.g.*, that people tread upon him at night with razors in the heels of their boots, and that the attendant tries to choke him by pushing the hair of his beard down his throat. These delusions lead to sudden and fierce outbursts of violence directed against any one to whom this delusion points, and he is then quite regardless as to any injury he may inflict, and far beyond reason or remonstrance. In these paroxysms, which vary in frequency from one to four daily, *two* attendants are quite unable to control him, and it requires the utmost exertions of three or four to restrain his fury and to place him in his room. Not only are these paroxysms highly perilous to any one against whom they are directed, but the struggles which they occasion are very dangerous both to the patient and to the attendants; for he is an exceedingly powerful man, and kicks, bites, and strikes with a fury which only insanity could develop. The difficulty in dealing with him is greatly increased by the treacherous cunning which he exhibits, his assaults often commencing by a profession of friendship followed by a sudden kick or blow. Another aggravation in the case is the impossibility of administering any medicine; being full of suspicions against every one, he resists so fiercely and successfully that sub-cutaneous injection is the only method possible, and this method has been used without success or benefit. Fortunately he likes to remain in his room, and for some weeks he has left it only for meals and for an occasional walk in the airing-court. Of course this, being isolation in a locked room, has been entered as seclusion, although preferred by the patient to association with others. Even under these circumstances, and although under special surveillance when out of his room, his outbreaks of violence were frequent and fierce, and his condition was not improving. It was therefore determined to resort to the use of modified restraint, and a jacket of strong material has been made for him, of the same shape as the jacket worn by the rest of the patients, but with the sleeves stitched into the pockets. With this dress, first used on the 8th instant, and wearing canvas slippers (as usual), he now mixes freely and safely with the others in the day-room and in the airing-court, and seclusion is unnecessary. He resisted most furiously when first attired in his new jacket, but now knows resistance to be in vain."

He was of course unrestrained while in his room, the jacket being used only during the day, while he was associated with others. After he had worn it six days he seemed to realize that no one wished to harm him, and promised to refrain from violence if the jacket were removed; it was removed at once, and although he was often excited and

foolish, neither restraint or seclusion were subsequently necessary.

If you abjure restraint in a case like this, you must either resort to continual seclusion, which is often futile, or push sedatives unduly, which is often perilous; or expose the patient to the irritation and danger of constant struggles with the attendants, which is perhaps more perilous still. In this case the success of the treatment was its best justification.

3. *In destructive cases*, when night after night there is ceaseless activity, and persistent wholesale destruction of clothing and bedding.

Usually this tendency can be overcome and sleep obtained by outdoor exercise and hypnotics, or it can be baffled by making both clothing and bedding nearly indestructible; but in the worst cases these means utterly fail; the tendency to sleeplessness and to destruction is aggravated by being unchecked, and both for his own sake and economy's sake the patient should sleep in gloves. Only a fantastic philanthropy can discern any inhumanity in this.

I cannot do better than repeat words I formerly used on this subject:—

“I never hesitate to use restraint when other means fail, if I think it for the patient's good. The cases requiring it are very rare, but it is as certainly right to use it when required as it is wrong to use it when unnecessary. To condemn restraint under all circumstances merely because it has been or might yet be abused, is as unreasonable as to forbid all use of stimulants because they have been or may yet be used too freely.

“Unnecessary restraint cannot be too strongly condemned, but to reject its use when necessary for the patient's welfare is to sacrifice the patient to a sentiment, and to degrade ‘non-restraint’ from the expression of a great principle into the tyranny of a mere name.”

These remarks must recommend themselves to all sensible and impartial men. Those afflicted by sentiment are strongly urged to give them their most attentive consideration.

Strikes as affecting Insanity and Crime.—We pass over some remarks on broken ribs, and the details of a case of accidental poisoning by carbolic acid, to give Dr. Yellowlees' account of a most interesting fact which has come under his observation. He says:—

Every county has special circumstances which may affect both the character and the amount of the insanity which it produces. The wealth and prosperity of Glamorganshire are largely derived from coal and iron, and any arrest in their production and export is immediately and widely felt. During the last six months of 1871, and the

first three months of 1873, the mines, and consequently the docks, were deserted by reason of "strikes," and the effect of these strikes on the insanity and crime of the county was most marked and instructive.

In the first six months of 1871, 47 men and 30 women were received as patients into this Asylum; but only 24 men and 26 women in the second six months of the year. In the last three months of 1872, 21 men and 12 women were admitted; but only 10 men and 12 women in the first three months of 1873. It is thus shown, by a double proof, that during a strike the male admissions fall to *half their former number*, the female admissions being almost unaffected.

This decrease is doubtless mainly due to the fact that there is no money to spend in drink and debauchery. On inquiry at the County Prisons, I find that there was a marked diminution in their male admissions during the same periods, so that the production of crime as well as of insanity is greatly lessened while the strikes continue.

What the effect of a very prolonged strike would be, I trust we may never know, but to these results of the last two strikes I would earnestly direct public attention. They are among the most sad and significant facts of our social life, and seem to prove that high wages without wisdom to use them are a curse rather than a blessing.

MIDDLESEX.—HANWELL.—It is impossible for us to notice all the points of interest, contained in the numerous reports submitted to the consideration of the Committee of Visitors of this Asylum.

To relieve crowding, the Commissioners suggest that suitable cases be removed from the asylum, and placed with relations able and willing to receive them; some pecuniary assistance being given by the union.

Upon the retirement of Dr. Begley, the Committee unanimously passed a resolution very flattering to him, expressing their high opinion of the manner in which he had discharged his duties as medical superintendent for thirty-four years.

Dr. Rayner directs attention to the difficulty of "placing the manageable insane under the care of their friends, amidst the population of a large city." Why not imitate what has been done to a considerable extent in Scotland, and board suitable cases in the country? The patients in Kennoway are mostly chargeable to town parishes where it would be quite impossible to allow them to live in private dwellings.

From the previous occupation of the large majority of the patients, great difficulty is experienced in getting them to enter heartily into outdoor labour.

One of the features of the Hanwell report is the contribution by the matron. Most of the matters on which she dwells could be much more appropriately placed before the Committee of Visitors by other officials. Accidents, suicides, architectural and engineering details, painting and ornamentation of the asylum, night-nursing arrangements, amusements, church services, the library; all these receive notice from this lady in her report. Doubtless the persons referred to in the following paragraph must feel highly flattered by the commendation bestowed on them by the matron:—

The extensive nature of the works in progress during the year has rendered the employment of many extra workmen constantly necessary, and it is very satisfactory to note that the conduct of the persons employed has been unexceptionable.

This lady is in receipt of £420 per annum, besides other allowances. The assistant medical officers only enjoy salaries varying from £150 to £175, and these are far above the average income of men occupying the same office in other asylums.

All interested in asylum management will be delighted to learn that “active steps will now be taken to remedy existing defects in this asylum, and to endeavour to make it in every respect ‘A Model Institution.’” We fear the work will prove an exceedingly heavy task. Perhaps the Committee of Visitors may find time at no very distant date, however, to fix in a satisfactory way the official status of the various members of the staff.

MIDDLESEX—COLNEY HATCH.—The asylum still continues full but the Committee have succeeded during the past year in providing much accommodation for recent cases by a systematic course of discharging quiet and imbecile chronic patients to the workhouses of their respective unions, in order that the Guardians might avail themselves of the accommodation for that class of patients in the metropolitan imbecile asylums of Leavesden and Caterham.

The arrangements made by the Committee of Visitors for the religious control of Jews and Christians are very liberal and praiseworthy.

When it is stated that in the death of certain gentlemen “the patients have lost two kind protectors,” readers who are

unacquainted with all the customs of Colney Hatch naturally enquire from whom the patients require protection. Perhaps they, like other people, sometimes require protection from their friends.

The Commissioners make the following remarks on restraint:—

A very dangerous male epileptic was restrained by wrist straps and a belt, and one patient of each sex was secluded. With respect to the employment of mechanical restraint in the case of the man above referred to, it appears from the register that since 22nd of last September, a period of nine months, he has during the day-time been constantly fastened in the manner described. There is record of ten other cases of restraint in the men's side, one patient having had his arms fastened, and the remainder having worn "gloves" altogether on 253 occasions. Such an amount of instrumental coercion is without precedent in any other English asylum at the present day, and we hope that some less objectionable mode of dealing with violent and destructive propensities will be adopted. There has been no restraint in the female division. According to the same register 34 men have been secluded on 64 occasions, and 96 women on 261 occasions.

This entry by the Commissioners gave rise to some correspondence. Dr. Sheppard furnished a report to his committee on the matter. His views are expressed as follows:—

Having taxed both (his ingenuity and experience) considerably, I am able to say that the only alternative in these cases is to place a special attendant in charge of each destructive patient. Setting aside the mere question of expense, manifestly unjustifiable, it is impossible to conceive a more galling and irritating kind of restraint than the ceaseless surveillance of a paid attendant of uncertain temper. A false estimate of the uncomfortableness of "gloves," and other mechanical restraint, is frequently formed by assuming that the condition of the sane is identical with that of the insane; as a rule, with but few exceptions, the enjoyment of the latter is not in any way lessened by a process which would be as disagreeable and degrading to the former as the habits for which it is the obvious corrective.

The same remarks apply to canvas dresses. No one maintains that they are sightly objects to the eye of a commissioner, a magistrate, or a medical superintendent; but as pinafores for dirty children, they are useful, and satisfactorily meet the requirements for which they have been designed. If a patient persistently undresses himself, or destroys the ordinary clothing, I should be no more justified in withholding from him a canvas suit than I should be in giving a knife to a patient of ascertained suicidal propensities. It is an utter misuse of terms to

call any treatment humane or philanthropic which violates the first principles of decency and safety. It may be as well to mention that the epileptic patient alluded to as having his hands fastened to his side, is frequently visited by his wife, and she declines to approach him unless he is so restrained.

In his practice, as explained above, Dr. Sheppard is supported by his committee.

NEWCASTLE.—Mr. Wickham complies with a suggestion made in the "Journal of Mental Science," that statistics should be obtained of the plan of procedure on the admission of a patient into an asylum. His method is good, being almost exactly similar to that followed in many other asylums.

Post mortem examinations were made in all cases of death where the consent of relatives could be obtained.

NORFOLK.—In this asylum, as elsewhere, Australian meat has been used extensively. Dr. Hill's experience of this as an article of diet, with some of his views of the dietary of the insane, are recorded by him as follows:—

Australian meat has been used, cold, for dinner on Sundays during the last 12 months, and we have proved it to be a perfectly satisfactory and satisfying form of animal food; two other days in the week it is also given to 160 imbecile, idiot, and demented patients. I have in these latter cases, without any detriment to health, substituted milk and water for beer. You are aware this class constitutes a large proportion of our chronic and permanent patients; the change has been effected with scarcely any remark on their part, and with very little alteration in their standard weight, whilst some appear more quiet and cleanly for it. I think we may fairly regard this class of patients as having an inferior type of life and nervous organisation; they lead a torpid existence, and are not subject to that waste of wear and tear which in normally developed men, and in many of the insane, creates the demand for a liberal supply of animal diet and alcoholic beverages; we have also lately adopted the plan of giving Australian meat to our convalescents for some weeks prior to their discharge, and of withholding beer; this is done with the view of gradually approximating them to their ordinary dietary in their own homes, so that on their return they may not be conscious of sudden change in this respect.

The female side of the asylum is much overcrowded, and the problem how to deal with our numerous chronic harmless permanent inmates remains unsolved as in former years; the complex machinery

and liberal arrangements of an asylum are equally superfluous and disproportionate as regards this class of lunatics; if sent to the Workhouse, they do not flourish on that uncongenial soil, but soon deteriorate and return to us in a worse condition.

Perhaps Dr. Hills has not yet attempted sending such cases to reside in private dwellings.

NORTHUMBERLAND.—It has been found necessary to increase the rate of maintenance from 9s. 11d. to 12s. 6d. per week.

Concerning medical treatment, Dr. Wilson says :—

In my last report, when speaking of medical treatment, I mentioned the great boon which had been conferred upon asylums by recent discoveries in medical science, namely, the introduction of new medicines calculated to procure relief and rest to the excited, troubled, and anxious mind. The same mode of treatment has been carried out, and with good results. Restraint has never been used in this asylum, and now seclusion (or confinement in a darkened bedroom) has likewise become with us almost a thing of the past, one patient only during the past year—a male epileptic, who was very violently excited—requiring to be secluded for the short period of twenty hours after his admission.

NOTTINGHAM.—**THE COPPICE.**—Dr. Tate reports :—

With regard to the medical treatment of the patients, the remedies employed have been those which improve the general health, such as tonics, with wine and generous diet. Hydrate of chloral, since its introduction, has been constantly used, with the best results, in moderately large doses, as a hypnotic; and in smaller doses, combined with bromide of potassium, as a sedative. In no instance has there been the slightest ill-effect from it, and in my practice it has quite superseded opium, except in some cases of melancholia, where morphia is found beneficial. With respect to the vexed question of forcible feeding, I will only remark that during 20 years I have frequently employed both nasal feeding and the stomach pump; that I have often been foiled in the former, and that in my opinion the latter, with ordinary care, is a safe, and by far the most efficient method of administering nourishment.

RICHMOND, DUBLIN.—During 1872 the recoveries were 186, being a fraction over fifty-two per cent. on the admissions.

Dr. Lalor protests against criminal lunatics being sent to the asylum under his charge. He says:—

I deem it right to state that the difficulty of management, and the discipline, good order, and security of the house, both as to person and property, have been very seriously increased in latter years by the removal to this asylum, and detention therein, of persons who belong to the very worst and most dangerous class of the community, viz., what may be called criminal lunatics of very strong homicidal and suicidal propensities. In some of this class it is exceedingly difficult to say whether they are responsible or not. If their responsibility is to be tested by the existence or non-existence of delusions, or by the knowledge of right and wrong, I should unhesitatingly say that they are not irresponsible. If, however, the want of control, which renders them the creatures of the most violent and dangerous passions and impulses, be admitted as in itself evidence of insanity and irresponsibility, then certainly there are few, if any, of these cases that can be considered sane or responsible.

But, in any case, such an asylum as this is in my mind quite unsuited for such cases, and if the present state of the law does not admit of their being kept in the Central Criminal Lunatic Asylum, I think it ought to be altered so as to allow such a course to be pursued.

ROYAL EDINBURGH ASYLUM.—As usual, Dr. Skae presents us with a very interesting report. We have, however, only space for the following paragraph, which treats of a most important subject—the treatment of convalescents and other cases by removal from the asylum for longer or shorter periods. He says—

The question of the influence of a temporary change of circumstances in the treatment of the insane is one of no little importance. It is a question often of anxious consideration to the Medical Superintendent. Many patients, after living a certain time in the house, are apt to fall into a listless, moping state, but on being for a short time removed from it rapidly improve. This plan of treatment is, however, in great measure a question of experiment. It is not possible in every case to say whether a given patient may be benefited or injured by such a change until the thing is put to proof. To meet this requirement a system of passes has now for some time been in use in this asylum, by means of which a patient may, without any other authority than that given by the concurrence of the medical officer, be for a space of three weeks removed from the asylum, though still remaining as a patient belonging to it, for whose welfare the Medical Superintendent continues responsible. This system has an advantage over the probation

plan, as it is put in operation with no difficulty; it does not necessitate any additional expense, and is therefore more suitable in regard to those patients in whose cases, as I have above said, change of scene is so far a matter of experiment. Objections have been raised by the Inspectors of Poor and others connected with patients to this plan, on the score of payment of board for such liberated patients while on pass. It has therefore been arranged that if any pauper patient be liberated on pass for a period longer than one week, board will be remitted for such a longer period; but for an absence from the asylum of under one week board will be charged as usual.

SALOP AND MONTGOMERY.—As in most reports, attention is directed to the advantage of early asylum treatment of acute cases. Dr. Strange shows that the methods of keeping really curable cases at home, or sending them to Workhouses, are unfair to all concerned. He very rightly thinks that workhouses are the worst places to which insane people in an early stage of disease can be sent.

Concerning the special arrangements suitable for the supervision of the epileptic and suicidal, Dr. Strange says:—

Considering the large number of suicidal cases in the male department of the asylum, I considered it necessary to appoint a second night attendant. All the known bad suicidal cases, bad epileptics, and infirm cases, are now so arranged at night as to be under constant supervision. This plan has been in vogue for some time on the female side, so that we have now four night attendants. I am aware that this plan of congregating together at night the worst suicidal cases does not find favour with some, the argument being that so many similar cases associating together, do each other harm, the faculty of imitation in lunatics being so great; but believing that the great end to be gained is the safety of the patients, I have not hesitated to adopt a plan which so materially lessens the risk of suicide.

SOMERSET.—The report by the Committee of Visitors and that by Dr. Medicott are very interesting documents. As they contain the account of an experiment in disposing of chronic cases by removal to Workhouses, we shall make such extracts as may be necessary to give a fair idea of its result.

The payment from the unions was raised at Midsummer from 8s. 9d. to 9s. 4d., and the Committee are in doubt whether they may not be obliged to require a larger payment.

Since the Midsummer Sessions, at which an order was made for an addition of 120 beds on the female side, half of them to be single rooms, the Committee have been engaged, at various meetings, in considering the necessary plans. The estimated cost is £13,310.

The Committee then proceeded to consider the case of chronics that have been discharged to the Workhouse, and Dr. Medlicott stated that four had been returned, and that the fifty cases had been picked ones, and that he could not venture to recommend the discharge of any more. Different members of the committee explained their views of the failure or success of the experiment in their own unions; it was stated that some of the Board were adverse to the experiment, and it was agreed that no dependence can be placed on the removal of patients to the Unions as a means of meeting the future accommodation of chronics, and it was afterwards resolved "that for the purpose of providing for the increase of pauper lunatics, it is the most economical and expedient course either to add to the present asylum, or to erect a detached building in some part of the adjoining grounds at Wells."

They have frequently urged on all who have anything to do with poor persons threatened with insanity, the great importance of sending them early to the asylum; what is now proposed is intended to make it impossible, for many years to come, that such persons should be refused admittance. On their being taken proper care of at the earliest proper [possible] time, the probability of their cure depends. This is not the case with idiots, who are for the most part incurable, and the Committee are very far from desiring that such persons should be sent at all. They get no good from being in the asylum, they get harm, their tendency is to imitate those whom they are with, and therefore they ape the odd ways of the lunatics, to whom especially, when convalescent, they are troublesome, and whose cure they interfere with, when they are placed from necessity in the single rooms which are part of the means of treatment of curable lunatics.

Concerning these chronic cases discharged to Workhouses, Dr. Medlicott says—

It is proper to mention that several cases have been discharged at different Workhouses in the county at the request of Boards of Guardians. These were selected cases among quiet and orderly chronics. Owing to the overcrowded state of the wards the experiment was tried of removing 47 harmless cases to the Workhouses—of these, 19 returned; the majority greatly deteriorated in mental and bodily condition, a result partly of defective diet, as shown in their remarkable diminution in weight when re-admitted.

The following table gives the details concerning these, *i.e.*, cases returned from the Workhouses. To save space we slightly abridge it, and alter the arrangement.

Males.				Females.			
Weight Discharged.		Weight Re-admitted.		Weight Discharged.		Weight Re-admitted.	
Initials.	lbs.	Date.	lbs.	Initials.	lbs.	Date.	Date.
J. C.	120	1871, Dec. 30	117	M. B.	125	1871, Dec. 30	120
I. M.	141	" "	120	D. P.	122	" "	117
E. L.	151	1872, Jan. 6	141	H. O.	112	1872, Jan. 6	112
J. J.	140	" "	132	S. D.	135	" "	135
J. L.	144	1871, Dec. 30	129	M. W.	112	" "	100
W. B.	173	" "	141	S. G.	140	1871, Dec. 25	122
A. V.	176	" "	146	S. F.	119	" "	109
H. B.	122	" "	113	E. C.	147	1872, Jan. 8	147
J. B.	120	" "	112	S. J.	91	" "	90
				E. D.	122	" "	100

This table shows that all the men removed from the Asylum to the Workhouse lost in weight, the greatest loss occurring in Shepton Mallet Workhouse, both patients losing 30lbs. in about six months. The loss in weight is not so marked among the female patients.

Dr. Medlicott makes a few remarks on medical treatment. Speaking of incurable cases, he says :—

The latter form a large proportion of cases in every asylum, and if the returns, issued periodically from State documents, be trustworthy, insanity is vastly on the increase, and legislation has to maintain the perpetual succession of lunatics. But, inasmuch as many reputed lunatics are only *manufactured* such, the number of cases that come under legitimate medical treatment are small in proportion.

We would feel infinitely obliged to Dr. Medlicott if he would have the kindness to refer us to any statistics in the world which justify him in making the statement as to the immense increase of cases of insanity. So far as we have examined the question, it is impossible for anyone to dogmatise, as the data by which the whole matter must be settled are imperfect. What does he mean by “many reputed lunatics being only manufactured such?”

STAFFORDSHIRE.—BURNTWOOD.—Dr. Davis complains of the state in which many patients are sent to the Asylum ; “when brought in, as many are, in a moribund or dying state, all hope of treatment is gone, and the patient is admitted into the Asylum to die, it may be in the course of a few hours or days.”

The following is the system of night-watching pursued at Burntwood :—

Owing to the number of suicidal and severe epileptic cases now in the Asylum, I have to report that in addition to the usual night-watch on each side of the house, where there is any special case of a suicidal tendency, an unusual case of epilepsy requiring extra attention, and also in cases where the patient is in a low or dying state, that two attendants or nurses, as the case may happen, either in the male or female divisions, are set apart for the purpose, and divide the night between them. This plan I have found to act satisfactorily, and I consider much better than having additional night-watches appointed.

Post-mortem examinations have been made in all cases where the consent of the deceased’s friends could be obtained.

STAFFORDSHIRE.—STAFFORD.—The number of patients admitted during the past year was somewhat less than in former years, although in excess of the average admissions in many counties. The average of recoveries upon those admitted was 51 per cent., and the average of deaths was 9 per cent. upon those under treatment. The rate of maintenance has been raised from 8s. 9d. to 9s.

Post-mortem examinations were held in 17 cases only (there were 72 deaths), friends generally objecting.

Dr. Bower objects to the class of patients frequently brought to be under treatment. He says:—

For violent and curable afflictions of mind asylums are fit and proper receptacles, but for aged and diseased paupers, where Debility and Paralysis result from old age alone, Lunatic Asylums never could have been intended.

For such cases infirm wards in workhouses seem much better adapted, in which, by association with others in a similar state of harmless imbecility, much better protection can be obtained than in the wards of Lunatic Asylums, where violent lunatics must necessarily be mixed with them.

Although such facts are evident, still numerous cases are admitted into this asylum where the only treatment required is protection and sufficient food, and where space, which might be used for curable cases, is occupied.

We do not agree with Dr. Bower. There are strong objections to lunatics being sent to workhouses, as these are managed; and an opinion on this matter, which we have entertained for years, has been confirmed by Dr. Medicott's report, to which we would beg leave to refer Dr. Bower. We also maintain that a proper classification of patients, with good general management, can reduce the number of accidents to such an extent that no patient need suffer violence at the hand of his neighbour, except on the very rarest occasions. It is not among the quiet and harmless that accidents occur most frequently, but among the acute and excited. If patients must be discharged to make room for acute and more hopeful cases, let them be placed in private dwellings, and not in workhouses, where, as Dr. Medicott shows, they live in a state of partial starvation.

SUFFOLK.—We would gladly make numerous extracts from Dr. Kirkman's report, short though it be, for he notices many interesting topics. His views on the dietary of the insane are very sound. He believes "that of all economy dietetic

economy is the very worst," and shows that union-house dietary is unfit for a hospital for the insane.

SURREY.—From Dr. Strange Biggs' report it would appear that—

The recoveries were 42·6 per cent. on the admissions. This is the highest percentage since 1861. The average for 30½ years has been 32·9.

The mortality was 7·1 per cent. on the total number treated. Diseases of the lungs (28) and of the brain (19), and general paralysis (20) were the chief causes of death. Forty-three *post-mortem* examinations have been made.

Fifty-four patients (4·6 per cent. of the whole number treated) have required temporary seclusion—13 in consequence of dangerous excitement attendant upon epileptic seizures.

At Wandsworth Asylum there is considerable crowding in the refractory wards—a most unfortunate state of matters. The class of patients is very bad; witness the following statement:—

The paralytic, epileptic, or feeble condition of those who are not violent will be evident from the fact that 320, just one-third of the whole number, daily require *ground* dinners, which are prepared in the kitchen from Australian beef or mutton. This meat is particularly well adapted for the purpose, as it is free from bone, and has only to be warmed. The proportions for each dinner are—Australian meat, 4oz.; bread, 4oz.; and vegetables, 8oz. (The women get 2oz. less of bread.)

SUSSEX.—In addition to the ordinary asylum report, which does not call for any special notice, we have, for the second year, an appendix consisting of clinical notes by the medical officers and a paper by the chaplain. It is published as a separate pamphlet, and contains twelve short papers.

The first subject discussed is the discharge of harmless and chronic lunatics. The information supplied by Dr. Williams is exceedingly encouraging to those who consider that harmless lunatics may, with great advantage to themselves and others, be removed from asylums and placed in suitable private dwellings. During the last two and a half years he has discharged fifty chronic cases, and with the following results:—Remaining with relations, 20; returned to the asylum, 6; dead, 2; started again in life, 10; in workhouse, 1; unknown, 8. Some of the cases given in detail unmistakably prove the wonderful good which may occasionally

follow change of residence, &c., in even the most helpless cases.

Were the practice of discharging such patients to become more common, they could be placed under more perfect official inspection by the adoption of the method followed by the Scotch Lunacy Board. In Scotland there are two deputy commissioners whose duty it is to visit and report upon once a year every lunatic living in a private dwelling in his district.

Cases illustrative of the Treatment of Acute Mania.—In this paper there is given a brief *resumé* of the treatment and results of all the cases of acute mania admitted to the female division during 1872; cases of epilepsy and general paralysis, however, not being included. *Succus conii* (B. P.) was used in several instances, but not with such satisfactory results as have been obtained elsewhere.

Physical Appearances of the Ribs in the Insane.—This paper is illustrated by photographs of sections of ribs in various conditions. Various details of thirty cases are given in which observations were made as to the state of the osseous system; the sixth rib being selected in each case, thus securing uniformity. It was found that one inch of the sixth rib varied in weight from 5·03 grs. to 38·9 grs. The circumference was in one case as little as ·87 in.; in another it was as much as 1·62 in. It was found that the force requisite to cause fracture varied to a remarkable extent. In a case of chronic mania, a female aged 73, who died of "disease of heart and kidneys," the force was under 1 lb. In another instance, a case of chronic mania, the rib fractured when a force equivalent to 2 lbs. was applied.

Packing in the Wet Sheet.—What is restraint? must indeed be a difficult question to settle when we find Dr. Williams and the Commissioners differing about it. The following paragraph shows the position of affairs:—

"Within these last twelve months the Commissioners in Lunacy have determined to insist upon packing in the wet sheet being entered in the medical register under the heading of restraint. And on their visit to this Asylum last June, they left a request to that effect in their report. This request has, therefore, under protest, been adopted. It is now fully ten years since this mode of treatment was introduced into this Asylum by the then Medical Superintendent, Dr. Lockhart Robertson, with the full knowledge and consent of the Commissioners in Lunacy. After so many

years, therefore, it seems rather hard that in these latter days we should have to deface our records with the ugly word restraint, when in reality no more restraint is being now used than has been employed for the last ten years. The non-restraint system has our sympathies so entirely, and the traditions of this Asylum are so completely on the same side, that we could not at first make up our minds to again resort to what such high authorities called restraint, and for many weeks after the visit of the Commissioners no wet sheet packing was prescribed. But eventually its absence from our repertoire of remedial agents was so much felt, and its partial disuse so powerfully demonstrated to us its usefulness, that at last, remembering the words of Thomas à Kempis, that 'it is great wisdom not to be rash in thy proceedings, nor to stand stiffly in thine own conceit,' we abandoned our sentiments, and returned to the packing; feeling, indeed, that if we were satisfied of its beneficial effects, we had no right to deprive our patients of its advantages. We still, however, hold that to call packing in the wet sheet 'restraint' is a misnomer. The sedative action of cold water is a recognised therapeutical agent, and not long ago the medical papers teemed with reports of cases of disease wherein the temperature is abnormally high, and wherein the cold water bath was used with great effect. This remedy is, however, decidedly heroic, and we prefer to use the much less powerful agency of the wet sheet. But it is none the less a matter of treatment, and should not be designated restraint. After all, what is the mode of procedure?"

What's in a name? If packing in a wet sheet is a beneficial plan of treatment, what does it really matter whether it is called restraint or not? Sentiment in such questions should always be avoided by impartial men.

The Use of Electricity in Insanity.—The result of the observations are summed up as follows:—

“From the above observations, meagre though they be, we are confident that in the galvanic battery we have a powerful tonic or stimulant; further study, however, being required to estimate its true importance, and to decide in what cases it is most applicable. Our experience leads us to think that recent cases of melancholia or mania, with lowered vital powers, are those in which a current passing from the centre to the peripheries seems to produce great benefit; and that it seems to have no effect on those cases which have become

chronic, or in which secondary symptoms are setting in, or in which we have reason to suspect central disorganization."

There is almost nothing calling for special notice in the concluding "Notes," which are entitled—" *Cannabis Indica in the Treatment of Migraine*;" " *The Results of Night Nursing*;" " *Note on Chloral*;" " *On the Use and Abuse of Seclusion*;" " *Medical and Surgical Memoranda*;" " *Records of Post-mortem Examinations during the year 1872*;" and " *On the Connection between Atmospheric Conditions and certain States of the Insane*."

We are surprised to find it stated by one of the writers of these "Notes" that the Sussex County Asylum was the first Asylum in Great Britain in which chloral was used in the treatment of insanity. We always understood that any credit which might belong to the introducer of chloral into Asylum practice was really due to the Superintendent of the Devon County Asylum.

THREE COUNTIES' ASYLUM.—In July the rate of wages of all the attendants was advanced 10 per cent.

There is nothing calling for special notice in Dr. Denne's report. We confess, however, that we do not quite see the correctness of some of the statements contained in Table V., showing the causes of death. We do not know that it is usual to place "acute rheumatism" in the class of thoracic diseases, even though it be complicated by pericarditis. It is also uncommon, in our experience, to find ranged under "Abdominal diseases" the following:—"General debility," "General debility *with disease of heart*," and "Senile decay."

WILTS.—The rate of maintenance is 8s. 9d. per week. By utilising a balance on hand it was formerly 7s. 7d., but this becoming exhausted, and looking at the advanced price of necessaries, the committee have been obliged to return to the rate mentioned.

There is now an abundant supply of water.

It is melancholy to reflect on the large number of those cases in particular in which the exciting cause is clearly traceable to intemperance in drink. During the five years 1867-1871, 20 per cent. were, after inquiry as particular as could be instituted, manifestly attributable to habits of drunkenness. During the year now expired as many as 35 of the 102 admissions, or 34 per cent., were to be assigned to this cause. It is to be feared that the increased wages now in many places paid to the agricultural labourer are of little real advantage to the recipient, but rather to the licensed keepers of public-houses, who profit by the consequent larger expenditure in drink.

The deaths have been fewer than usual, 33 in number, viz., 20 men and 13 women. This gives an average rate of mortality of 7·2 per cent.—a lower rate than during any year since the opening of the asylum, and much lower than for the 21·35 years, which averages 11·6 per cent.

Twenty-six *post-mortem* examinations were made during the year.

Concerning the enlargement of the asylum, and the disposal of certain patients, the Commissioners remark:—

We cannot learn that the Committee entertain any idea of immediate enlargement of the building on the male side; it seems to us, therefore, expedient that early consideration should be given to the possibility of suitable arrangements between the Committee and Boards of Guardians for the care in Workhouse infirmaries of such chronic and harmless cases as Dr. Thurnam might himself select from the male patients on the books of this asylum. If a dietary equal to that in use here, and some paid supervision could be insured by such arrangements, there are many patients whom we saw who could thus, in our opinion, be properly cared for.

WORCESTER.—When men meddle with that about which they know nothing, the probabilities are that they make fools of themselves. The following paragraphs from the Commissioners' report contain a rebuke to the justices of Worcester which they richly deserved:—

In reference to the subject of diet, we learn that the justices in Quarter Sessions some time ago recommended a material reduction on the score of economy, as respects patients of the chronic and incurable classes, and an assimilation of the dietary for such patients to that adopted in Union Workhouses.

We have much satisfaction in stating that, after full consideration and consultation with the Medical Superintendent, the Committee of Visitors declined to carry out the proposal.

We are strongly of opinion that, even for patients of the classes referred to, a lower than the ordinary dietary would injuriously affect them both physically and mentally, and would be attended by an increased mortality.

Fifty-eight *post-mortem* examinations were made. In the Pathological Appendix, extracts from the notes of 15 cases are given.

From Dr. Sherlock's very elaborate and interesting report we can only extract his remarks on some of the remedies he has of late employed:—

During the year several remedies which have been advanced as possessing an undoubted curative influence in the treatment of the insane suffering from certain specified complications and groups of

symptoms, have been administered to selected individuals in the doses recommended, and the use of the drug was continued for a time sufficient to enable us to form an estimate of its value, but in our hands no decided improvement or result has been arrived at. Care was in all cases taken to provide ourselves with these remedies prepared by the best druggists in respect of the articles being tested.

The succus conii was given to several cases who were suffering from attacks of recent or acute recurrent mania accompanied with much excess of motility and irritability, constant restlessness and sleeplessness, with agitation of manner and wild incoherence. Most of the cases continued to use this drug for about two months in gradually or rapidly increased doses, but in none to whom it was given was there any appreciable subsidence of the excessive motility and irritability of the muscular system, nor any relief from the state of mania observed. In some of the cases the course of the attack became more alarming, and after a fair trial the use of this agent was discontinued.

The extractum ergotæ liquidum, which was reported to possess very beneficial effects in cases of recurrent mania, and of mania with epilepsy, by reducing the violence of the excitement, and prolonging the intervals of comparative tranquillity, we found, after repeated trials in many cases of both characters, to be inoperative; and in the cases who were using this drug when the attack supervened, its intensity or duration was not mitigated or shortened, and the attacks declined as they had done on former occasions. In all of our cases the use of this remedy was continued for a couple of weeks, and in most of them its use was again resumed on the re-appearance of a subsequent attack, and with similarly unsuccessful results.

The calabar bean, in the form of tincture, was experimented with in respect of its curative or arresting powers in cases of general paralysis of the insane. Nearly the whole of the cases to whom it was exhibited had already suffered from one or more attacks of epileptiform convulsions. In about one-half of the cases who were taking this remedy, the disease ran on apparently without interruption, if not more rapidly than is generally the case; but in the remainder there was a subsidence of the graver symptoms for a longer or shorter duration; and in two of the persons who had used it for about two months there was also a remission in the disease, and although the persons could not be reported as recovered, there was sufficient improvement secured to enable them to return home to the care of their friends.

The chloral hydrate alone, or in combination with other remedies, has proved very effectual as an hypnotic in most cases requiring rest and sleep, with the object of avoiding exhaustion and prostration from excessive or long-continued agitation. It is not considered to be a remedy having much curative power over the progress and course of mental disease, but it is undoubtedly of high value in procuring rest and sleep without much, if any, constitutional disturbance; so that time is afforded for the due exercise of other moral and medical treatment.

PART III.—PSYCHOLOGICAL RETROSPECT.

German Psychological Retrospect.

BY. DR. IRELAND.

(Continued from page 304.)

In the "Zeitschrift für Psychiatrie," xxix. Band, 1 Heft, Dr. Meschede gives a long, careful, and somewhat diffuse article on the Pathology and Pathological Anatomy of Pyromania, the tendency or impulse to set fire to objects. Dr. Meschede is not aware of any cases of pyromania where the morbid appearances found after death have been described.

He gives us a long account of Natalie X., a girl who commenced to have fits when three years old. She gradually became violent and unmanageable, especially when the fits were more frequent than usual. At last she became very dangerous, attacking animals and children with pointed instruments, and trying to set things on fire. When questioned she said that an inner voice drove her to do what she was blamed for. She several times set fire to the Asylum of Schwetz, where she was confined. She died at the age of 18, a confirmed epileptic maniac, apparently of phthisis pulmonalis. On examining the body the skull was found asymmetrical, the left cavity being larger than the right. On the Clivus Blumenbachii, just behind the sella turcica there was a prominent osseous growth in the form of a crest; the arachnoid at the lower part of the brain thickened and less clear than usual. The substance of the brain was tougher than usual; the pons and medulla oblongata, especially the olivary body, were hardened.

Dr. Meschede considers that the disease commenced with the osseous growth on the clivus causing epileptic fits. It is clear from the history of the case that the epilepsy commenced before the mental derangement, and was the most constant and prominent symptom during its continuance.

The author gives another case of epileptic imbecility, with pathological changes in the base of the brain and skull, adhesion of the pons with the clivus, and displacement of the vertebral and basilar arteries. The patient, who was also an epileptic, was very malicious, biting the other lunatics, and occasionally striking his head against the wall.

Dr. Meschede concludes his paper with a description of a large number of cases where there were hallucinations connected with fire and light.

Dr. Meschede is disposed to place the seat of motor impulses, such as those which impel to violence and fire-raising in the pons Varolii.

Dr. C. Westphal, in the "Archiv. für Psychiatrie," iii. Band, i. Heft., has a long article on Agora phobia; by this he means the fear

of squares or open places. He gives, from his own observation, three cases of this singular affection, all of which seem to have occurred in Berlin. They all felt a peculiar uneasiness or anguish in crossing over wide squares or free, unenclosed spaces. One of the patients compared it to the feeling of a swimmer crossing a lake, uncertain whether he will be able to reach the other side. This feeling of distress was accompanied by uneasiness and beating at the heart. They all found the sensation diminished after the use of wine and other stimulants, and often felt quite at ease when accompanied by a companion. One of them used to follow someone going the same way, or a coach crossing a square, for he found this made the sensation less intolerable. One of them felt relieved when he used a walking stick. The other two seemed to have derived no relief from this simple precaution. The feeling of distress was sometimes overpowering, and prevented them crossing many of the wide streets and squares in Berlin. It was quite different from giddiness, and was unaccompanied by any trace of insanity. They were all young men. The first case described had a want of symmetry of the whole body, the right side being somewhat larger than the left. The second and third had been troubled with epileptic attacks. The second case was of a family in which insanity and nervous diseases prevailed. The first and second cases also complained of seeing shining circles floating before their eyes. In a note added to the same number, Dr. Westphal quotes another instance of this hyperæsthesia. The subject of it was an officer who was thrown into the greatest distress, accompanied by beating of the heart and profuse perspiration, at the sight of a large room, a long street, or a wide square. This feeling was generally absent when in command of his troop, and never attacked him when riding or in the open country. The author easily shows that this peculiar feeling is quite different from the disease described by Trousseau under the name of *vertigo a stomacho læso*.

In iii. Heft of the same volume of the Archiv., Dr. E. Cordes, proprietor of the Hydropathic Establishment, Alexanderbad, considers at length the subject of Agoraphobia or Platz-angst, raised by Westphal. He treats it as the result of hyperæsthesia of the nervous system. It arises from a sense of personal insecurity. The patient is overpowered by a leading idea. In moving across a square this idea is "You can't get across, you will fall, you are paralysed." On entering a room the idea is that people are looking at you and remarking your condition. In walking on a plain it is, "You will never be able to get home" The patient knows that this notion is not based on any evidence; that it is absurd, that it is weak to yield to it; nevertheless it seizes upon him, and he cannot banish it from his mind. The feeling of alarm may be excited by very different suggestive ideas, just as a man who could keep cool in a musketry fire, would be overpowered with alarm if made to climb the mast, or a man who could do both would altogether lose his nerve if he had to make a speech in

the House of Commons. In a similar way the mesmerist gains a control over the mind of the mesmerized, by suggesting some leading idea which gains an overpowering hold over the victim's mind.

Dr. Cordes gives an analysis of twenty-nine examples of hyperæsthesia. What he finds common to them all is that they suffer from weakness and irritability of the nervous system, that they are seized in certain conditions, sometimes in crowds, sometimes in solitary places, sometimes in wide squares, with a feeling of great mental distress. He observes that these feelings often come on after the patient is fatigued.

In the "*Zeitschrift für Psychiatrie*," xxix. Band, 5 Heft, Dr. Tigges takes up the consideration of the cases given by Westphal and Cordes, and tries to explain the symptoms by quoting experiments derived from the application of the constant current to the head.

In the same number Dr. Emil Höring collects a number of cases of Agoraphobia and Vertigo from different authors.

The same subject was treated by Dr. Flemming at the Meeting of the Südwest Deutschen Verein für Psychiatrie, at Karlsruhe (see *Zeitschrift für Psychiatrie*, i. Heft, s. 112). He characterizes the affection as the fear of becoming giddy or insensible.

Dr. William Sander has an essay upon an impression which probably most of us have felt during the course of our lives. Suddenly when an object appears to us for the first time, or when some new event has happened, we feel that we have already seen the object or existed in similar circumstances before. As Jensen has expressed it: "So far does it go that we have almost the conviction that we could say before what was going to happen. Then suddenly everything disappears, and we live again in the present, no longer, as before, doubled half in the past."

Dr. Sander gives the case of an epileptic in an asylum, with whom these impressions were common. The man described his experience thus: "I speak with someone about something out of the newspaper as if I had read it once in the newspaper; then comes at once the feeling as if I had read it already once before, as if I had lived in the same circumstances years before in the same room, and read the same newspaper."

Jensen explained this by supposing that sometimes the double impressions made on the two hemispheres are separated in consciousness, owing to morbid conditions of one or other side of the brain, and that these impressions are afterwards put down by the mind as of different origins, though really the same, and Wiedemeister supports this view with an interesting case of meningitis and atrophy in the left side of the brain; but there was none of these singular impressions in the case cited. There is no proof that they are frequent in lesions confined to one hemisphere, and they are not uncommon with healthy individuals. Dr. Sander has little difficulty in showing this explanation to be insufficient. He himself is disposed to believe that these

“deceptions of memory,” as he calls them, are often brought about by the half-forgotten remembrance of a similar event or object. This similar part of an earlier event awakens all the conceptions and feelings as if the whole antecedents had been already lived through in the same manner. It is also possible, he remarks, that the remembrance is that of a dream or lively fancy. The author himself confesses that his explanations do not account for all cases. To my mind, they are not at all satisfactory. It will be remembered that the ancient Pythagoreans, as well as the modern Hindus, regard such impressions as stray recollections of a former existence.

In the same number as Dr. Sander's paper, Dr. L. Meyer has a very well written article on Circular Insanity, Alternations of Mania and Melancholia.

In the “*Centralblatt*,” December 30th and January 30th, 1873, Dr. Lang continues his careful observations on Skatophagia. In the discussions which followed the reading of his papers, the remarks of a number of medical men on this subject were given.

The same subject is considered in the “*Correspondenz-Blatt*” (February, 1873), by Dr. A. Erlenmeyer, junior.

Dr. Max Huppert (*Archiv.*, iii. Band, 1 Heft) returns to a subject which he has already treated of in another periodical—the occurrence of double conceptions. He observes that the two hemispheres of the brain, which we are entitled to regard as the seat of the conceptions and processes of thought, have functions at once double and simultaneous. He gives some cases where this double process ceases to be equal and simultaneous. The first case was a man, 38 years of age, suffering from general paralysis, who had led a dissolute life. He complained that he heard voices of women, who reproached him with some of his old misdeeds. He was very fond of reading; but now he found that when he took up a book the words which he read were repeated by a chorus of female voices, fifty or sixty in number. At the end of the reading, when he himself had ceased, he heard these voices repeat the last two words or syllables. He found that the voices were no longer heard when he read in a loud tone; but when he stopped reading again they echoed the last word. When he sat down to write a letter, ere he had finished writing out the word, the feminine voices had guessed it, and cried it in his ear. It seems to me that here there was no double conception; but the spoken symbol answering to the written word was heard, although no outward sound or vibration existed. Surely this is simply a hallucination of hearing, which has nothing to do with the duality of the hemispheres.

Dr. Huppert gives seven cases in which hallucinations of hearing or vision were met with. In one case the patient imagined he saw before him, when he shut his eyes, the figure of a man or house that he was thinking about; in another he saw in the air some yards before him the numerals of a sum which he was thinking of. The Doctor's explanation is, if I understand it aright, that the representation of the man, house, or arithmetical sum, existed on the one side of the brain,

and the image or cipher believed to be seen on the other. Dr. Huppert is careful to add that this phenomenon *may* be so explained, he does not assert that it *must* be.

In the "Zeitschrift für Psychiatrie," 29 Band, 2 Heft, there is an account of a mad family. They consisted of a father and mother, and six grown-up children. In the winter of 1850 they appeared at Soleure, and complained that they had been plundered of their property by the magistrates in Amylic in Savoy. It would appear that this was a delusion, that they had given up cultivating their land, shut themselves up in their house, and would listen to nobody. The neighbours, out of compassion, had gathered in the crops for them. They, however, bitterly complained of having been plundered of everything, and said that the Federal Council at Berne could alone help them. By an arrangement with the Gemeinde at Amylic, their land in Savoy was sold, and a house and field bought for them in Soleure. They cultivated the land, but for some unexplained reason the new property was also sold. They now complained more bitterly than ever of being plundered, and would associate with no one. They lived upon bread and milk, used no fire, and washed their clothes without soap in a neighbouring brook. From time to time a deputation of the family went to Berne to complain of the manner in which they had been treated.

This continued for nine years, during which it appears that none of the family who remained in the house ever tasted warm food. Two of the younger members left for situations, and one died. They all persisted in the statement that they had been shamefully treated, and in the delusion that they would obtain justice by going to law. At last the father died of want and cold during the winter of 59-60; and a year after the mother perished on the road returning on a chilly winter's night from one of her fruitless expeditions to Berne.

In January, 1862, Dr. Cramer got the remaining members of the family into the asylum at Rosegg. These were two sisters and a brother; one of the sisters was decidedly microcephalic, and somewhat weak-minded. In eight months she had given up the idea that she was an object of persecution, and became a useful servant. The brother, too, left the asylum and got employment, but the eldest sister, Maria, persisted in the same notions which had filled the mind of the mother, and attacked those who disagreed with her with abusive language.

Dr. Cramer believes that the mother and daughter were insane, possessed with an insane delusion, and that they succeeded in impressing this delusion upon the husband and children. One thing seems clear, that the treatment this unfortunate family met with from the local authorities, was more likely to confirm their delusions than to cure them. Had the mother and eldest daughter been separated at an early period, it seems almost certain that the unhappy influence over the rest would have ceased.

Dr. Schmincke gives a case of inverted sexual inclination (Archiv.

für Psychiatrie, iii. Band, 1 Heft), in a young man 25 years old, who had suffered from convulsive spasms in the limbs. He was much attracted by good-looking young men, but had little or no desire for women. He is now 30 years old, and has, in a great measure, got the better of this perversion of feeling, but is still indifferent to women.

In the "Irrenfreund," No. 11, there is a painfully interesting article on the private and public asylums of Paris and its neighbourhood during the two sieges of 1870 and 1871, by A. Brierre de Boismont. The paper was written in French by its distinguished author, and translated into German by Dr. Brosius, one of the editors. Many of the insane had been sent away before the first siege commenced, but from 3,500 to 3,600 were left within the fortifications.

There is a touching account of the hardships and dangers which the insane had to endure in common with the rest of the population of the blockaded city.

M. Brierre de Boismont avows his opinion that the vagaries of the Commune were the result of insane delusions, and gives reasons for his conviction that Lullier, Flourens, Ferré, Delescluze, and other chiefs of the Commune were lunatics. The following passages, which I translate into English, are worthy of attention:—

"People have spoken at all times about the influence of political commotions upon the production of insanity; but the facts do not bear out the prevailing view that periods of excitement increase the number of admissions into asylums. Marcé says 'Revolutionary times excite and drive into insanity only those already disposed to it, who probably would become mad through some other exciting cause. The type of the delirium can be determined by the ruling political ideas, but the number of insane is not increased to any marked extent through political revolutions. This is proved by statistics.' The following is the number of admissions in the Department of the Seine during the year—

	Insane.		Insane.
1847 . . .	1230	1853 . . .	1399
1848 . . .	1348	1854 . . .	1493
1849 . . .	1351	1868 . . .	2009
1850 . . .	1245	1869 . . .	2432
1851 . . .	1334	1870 . . .	2519
1852 . . .	1527	1871 . . .	2198

"In the times following political excitement one often sees a diminution in the number of admissions.

"Some of the insane took part in the disturbances; the victims of their diseased excitability they find a vent for their turbulence in political riots. Many lose their lives during the struggle through their rashness and insensibility to danger; after the struggle they not unfrequently are banished by incompetent judges, who, though conscientious enough, do not distinguish the insane from sane criminals."

The author remarks that insane people should get even a better nourishment than they often do when in their sane mind. "Twice in a hundred years," he remarks, "under the pressure of circumstances, and in the course of misfortunes which overwhelmed the country, were the asylums of the Department of the Seine forced to reduce by a considerable degree the dietaries of the insane; and we soon saw in what a frightful proportion the mortality increased, not to speak of the indirect consequences, for in many cases the disease was prolonged, and in others it passed into an incurable state." During the first siege about one-sixth of the lunatics confined in Paris died.

In the *Archiv.*, iii. Band, 3 Heft, there is an article by Rudolf Arndt on the effects of hydrate of chloral. The author gives an account of the case of a patient admitted into the Griefswalder Lunatic Asylum with general paralysis. As he was very restless and did not sleep at night, chloral was given every evening for a week, after which there came out a severe eruption of *erythema papulatum*, which was followed by jaundice, disorder of the bowels, and retention of urine. As under the influence of this new disease the patient became quiet, the chloral was stopped for seven weeks; but on his again becoming noisy and restless the chloral was resumed, and four days after the erythema returned, and spread itself over the whole body in two days. It was promptly followed by the jaundice, and in a week the patient died.

An examination was not allowed; but the author is convinced that the cause of death was the retention of bile in the blood, and its paralyzing influence on the heart.

The second case was also one of general paralysis, who got chloral to subdue restlessness, and cause sleep. In about a month his appetite fell away, and he complained of pain in the stomach; and in a week after died. On examination the arteries of the brain were atheromatous. The stomach was found to be deeply diseased, the mucous membrane eroded in many places and easily torn; the larger vessels widened in calibre, and the smaller ones burst in some places, so that extensive ecchymoses were formed. There was a perforation the size of a thaler in the posterior wall of the stomach. The author believes that both these deaths were owing to the use of chloral given in ordinary medicinal doses, and that death was brought about by its exciting inflammation of the stomach and bowels, which in one of the cases caused jaundice. He gives a large number of observations, principally from German periodicals, where chloral appears to have been the cause of unpleasant or dangerous symptoms. These are of a varied character; the most frequent one noticed is the appearance of a rash or flushing of the face, eyes, and neck. Schüle found from examination through the ophthalmoscope that the injection of the capillaries extended to the retina, and thought that it extended to the brain. Other authors give instances where chloral appeared to cause congestion of the brain, purpura, œdema of the feet, &c.

The author accumulates so many instances and arguments that he fills twenty-six pages against chloral. It would have been well had he given us some idea as to the proportion of the cases where chloral was safely given to those where it did harm.

Dr. Gellhorn, Physician to the District Asylum at Halle, has, in the "*Zeitschrift für Psychiatrie*," 4 Heft, an article on skin exanthemata after the use of hydrate of chloral. He gives details of six cases where the medicine seemed the cause of injurious effects, which he enumerates in the ascending scale:—Rash, renewed exanthema, diarrhœa, quickness of the pulse, and stupefaction of the intellect.

In the "*Psychiatrisches Centralblatt*," Nr. 12, Dr. Leidesdorf points out some of the dangers of giving chloral without due caution. The danger principally consists in vaso-motor paralysis beginning in the capillaries, and spreading to the heart. In small doses it is more apt to cause than to subdue excitement; in large ones, from three to six grammes, it has been known to cause sudden paralysis of the heart and death.

Dr. Kirn, in a paper on Chronic Intoxication through Hydrate of Chloral in the "*Zeitschrift für Psychiatrie*," 3 Heft, confirms the views of Dr. Gellhorn and others. Chloral incautiously given produces not only the well-known rash, but inflammation of the intestinal canal, difficulty of respiration, flow of blood to the head, and stupefaction. In the case of a young woman afflicted with derangement, but physically healthy, Dr. Kirn found a long train of maladies to come from the administration of chloral continued for nine days. The symptoms commenced with rash; then followed febrile action, lasting for eight weeks, in the course of which the patient had œdema of the face, eyelids, and ears, diarrhœa, catarrh of the air passages, and finally abscesses in both arm-pits. She, however, recovered.

Dr. Liebreich, at the Psychiatrischer Verein, held at Carlsruhe (reported in the "*Zeitschrift für Psychiatrie*," 29 Band, 1 Heft, s. 119), gave some experiments upon a new narcotic hydrate of crotonchloral, which is produced by subjecting allylene to the action of chlorine. He finds from experiments on animals that it produces anæsthesia by acting on the brain, while the sensibility of the body is not affected. It does not paralyse the heart like chloral; but, in large doses, was found to cause death by stopping the function of the medulla oblongata. After trying it on animals, Dr. Liebreich had used it on human beings, when it was found to produce deep anæsthesia without impairing the force of the circulation, as chloral, in large doses, is apt to do.

In the *Archiv.* (3 Band, 1 Heft), Dr. Knecht gives a carefully studied case of intermittent mania, in a female, where much benefit was derived from the subcutaneous injection of morphia. The patient had been about eight months in the asylum without any improvement, when morphia was tried with great advantage both to her mental and bodily condition. Morphia, the author believes, helps in many ways. Not only does it mitigate isolated

symptoms, but it often prevents the appearance of exacerbations of insanity, or if it fails to prevent them, it shortens them when they do come. The author tries to give a scientific explanation of the favourable effects of morphia used in injection. The main effect of opium in certain doses consists in the stimulus which it gives to the vasomotor centre, and in its power of increasing the tonicity of the muscular coat of the vessels. This influence is exerted in a peculiar degree on the brain, which is highly vascular, and where the arteries have a well-developed muscular coat. In this way it lessens the circulating fluid within the cranium, confines the activity of the organ, and suspends the progress of pathological changes. Dr. Knecht cites in support of his theory the physiological researches of Gscheidlen, who has come to the conclusion that morphia in small doses has a stimulating effect; in large ones, a paralysing effect upon the muscular and vasomotor nerves. Mendel found that in animals narcotized with morphia the temperature sunk lower within the cavity of the cranium than under the skin or in the rectum.

Dr. Knecht's paper is well worthy of perusal.

Dr. Hösternann (quoted in the "Centralblatt," 30th January, 1873) claims to have obtained successful results in the treatment of simple melancholia with nitrite of amyle given in inhalations from twice to four times a day in doses of from four to five drops inhaled for about forty seconds. He finds that this agent has a notable effect in increasing the quickness of the pulse. It also widens the calibre of the capillaries in the skin and in the head.

Dr. Otto Obermeier has a paper in the *Archiv.*, iv. Band, i. Heft, upon the employment of aethyl alcohol in insanity. By this name he appears to designate a fluid composed of 30 per cent. of rectified spirit mixed with water, "with aromatic additions." With this compound he has obtained much success in cases of melancholia, and never noticed any of the bad symptoms observed by Parkes and Wollowicz to follow the use of alcohol.

Putting together the favourable results obtained through morphia, nitrite of amyle, and the agreeable beverage mixed up by Dr. Obermeier, we may venture to hope that melancholia will soon be rare in German Asylums.

Dr. Voppel, in an article of 45 pages (*Zeitschrift für Psychiatrie*, 3 Heft), gives an account of an experiment which had been carried on for more than two years and a half on the management of the insane in the rural Colony of Colditz. He had a central Institution for their lodging in the middle of a large farm on which the lunatics were employed. He had 139 cases during the period of which he writes, who were kept in employment on about 66 acres of land, apparently worked on the system of *petite culture*, or spade husbandry used by the peasant proprietors and metayers on the Continent. The patients were granted more liberty than is allowed within an enclosed Asylum, and to encourage them a few pence was given them for what they earned.

On wet days they were employed in straw plaiting. He calculated that the labour of four lunatics was worth that of one sane labourer. He found the epileptics to be the strongest.

Dr. Voppel's paper is worthy of attention, though it appears to me that the treatment of the lunatics does not differ very much from what is carried on in County Lunatic Asylums in Great Britain.

I have been obliged, from want of space to defer a report of the article of Dr. E. Hitzig on the relative value of some methods of applying electricity till a future number. The paper is not concluded, but the first part has appeared in the *Archiv.*, iv. Band, 1 Heft.

Professor Betz's Method of Making Sections of Nervous Tissue. By Dr. BATTY TUKE.

Professor Betz, of Kiew, has lately produced brain sections, which have attracted very considerable attention in Vienna. His specimens are of vast extent. He appears to be able to produce thin sections of an entire hemisphere. We append his method of hardening and cutting as it is stated in the "*Correspondentze Blatt der deutschen Gesellschaft für Psychiatrie und Gerichtlich Psychologie*, Jan., 1873." The method of hardening which we wish to bring into notice is as follows:—observing that differences exist in the treatment of the spinal-cord, cerebrum and cerebellum. The spinal-cord—after the careful removal of the dura mater, it is placed in spirit of from 75 to 80 per cent., which is tinged a clear brown colour by the addition of Iodine. After from one to three days, during which the preparation must stand in a cool temperature, the Pia Mater and the Arachnoid are also removed; the specimen remaining in the spirit, to which a few drops of Iodine must be added daily for three days, maintaining an ordinary temperature. It is then transferred to a three per cent. solution of Chromate of Potass, and back again to the cool temperature. Here it hardens thoroughly, which is known by the fluid becoming turbid, and by the formation of a brown deposit upon the preparation. When this occurs, it must be immediately thoroughly washed with water, and immersed in a solution of Chromate of Potass, from a half to one per cent. strength, in which it will not become too hard or brittle.

Preparations of cerebellum can only be made when it has been taken from a perfectly fresh body. Before immersing it in the Iodine spirit, the vessels and membranes must be carefully removed, especially at the vermiform process and the "square lobes;" and cotton wool should be stuffed into the sulci on either side of the process, the rhomboidal groove, and the nates and testes, should they be in the specimen, so as to render the passage of fluid into the deeper parts more easy. The preparations should rest on cotton wool. The

Iodine spirit should be quickly increased in strength. After from 7 to 14 days the specimen should be placed, provided it does not give to the finger, in a five per cent. solution of Chromate of Potass.

The *great brain*, after being divided in half through the length of the corpus callosum, is laid in weak Iodine spirit. After some hours the separation of the membranes in the fissure of Sylvius, and at the tail of the corpus callosum should be commenced, so as to allow of the permeation of the spirit. The preparation must stand in a cool place (during summer in an ice cellar). After from 10 to 14 days it is removed to a four per cent. solution of Chromate of Potass. When sections are to be taken it must be washed carefully in water.

The Cutting of Sections.—Betz endeavours to avoid all rubbing of the knife on the surface of the preparation, and sticking of the section on the upper surface of the blade. To this end he has had constructed a knife whose upper surface is convex, the under one concave, the radius of the lower one being somewhat smaller than that of the upper. The blade is from one and a half to twice as long as it is broad, the thickness being one-third of the breadth. For large cross sections, as for instance through the whole hemisphere, Betz uses a knife whose blade is 21 centimetres ($8\frac{1}{4}$ in.) long by 10 centimetres (4 in.) broad. This form of knife (hatchet?) makes it possible to keep the surface of the preparation and the section constantly wet by means of dropping spirit, so that rubbing on the one and sticking of the other may be avoided.

Details are given of the form of section machine which, except of course in size, is constructed on the same principle as the one in use in this country.

2. *English Psychological Retrospect.*

In Numbers CII. and CIII. of the "British and Foreign Medico-Chirurgical Review," Dr. J. Batty Tuke publishes the results of investigations made in ninety-two Autopsies as bearing "On the Morbid Histology of the Brain and Spinal Cord as observed in the Insane."

The morbid appearances noted as having been found in or on the blood-vessels and the tissues intimately connected with them were—(1.) A dilated condition of the brain substance immediately surrounding the blood-vessels. This is best marked in epilepsy and general paresis, but also occurs in cases where there is a strong presumption that congestion has at one time or another existed. (2.) A thickened condition of the hyaline membrane, which Dr. Tuke believes to exist apart from changes in the Tunica Adventitia.

(3.) Deposits on the Tunica Adventitia. These are of two kinds, the one composed of molecules homogeneous in structure, sometimes of a pale yellow or yellowish-brown tint, but generally colourless. This deposit was found in every brain, sane or insane, that was

examined, but is most abundant in the oldest standing and most aged cases of insanity in small particles. The other kind of deposit consists of masses of hæmatoidine. It cannot be said to be peculiar to any form of insanity, for it has been found in every case where it was looked for. (4.) Hypertrophy of the muscular coat was observed in two cases, one of congenital idiocy complicated with epilepsy, and the other a case of rapid general paresis. (5.) Minute aneurisms were clearly demonstrated in three cases. In two of these they existed immediately below the floor of the lateral ventricles in the corpus striatum. In the other they were confined to the left frontal lobe in the neighbourhood of a large apoplectic cyst. (6.) Abnormalities of direction in the vessels were noted to consist of undue straightness, tortuosity and sinking, and were constantly observed. (7.) A pigmented condition of the arterioles supplying the convolutions and the cord was seen in six cases.

The microscopic appearances in or on the membranes which were noted in Dr. Tuke's examinations were—(1.) Deposits of crystals of phosphate of lime, which were seen in one case of acute idiopathic melancholia due to great brain exhaustion. (2.) Lymph deposited between the substance of the cord and the pia-mater. This was seen in two cases, one of severe and long standing epilepsy, and the other of chorea.

Granulations on the surface of the brain and floors of the ventricles were accompanied generally with considerable alterations, implicating the epithelium and subjacent tissue, and giving evidence of chronic inflammatory action.

The central canal was abnormally patent in one case of senile insanity in which great wasting of the spinal cord existed. In two cases of epileptic insanity it was occluded by growths of columnar epithelium, and in three other cases by deposits of colloid bodies.

The changes noted in the neuroglia were—(1.) General sclerosis or hypertrophy, which was demonstrated in a case of hypertrophy of the right cerebral hemisphere with co-existent atrophy of the left side of the body. The condition was best marked in the occipital lobe, less so in the parietal, and in a still minor degree in the frontal. In fact, it was co-existent with the degrees of hypertrophy of the different lobes.

(2.) Disseminated sclerosis. This term is used to discriminate between the scattered patches of grey degeneration and general sclerosis. Amongst the chronic insane it is most frequently met with in the white matter of the corpora striata and optic thalami. It is not uncommon in the pons varolii, medulla oblongata, and spinal cord of the general paralytic and epileptic.

(3.) Miliary sclerosis differs from the other forms in that it is not necessarily preceded, attended, or followed by any proliferation of the nuclei, that it is a circumscribed lesion not involving surrounding tissues, except so far as it displaces nerve fibres, that no morbid plasm

is diffused beyond its own area, and that it is in no way connected with blood vessels. It presented itself very frequently in Dr. Tuke's series of cases in all parts of the brain and spinal cord.

(4.) Atrophy of the senile brain, consequent on the impaired nutritive powers of atheromatous vessels, is a well known pathological condition. It is evidenced to the naked eye by wide sulci and sharp and thin convolutions. The brain substance is brittle and stringy when subject to chronic acid, and sections split in the directions of the fibres like over dried wood.

(5.) Colloid degeneration is one of the most interesting forms of brain lesion, being, Dr. Tuke believes, the primary pathological change in certain of the most prominent and well-defined varieties of insanity. Colloid bodies appear first in the white matter immediately contiguous to the cortical substance, but as the disease advances become more diffused.

J. M.

The following is Professor's Ferrier's summary of his very important "Experimental Researches in Cerebral Physiology and Pathology," which appeared originally in the *British Medical Journal* for April 26, 1873, and subsequently with a full account of the experiments in the *West Riding Lunatic Asylum Medical Reports*, vol. iii. There is no doubt that those experiments open up a most important field and mode of research. To be able to stimulate directly limited parts of the brain in a living animal is a great step in advance of anything as yet attempted in investigation of cerebral function. It is not only what Professor Ferrier's experiments prove, but what they suggest, and will undoubtedly lead to, that gives them their superlative interest to all students of brain function.

1. The anterior portions of the cerebral hemispheres are the chief centres of voluntary motion and the active outward manifestation of intelligence.

2. The individual convolutions are separate and distinct centres; and in certain definite groups of convolutions (to some extent indicated by the researches of Fritsch and Hitzig) and in corresponding regions of non-convoluted brains, are localised the centres for the various movements of the eyelids, the face, the mouth (and tongue), the ear, the neck, the hand, foot, and tail. Striking differences corresponding with the habits of the animal are to be found in the differentiation of the centres. Thus the centres for the tail in dogs, the paw in cats, and the lips and mouth in rabbits, are highly differentiated and pronounced.

3. The action of the hemisphere is in general crossed; but certain movements of the mouth, tongue, and neck are bilaterally co-ordinated from each cerebral hemisphere.

4. The proximate causes of the different epilepsies are, as Dr. Hughlings Jackson supposes, discharging lesions of the different centres in the cerebral hemispheres. The affection may be limited

artificially to one muscle, or group of muscles, or may be made to involve all the muscles represented in the cerebral hemispheres, with foaming at the mouth, biting the tongue, and loss of consciousness. When induced artificially in animals, the affection as a rule first invades the muscles most in voluntary use, in striking harmony with the clinical observations of Dr. Hughlings Jackson.

5. Chorea is of the same nature as epilepsy, dependent on momentary (and successive) discharging lesions of the individual cerebral centres. In this respect Dr. Hughlings Jackson's views are again experimentally confirmed.

6. The corpora striata have crossed action and are centres for the muscles of the opposite side of the body. Powerful irritation of one causes rigid pleurosthotonus, the flexors predominating over the extensors.

7. The optic thalamus, fornix, hippocampus major, and convolutions grouped around it, have no motor signification (and are probably connected with sensation).

8. The optic lobes or corpora quadrigemina, besides being concerned with vision and the movements of the iris, are centres for the extensor muscles of the head, trunk, and legs. Irritation of these centres causes rigid opisthotonus (and trismus).

9. The cerebellum is the co-ordinating centre for the muscles of the eyeball. Each separate lobule (in rabbits) is a distinct centre for special alterations of the optic axes.

10. On the integrity of these centres depends the maintenance of the equilibrium of the body.

11. Nystagmus, or oscillation of the eyeballs, is an epileptiform affection of the cerebellar oculo-motorial centres.

12. These results explain many hitherto obscure symptoms of cerebral disease, and enable us to localise with greater certainty many forms of cerebral lesion.

PART IV.—NOTES AND NEWS.

The Medico-Psychological Association. Proceedings at the Annual Meeting of the Association, held (by permission of the President and Fellows) in the Royal College of Physicians, London, on Wednesday, August 6th, 1873.

The Council met at the Royal College of Physicians at 10.30 a.m. Dr. Harrington Tuke, President-Elect, in the Chair.

The Morning Meeting was held in the Library of the Royal College of Physicians at 11 a.m., and the Afternoon Meeting at 2 p.m.

Members and Visitors present:—Dr. Harrington Tuke, President, Dr. Lush, M.P., Dr. Bucknill, F.R.S., Dr. Sibbald, Dr. Paul, Dr. Maudsley, Dr. Guy, Dr. Batty Tuke, Dr. Rogers, Dr. Murray Lindsay, Dr. Yellowlees, Mr. Mould, Dr. Lalor, Dr. Rhys Williams, Dr. Duckworth Williams, Dr. Arlidge, Mr. Toller, Dr. Clouston, Dr. Davey, Dr. Boyd, Dr. Blandford, Mr. Thompson, Dr. Stocker, Dr. Munro, Dr. Jepson, Dr. Rayner, Dr. Langdon Down, Mr. Stewart, Mr. Ley, Dr. Deas, Dr. Chapman, Dr. Bywater Ward, Dr. Sutherland, Dr. Duncan, Dr. Parscy, Dr. Sankey, Dr. Blanche (of Paris), Dr. J.

Thompson Dickson, Dr. Macdowall, Dr. Aldridge, Dr. Hewson, Dr. Strange, Dr. Davis, Dr. Kirkman, Mr. Jackson, Dr. Eastwood, Mr. Dudley, Dr. Sheppard, Dr. Wilson, Dr. Shaw, Dr. Orange, Dr. Nicolson, Dr. Sabben, Dr. Mickle, Mr. Gill, Mr. Molesworth, Mr. Horne, Mr. Fellows, Dr. Tweedie, Dr. Thurnam, Mr. Wood, Dr. H. Sankey, Dr. Irvine, Mr. Byas, Dr. Freeman, Mr. Prichard, Dr. Shuttleworth, Dr. Seguin (from New York), Mr. Wilkinson, Dr. H. H. Stewart, Dr. Belgrave, Dr. Baife, Mr. Swainson, Dr. H. N. Williams.

In the absence of Sir James Coxe, M.D., the President, Dr. HARRINGTON TUKE, the President-Elect, was voted into the chair, when he said that he had received a letter from Dr. Christie, the General Honorary Secretary, regretting his unavoidable absence, and stating that Dr. Sibbald would fill his office for him; also stating that Sir James Coxe had written to him to express his great regret at his inability to be present at the meeting, and in person resign the presidential chair. The vacation had commenced, and he was the only Commissioner left in Edinburgh, and it was required that one should remain in Edinburgh during the recess.

Dr. HARRINGTON TUKE then formally took the chair, and in so doing, said, in taking possession of this chair, which has been so ably filled by Sir James Coxe, whose absence from amongst us to-day we all regret, I feel that you have done me a great honour in calling me to this position, and I beg to tender you my best thanks. With your permission I shall postpone until two o'clock the usual presidential address in order that we may at once proceed to business.

Dr. SIBBALD, for the Secretary, then stated that letters had been received from MM. Calmeil and Baillarger, Paris; Dr. Ludwig Meyer, Göttingen; and Dr. Bulckens, Ghent, expressing regret for their inability to attend the meeting, but good wishes for the success and prosperity of the Association; also a letter from Sir Henry Holland, who was unable to attend, he having, on the previous evening, started for Russia.

Dr. SIBBALD then produced the minutes of the last General Meeting, and said that it was usual for these minutes to be taken as read, and for the President to sign them in testimony of their correctness, as printed in the Journal.

The PRESIDENT then put the confirmation of the minutes to the meeting, and the resolution was carried unanimously.

The PRESIDENT then said that the first question to be decided was where the Association shall meet next year.

Dr. MAUDSLEY proposed that the next meeting should be held in London. He said a wish had been expressed that the next meeting should be in Dublin, but he understood that our Irish friends were not quite ready to receive us yet, and, therefore, he proposed London as being accessible to all.

Dr. JEPSON seconded the resolution, which was carried unanimously.

ELECTION OF PRESIDENT.

Mr. MOULD proposed that Dr. Rogers, of Rainhill, be chosen as President for next year, and observed that Dr. Rogers was so well known for his ability, pertinacity and fixity of purpose, that he could not fail to do honour to the post to which he had the pleasure of nominating him.

Dr. BOYD seconded the resolution.

The PRESIDENT—As no other name has been proposed, it is within the power of the meeting to carry the resolution by acclamation; but as it has always been customary to ballot for the President, I shall direct that the ballot shall now go round.

The ballot was then taken, and the votes were unanimous in favour of Dr. Rogers.

ELECTION OF SECRETARY.

The PRESIDENT—The next business we have to transact is the election of a secretary. Dr. Christie, I regret very much, is unable to be here to-day; he has been called away upon military duty to Aldershot, and it seems that the business of our Association was not deemed sufficiently urgent to permit of his absencing himself from his duties to attend this meeting; but I learn from Dr. Sibbald that he has sent up the books, letters, and papers of the Association, most carefully compared, well kept, and in order.

Dr. CLOUSTON said—Mr. President, it is always an unpleasant duty to make personal remarks, but I feel very strongly that it is due to the dignity of our Association that some notice should be taken of the absence of our secretary. I do not wish to say one word against Dr. Christie, who is a personal friend of mine, but think that it is not enough to express regret that Dr. Christie should have

absented himself from the meeting on this occasion, and I think the Association should take steps to guard itself against being left without a secretary in future.

Dr. BOYD said—In all other Medical Societies there are two secretaries, and I was about to propose that we should have a second secretary, and that that secretary should be Dr. Rhys Williams.

The PRESIDENT—I think the rules will not permit of a second secretary being appointed, as such an appointment would involve an alteration in the rules; and no change can be made in the rules unless notice of such change has been given at a previous meeting.

Dr. BOYD then proposed that Dr. Rhys Williams be appointed to the office of secretary.

Dr. DEAS seconded the motion.

Dr. CLOUSTON proposed that Dr. Christie be re-elected to the office, stating that Dr. Christie had performed his duties well, and that his services required some recognition.

Dr. JEPSON seconded the resolution.

A member complained that he had not received a notice of the last quarterly meeting, but

Dr. SIBBALD explained the last quarterly meeting was a Scotch meeting, and that Dr. Christie was therefore in no way responsible for the sending out of the notices.

Dr. LALOR asked whether the remarks of Dr. Clouston were to be taken as a vote of censure upon Dr. Christie?

Mr. MOULD said that he certainly did not think it was a vote of censure, but asked whether any formal letter had been received from Dr. Christie in explanation of his absence.

The PRESIDENT said that no formal letter had been received from Dr. Christie, and after speaking to the onerousness of the duties of secretary—a post which he had himself for a long time filled—said that the question before the meeting was whether Dr. Williams be elected or Dr. Christie re-elected to the office of General Honorary Secretary. He then directed that the ballot should go round, and stated that although in an election for president the rules required that two-thirds of the members present should vote for the president, yet in the case of secretary a simple majority carried the election.

The PRESIDENT then declared the result of the ballot, and the numbers were—

Dr. Rhys Williams	...	...	...	...	13
Dr. Christie	...	...	...	...	12

Dr. CLOUSTON, remarking on the very small majority, asked that scrutineers be appointed to examine the ballot.

Dr. Strange and Mr. Ley were then nominated scrutineers, and, after an examination of the votes, declared the numbers to be as stated by the President.

Dr. Rhys Williams was then declared to be duly elected General Honorary Secretary.

Dr. BATTY TUKE asked that it might be an instruction to the Secretary to make a careful revision of the list of members, and to take off the names of all who had not paid their subscriptions. He regretted very much that there were some gentlemen whose names were on the list who had not paid their subscription for six years, and some, he was sorry to say, Scotch members, who he believed never would pay.

ELECTION OF SECRETARY FOR IRELAND.

Dr. MAUDSLEY proposed that Dr. Stewart be re-appointed Honorary Secretary for Ireland.

Dr. PAUL seconded the resolution, which was carried unanimously.

ELECTION OF SECRETARY FOR SCOTLAND.

Mr. MOULD proposed that Dr. Frederick Skae be re-elected Honorary Secretary for Scotland.

Dr. CLOUSTON seconded the resolution, which was carried unanimously.

ELECTION OF TREASURER.

Dr. RAYNER proposed that Dr. Paul, to whose hands the funds of the association had so long and so beneficially been entrusted, be re-elected Treasurer.

Dr. CLOUSTON seconded, and

The PRESIDENT observed that, as there was a feeling of general approval, voting was unnecessary, and that the resolution might be carried by acclamation.

The resolution was carried by acclamation, and

Dr. PAUL thanked the members for their continued confidence in him.

ELECTION OF EDITORS OF THE "JOURNAL."

Dr. BATTY TUKE proposed that Dr. Maudsley and Dr. Clouston be re-elected Editors of the "Journal," and said he was sure that there could be no dissent from his opinion that these gentlemen had performed the duties to the entire satisfaction of the association.

Dr. SHEPPARD seconded the resolution.

Dr. BOYD said that he felt that the association had done little or nothing to advance the specialty, and he thought that the "Journal" should be made more the medium of advance than it had been hitherto. No encouragement was given by the Editors to superintendents of asylums to publish the facts which came before them in the "Journal." Superintendents generally had not time to write papers, but they might send the facts of their observations and experience to the Editors, who should collect them and put them into form, to be published in the "Journal" for the use of the members of the Association. He desired to speak in terms of high praise of the present Editors, but he desired to draw attention to the fact that one asylum had started an independent volume of reports. He respectfully proposed that an editor and a sub-editor under him, unconnected with the association, should be appointed and paid out of the funds of the Association, and that it be the duty of the editor or the sub-editor to collect the scientific materials from the reports of medical superintendents.

The PRESIDENT said that he must rule that the proposition could only be received as a suggestion—a good suggestion probably—to the Editors, who had power to appoint assistants, should they require them. To receive the proposition in any other way would involve an alteration in the laws, of which notice must be given a year before. But Dr. Boyd might give notice that he would, next year, bring forward a motion proposing a change in the conduct of the "Journal."

Dr. BOYD then said that he would propose that the President be the Editor, and that he should appoint a sub-editor.

Dr. SIBBALD said that it appeared to him that in proposing that the President should be editor, Dr. Boyd had proposed something which was contrary to the laws of the Association, and he read from the rules that notice of motion involving an alteration of the laws must be given a year previously.

Dr. BOYD said that he believed he was quite within the laws. It had happened before that the President had been Editor, as in the case of Dr. Maudsley.

Mr. MOULD thought that in that instance the circumstances were altogether different. Dr. Maudsley was Editor at the time he was called to the presidential chair, and it was not required for him then to retire from the editorship; in the present instance he doubted the power of the Association to vest the editorship in the President.

The PRESIDENT said that he was of opinion that there was no power to do so, but even had there been he should have felt himself unable to accept the office.

Dr. DEAS then proposed that the matter should stand where it was, and

Mr. MOULD stated that he thought that it would be extremely undesirable to make any change in the present editorial staff; and as no other names had been proposed, he thought that the motion to re-elect Dr. Maudsley and Dr. Clouston should be carried by acclamation, and the motion was carried accordingly.

ELECTION OF AUDITORS.

The PRESIDENT said that it had always been the rule for the President to nominate the Auditors; it was then for the meeting to elect or reject his choice. On the present occasion there was one vacancy; Dr. Arlidge retired by rotation; and he would nominate Dr. Rayner as his successor.

Dr. MAUDSLEY then proposed, and Dr. BLANDFORD seconded, that Dr. Rayner be appointed Auditor to fill the vacancy caused by the retirement of Dr. Arlidge, which was carried unanimously.

The PRESIDENT said that three gentlemen had to be chosen to serve as members of council in the place of Dr. Alonzo Stocker, Dr. Palmer, and Dr. Wm. Wood, who retired by rotation, and it was for the meeting to make the selection.

Dr. MAUDSLEY proposed Dr. Lalor, of Dublin; Dr. Donald Campbell, of Brentwood; Dr. J. M. Monro, of London, as members of the Council.

Dr. J. M. LINDSAY seconded the resolution.

Dr. BATTY TUKE then called attention to the fact that there was another vacancy on the Council, that the name of Dr. Clouston stood in the list as a member of the Council, but that as Editor of the Journal he was *ex-officio* member of the Council. Dr. Batty Tuke said further that as there was only one Scotch member of the Association on the Council, he should propose that Dr. Howden be elected to take the place of Dr. Clouston, who was already *ex-officio* a member of Council.

Dr. MAUDSLEY seconded, and the President submitted the names of Dr. Lalor, Dr. Campbell, Dr. Monro, and Dr. Howden, who had been proposed and seconded, as members of the Council.

Carried unanimously.

The PRESIDENT then called for the Treasurer's report, which Dr. Paul brought up duly audited, and he congratulated the Association on the balance, £174 8s. 6d., which he had in hand, and which was the largest balance that had ever been shown in any balance-sheet of the Association.

(For Treasurer's Balance-Sheet see next page.)

On the motion from the Chair, the report was unanimously adopted, and ordered to be printed for circulation.

The PRESIDENT then said that it was customary to submit the names of the gentlemen to be proposed as honorary members from the chair, and on this occasion he had to propose the names of Dr. G. Burrows, President of the Royal College of Physicians; Wm. Norris Nicholson, Esq., Lord Chancellor's Visitor of Lunatics; Dr. H. A. Pitman, Registrar of the Royal College of Physicians; and Professor C. Westphal, of Berlin. He thought that the election of Dr. Burrows and Dr. Pitman was but a graceful acknowledgment on the part of the Association of the kindness of the President and Fellows of the Royal College of Physicians in allowing the meetings of the Association to take place in their College. Mr. Nicholson, he thought, would be the more welcome to their ranks as he had already unofficially expressed his desire to be a member of the Association; and Professor Westphal was already so well known that any comment upon his merits was unnecessary.

They were then elected by the unanimous vote of the members present.

The following new members were then proposed and duly elected:—M. D. Macleod, M.B., Assistant-Medical Superintendent, Cumberland and Westmoreland Asylum; George H. Savage, M.D. Lond., Assistant Physician, Bethlem Royal Hospital; W. M. Harmer, M.R.C.P. Ed., North Grove House, Hawkhurst, Kent; Wilson Eager, M.R.C.S., Assistant-Medical Officer, Prestwich Asylum, near Manchester; Francis J. Wright, M.B., Assistant-Medical Officer, Prestwich Asylum, near Manchester; Charles H. Gibson, M.R.C.S., Assistant-Medical Officer, Warwick County Asylum, Warwick; H. Hayes Newington, M.R.C.S., Assistant-Physician, Royal Edinburgh Asylum, Edinburgh; George Ronald, M.D., Assistant-Medical Officer, Royal Asylum, Montrose; James Maclaren, L.R.C.S.E., Assistant-Physician, Royal Edinburgh Asylum, Edinburgh; J. A. Philip, M.B., Assistant-Medical Officer, Gloucester County Asylum, Gloucester; John E. M. Finch, M.B., Medical-Superintendent, Borough Asylum, Leicester; George H. McKenzie, M.B., Assistant-Medical Officer, Fife and Kinross Asylum, Cupar; George H. Pedler, M.R.C.S., 6, Trevor Terrace, Rutland Gate, London; T. Fitzpatrick, M.D., Lower Bagot Street, Dublin; W. Waugh Leeper, M.D., Loughall, Ireland; R. McDonnell, M.D., 11, Lower Pembroke Street, Dublin; G. E. Carre, M.B., Letterkenny, Ireland; T. Vincent De Denne, M.R.C.S., Assistant-Medical Officer, Rainhill Asylum, Liverpool; W. Dewsnap, M.R.C.S., 1, Theresa Terrace, Hammersmith, London; S. O. Bishop, M.R.C.S., Fisherton House, Salisbury; G. S. Elliot, M.R.C.S., Metropolitan Asylum, Caterham, London; Oscar T. Woods, M.B., Assistant-Medical Officer, County Asylum, Hatton, Warwick; Frederick H. Ward, M.R.C.S., Assistant-Medical Officer, Surrey County Asylum, Tooting; W. Yeats, M.D., Assistant-Medical Officer, Asylum, Coton Hill, Stafford; John W. Ogle, M.D., 30, Cavendish Square, London; Thomas Anderson, M.B., Southern Counties Asylum, Dumfries.

The PRESIDENT then called upon Dr. Boyd to propose the resolutions of which he had given notice.

Dr. BOYD said of the last quarterly meeting the report was very partial, and certain portions of the discussion have been ignored altogether, particularly portions of Dr. Ogle's remarks. He knew that it was impossible for the secretary to perform the double duty of secretary and reporter, and he therefore proposed "that a re-

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Treasurer's Annual Balance Sheet, July, 1873.

RECEIPTS.	£ s. d.	EXPENDITURE.	£ s. d.
To Balance Cash in Hand	138 8 2	By Annual Meeting	15 6 0
To Subscriptions received	164 17 0	By Editorial Expenses	6 6 0
By Secretary for Ireland	33 12 0	Printing, publishing, engraving, and advertising Journal	241 8 5
By Secretary for Scotland	38 17 0	Sundries—Advertisements	0 19 0
By Sale of Journals, Messrs. Churchill	86 6 0	By Printing expenses of Quarterly Meetings	3 16 6
		By Treasurer	5 5 0
		By Secretary for Ireland	1 8 0
		By Secretary for Scotland	7 17 9
		By General Secretary	5 5 0
		By Balance in Treasurer's hands	174 8 6
	£162 0 2		£162 0 2

Examined and found correct,

HENRY RAYNER.

ROYAL COLLEGE OF PHYSICIANS, 6th August, 1873.

porter be engaged to attend the quarterly meetings of this Association to report the proceedings."

Dr. MURRAY LINDSAY said that he believed it would be to the interest of the Association to have all its proceedings reported. He thought that if the meetings were worth holding, the proceedings of the meeting were worth recording, and he, therefore, had great pleasure in seconding the resolution.

Dr. MAUDSLEY stated that Dr. Christie had engaged a reporter on the last occasion, but that the work had been so badly done that it was useless; but that in regard to the report, Dr. Christie had applied to Dr. Ogle himself, and got from him direct the report of what he said.

The PRESIDENT said that in the report of the meeting at Glasgow, Dr. Gairdner was made to say nonsense, whereas he had made a very able speech, and certainly did not talk nonsense. He approved of the resolution, but did not say that he would vote for it.

The resolution was then put to the meeting, and was carried unanimously.

The PRESIDENT then called upon Dr. Boyd for his second proposition.

Dr. BOYD said that he had given notice of the resolution in the following terms:—
 "That with a view to carry out more fully the objects of this Association, a limited number of subjects connected with the care and treatment of the insane be proposed at each annual meeting, for elucidation in their annual report, by those superintendents who are interested, and that a summary or analysis of the information thus obtained be published by the authority of the Association in the 'Journal of Mental Science.'" He thought that such a subject as that involving the question of the proportion that single rooms should bear to associated rooms was a question which might usefully be proposed to superintendents, and the results of their experience recorded in the "Journal" would be of value. Again, he thought that the question of the proportion which epileptics bore to other patients in the asylum was one that might very usefully be considered, and he could see no more important question than that of the various phenomena of epilepsy as seen in asylums and its treatment generally, and he thought that subjects like these and similar ones might very properly be suggested as subjects to be discussed. Also the results of experience on the present popular subject in the weekly journals—the relative value of feeding through the nose or mouth

Dr. BLANDFORD seconded the resolution.

Dr. LALOR said that it was of the greatest importance that scientific records of insanity should be kept; but he doubted if such records should be distributed in the ordinary asylum reports. He felt the great importance of some such measure as proposed by Dr. Boyd, owing to the want of some means of making the facts in the practice of insanity known to the profession at large. But he also observed that the best asylum reports had done very little to advance the science practically, and he thought that it was because they were not accessible. He thought that the reports of asylums proper were written for the information of the magistrates or visitors as to the cost of the asylum, &c., and that these were details which do not refer to the scientific observations of the resident superintendent, and that as the reports were printed out of the county rates some magistrates would not allow the county to be put to the charge of printing the scientific work. Many reports already contained much good scientific work, and if the profession knew what was in some of the reports, they would see that much good was being done, and how the insane are practically dealt with; but then again where were they to get the reports? It had long occurred to him that the mixing up of scientific matter with the details of asylums, and distributing these reports as they are now distributed, was sending so much good work broadcast and unwisely. The profession do not know where such reports are to be found. He did not think that Dr. Boyd's resolution was competent to do what was wanted; it was too limited. Again, though some reports of asylums contained a mass of very valuable information, it was information from which he did not think a selection could be made. If, for instance, he took Dr. Boyd's own reports, he would not know what to select and what to omit. He wished that the principle of Dr. Boyd's resolution could be carried out, and that the scientific records should be so published that they might be accessible to the profession at large.

Dr. BLANDFORD said that he had no idea of the dimensions of Dr. Boyd's resolution when he seconded it. As regards scientific records, he thought that when they were contained in the annual reports of asylums they were practically lost. He had lately tried to get them, but did not know where any complete set was to be found. He went to the libraries, but had found no complete set in any library. If all the

reports could be got together, he had on doubt that they would be of immense value.

Dr. MAUDSLEY said that he believed that all the asylum reports were most carefully kept in the library of the College of Surgeons. He had all respect for Dr. Boyd's proposition, but he did not know how it could be carried out, for, as Editor, he would not know what to select and what to reject. He would suggest that if the resolution should pass, a committee be appointed to consider how it could be carried out; but he thought, in regard to reports of asylums generally, that scientific matters were best left out of them. These reports were intended for magistrates, whom the scientific matter did not in any way concern; but if superintendents of asylums would send notes of facts and such matters as were of scientific interest to the Editors of the "Journal," the Editors would be only too glad to publish them. And he stated that when he was associated with Dr. Lockhart Robertson, as Editor, they had made a special department in the "Journal" for such notes, but that they were obliged to give it up, as it was so little responded to.

Dr. LANGDON DOWN said that he thought that the publication of scientific records in annual reports of asylums was an incongruity and highly inconvenient, for it was impossible that they could gain more than very partial attention. Such reports could not be kept, for if they were they would very soon fill the library shelves, and what was more, they would be useless unless an index of their contents was kept. He was of opinion that if superintendents would keep the scientific matters from their reports, and publish them separately, they would render much greater service.

Dr. STEWART said that he thought that the error of the existing system of mixing up the scientific observations with the general details of the asylum in the annual reports was singularly shown in the fact that only last year Dr. Wilkins, of California, in his able report to the Governor of California, quotes opinions given 20 years ago to the Commissioners in answer to questions addressed to superintendents by them, and Dr. Wilkins had quoted these opinions in default of more recent information, such not being accessible. He thought that the Association might ask for some better system than the present.

Dr. YELLOWLEES thought that this was a matter for superintendents, for it involved that they should become writers. He differed from Dr. Maudsley as to the distribution of the reports; they were written for the magistrates, were read by them and by the people in the neighbourhood where the Asylum was; that it was a means of instruction to these people; and he thought it good, for it gave these people an insight and interest in the Asylum. But he thought that much might be done to improve the reports by separation of the materials. He had read in a report some remarks upon the action of Hydrate of Chloral, and in the next sentence remarks upon the cost of the Asylum.

A MEMBER was of opinion that in the district of the Asylum many were interested in the inmates of the Asylum, particularly the medical practitioners of the district, for many of the inmates had been their patients before admission, and they had no opportunity of hearing any more of them, except through these reports.

Mr. LEY could endorse all that Dr. Yellowlees had said; he saw a difficulty in carrying out a resolution such as that of Dr. Boyd, but he thought that the object would be attained if medical superintendents would accept it as the wish of the Association that permanent records of scientific observation should be kept and put in the "Journal of Mental Science."

Dr. DEAS said that it was undesirable to mix up the two classes of subjects in reports, especially as the printing of them was at the option of the Committee of Visitors, and it was never intended that medical opinions on insanity should be printed and paid for out of the county rates; many magistrates had already refused to print them. If the doctors would send the scientific part of their reports to the Editors of the "Journal," the desired end would be gained.

Dr. CLOUSTON said that he spoke with an experience of ten years in a County Asylum, and he had felt the difficulty of getting the facts properly arranged, but he thought that if the medical superintendents would collect the important facts of the year, they could be arranged and published in the "Journal;" that whatever the superintendents wished to publish in their reports, they should do, but that they should themselves select which portions should be eliminated, and which published in the "Journal." He thought that medical men in the same county as the Asylum who had sent patients there had a right to copies of its reports.

Dr. MAUDSLEY then proposed, and Dr. DEAS seconded as an amendment—
"That a committee be appointed to consider the best means of carrying out the

resolution of Dr. Boyd," and Dr. MAUDSLEY asked Dr. Boyd if such a course would meet his view?

But Dr. BOYD said that he did not entirely adopt such a view.

Dr. BATTY TUKE then proposed "The previous question." He was sure that the feelings of the Association were now generally known, and that the Editors would adopt the suggestion.

The PRESIDENT then put the amendment to the vote, and it was carried by a large majority.

The PRESIDENT then called upon Dr. Chapman to move the resolution, of which he had given notice.

Dr. CHAPMAN then said—My object in bringing before you the motion of which I have given notice, is to obtain from this Association an expression of opinion which many of its individual members have already given, as the annual reports of our County Asylums from year to year show, but which given as an opinion by an Association like this, should have more weight than the individual utterances can have. Criminal lunatics are sent to County Asylums directly from gaol, and on the expiry of their sentences from the Criminal Asylum at Broadmoor, and from both these sources we receive some individuals of thoroughly criminal character, individuals whose criminality is a more marked and important feature than their insanity; I need not enlarge on the objections to such patients being mixed with the proper inmates of our County Asylums. Before going further, I would point out that at present two very distinct classes of cases are confounded together under the term Criminal Lunatics. Firstly—those persons who have become insane, and from want of being placed under proper care, have committed some offence which has made them amenable to the law. It appears to me that a large majority of the insane might have got into the same position, had they not been properly cared for, and whilst the want of this care may have aggravated the malady from which they suffer, may have rendered it chronic, or have developed some troublesome symptoms, that differentiate them somewhat as a class from the ordinary patient in our County Asylums, I can see no reason why the patient belonging to this class should not be sent to the County Asylums, rather than to a Criminal Lunatic Asylum. The other class of Criminal Lunatics are those to which I think the term should be confined, and if they were called Lunatic Criminals, instead of Criminal Lunatics, the name would be a sufficient definition; they are those in whom the lunacy is the accident, the criminal nature the essence. There is a section of cases, namely, the homicidal, which, as regards the place of detention, ought, perhaps, to be separated from both these classes; both because other lunatics, whether criminals or not, may fairly object to be associated with them, and also because there is often a considerable amount of doubt as to the reality of the insanity in such cases. That public opinion sides with me in recommending the first class of case to be sent to the County Asylums is clear, I think, from the fact that there is a strong and increasing tendency in such cases to hand the patient over to the relieving-officer, to be sent to the Asylum in the ordinary way, and to pay no further attention to the offence, even in cases so serious as would have caused the patient to be sent to a Criminal Asylum, did the matter take the regular course. In all cases where it is clear that the patient committed the offence in consequence of insanity, I contend that this should be the regular and legal course instead of the exceptional one. With regard to the association of the Lunatic Criminal with ordinary patients in County Asylums, nothing I could say would more clearly or more authoritatively show its inadmissibility than the following remarks about them from the last report of the Superintendent of the Criminal Asylum at Broadmoor. You will see that he draws the same distinction between the two classes of cases under his care that I have done:—"There remained in the Asylum, on the 31st December, 407 men and 101 women, who, although all comprised under the term 'criminal lunatics,' are nevertheless composed of two classes differing in many very important particulars one from the other. One class consists of those who, having been charged with the commission of some criminal act, have either, whilst awaiting trial, or when arraigned, or when tried, been found to be insane, and have in consequence been ordered to be detained during her Majesty's pleasure. The other class consists of those who have been removed on the ground of insanity to Broadmoor from convict prisons whilst undergoing various terms of penal servitude. The former class consist mainly of persons whose offences have been isolated criminal acts, the direct results of their insane state, and who, up to the time of the outbreak of their insanity, have, in many cases, led honest and industrious lives."

The other class, consisting of those removed from convict prisons, whilst undergoing penal servitude, differs widely from the class thus described. Instead of being composed of persons who have committed criminal acts in the frenzy of mania, it consists chiefly of those whose offences against law and order are part of their everyday life. It is not intended at the present time to enter upon the discussion of the question how far criminal habits may be the result of natural defect of mind and inaptitude to earn an honest living, but simply to consider the characteristics of this class of patients at the time when they become inmates of this Asylum, and the bearing which those characteristics exercise upon their treatment. Persons becoming insane whilst undergoing sentences in convict prisons, or in county or borough gaols, are all equally included in the term "criminal lunatic," but usually those only from convict prisons come to Broadmoor; those from county or borough gaols going to the County Asylums. The average daily population of the convict prisons in 1871 was 8,218 men, and 1,217 women, and it is from this population that the class of inmates now under consideration is drawn. They are, therefore, chiefly old offenders. The Medical Officer of the Millbank Prison states, in his report for the year 1869, that of 28 prisoners certified during the year to be insane, 24 were known to have been previously convicted, and that in one case 14 previous convictions had been recorded, in another 13, and in another 10. While on the one hand, therefore, the degree of mental defect previously existing would not appear to have been sufficient to warrant the signing of a certificate of insanity by the surgeons of the prisons through which these persons had formerly passed; so, on the other hand, it had not found any impediment to the full development of a life of crime, or to the acquirement of those habits of lawless violence, of antagonism to order, of contempt for honest work, and of the use of language of the foulest description, which characterize this class of inmates, and which cause their management, when they are aggregated in considerable numbers, to present special difficulties not encountered in dealing with other insane persons. At the close of the year, the 507 patients then in the Asylum were composed in the following proportions of the two classes which have been described; 268 men and 75 women belonged to the class found insane, either before or at the time of trial, and 138 men and 26 women had been removed from convict prisons. Although it is not intended to raise the slightest doubt that these 138 men and 26 women are, by reason of their mental condition, quite unfit subjects for penal discipline, or that their proper place is in a lunatic asylum, it may still be open to question whether it is either just or expedient to permit those other inmates whose lives have not previously exposed them to such evil influences to be contaminated by the degraded habits and conversation of the convict class, or to cause those belonging to one class to suffer from restrictions which are only necessary for the other class; and yet this is what at present happens, in consequence of the intermingling of the two classes in the proportion just stated. These remarks apply with greater force to the male division than to the female, in consequence of the proportion of convicts being greater amongst the men than amongst the women, and also because, as the female division is not fully occupied, a better classification of the existing inmates is possible. The male division is, however, now full, and the present seems therefore an opportune time for submitting the foregoing remarks, with the view, that in any plan which may be adopted for providing further accommodation, the desirability of affording effectual separation of the two classes may be considered. In our County Asylums the constant endeavour is to reduce all terrorism, coercion and punishment (restraint, seclusion, the shower bath, &c.), as upholders of order and discipline, to a vanishing point, and the more nearly this can be accomplished the more satisfactory is the state of that Asylum and the greater are the benefits it confers on its patients. The addition of a few lunatic convicts to their population throws difficulties in the way of this result out of all proportion to their number. The number of convict criminals at present in County Asylums is difficult to find. The number of so called criminal lunatics is, by the last report of the Commissioners in Lunacy, 125, and of this number probably half belong to the criminal class. There is also a further number whose sentences have expired. The number of convicts sent from Broadmoor on the expiry of their sentences is about 20 annually, and the probable number now in County Asylums, making allowance for deaths, discharges, and escapes, is probably about 100. Among these transfers from Broadmoor some of the most thoroughly engrained criminals occur. If, therefore, you agree with the resolution I am about to move, we are asking for accommodation for patients in a Criminal

Asylum. At the same time we are suggesting that a certain number of patients at present so accommodated might be safely and proper sent to us. The extent of the evil of which I complain may be estimated from the fact that there thus appear to be a larger number of convict lunatics in County Asylums than in the Criminal Asylum at Broadmoor. I may remark that the Quarter Sessions of Herefordshire have petitioned against criminal lunatics being sent to County Asylums. I would leave it very much to the Committee that I request you to appoint to determine how they had best bring your opinion before the proper authorities; but I would suggest that it would be very desirable that they should, if possible, secure the co-operation of the Commissioners in Lunacy. I have been asked what I proposed with respect to criminals and criminal-minded persons who found their way into Asylums as ordinary patients. No doubt such cases are not uncommon; I have not, however, met with any trouble from such patients, and what is more important, I think that there would be great difficulty in distinguishing them and dealing with them separately. I think you might, however, remit the question to the Committee, though I should much deprecate any suggestions or recommendations being made by them that were not of a thoroughly practical and practicable character. I beg to move, "That this Association take steps to prevent criminal lunatics being sent to County Asylums"

Dr. LINDSAY seconded the resolution, and

The PRESIDENT suggested that a Committee should be appointed to consider the best means for carrying out the resolution. The suggestion was carried *nem. con.*, and Dr. Chapman was asked to nominate the Committee.

After some discussion the President, Drs. Boyd, Rogers, Rayner, Clouston and Chapman were appointed a Committee to consider the best means of carrying out the resolution.

Dr. BATTY TUKE then gave notice of the following motion:—

"That this Association shall, at intervals of not less than three years, grant a sum of £50 as a prize for an essay on a subject connected with Insanity, the subject to be fixed by the Council, who shall also appoint a Committee to adjudge the prize (two members not being connected with the speciality), Assistant Medical Officers a'one being competent to compete."

It being 1 o'clock, the meeting adjourned until 2 p.m.

The Association resumed its sitting at 2 p.m. Dr. Harrington Tuke, President, in the Chair, and

Dr. ROGERS being then present, thanked the Association for the honour conferred upon him in electing him President for next year.

The PRESIDENT then delivered his address (see Part I., Original Articles), and invited discussion on the following subjects:—

I.—The Alleged Increase of Insanity in England.

II.—Can the present system of treating the Insane be altered with advantage?

Dr. LUSH, M.P. for Salisbury, then said that the thanks of the Association were due to the President for his able and instructive address, and he therefore begged to be allowed to move a vote of thanks. He had no doubt that there was a wide field for discussion on the subjects which the President had proposed. The subject of the increase in lunacy had been prominently brought under his notice, and after examining the tables which the President had placed upon the wall, there appeared good grounds for the allegation. But he thought that nothing could be more important than the treatment in insanity. The treatment with restraint had long been abolished, in deference to enlightenment and better knowledge, and medicinal treatment now wanted to be better tried. Therapeutics had, in the last few years, made great progress, and he thought that the treatment of insanity should benefit by this progress. He was glad to hear from the President that alienation had a definition distinct and definite from lunacy, a term to which he had always objected. He said that he spoke early in order that he might be permitted to move a vote of thanks.

Dr. BUCKNILL begged to second the vote of thanks to the President for his valuable and instructive address, and he thought that the question of medicinal treatment should form an important part of the discussion.

The PRESIDENT said that he would like to hear the views of the writers of monographs on special subjects as to the values of Chloral, Digitalis, Henbane, and other drugs, and particularly he would like to hear Dr. Clouston's views.

Dr. DAVEY thanked the President for the allusion he had made to him, and to his paper. He had read a paper in this Association on the progressive increase of

insanity in Middlesex, and he believed there was yet reason to fear a still greater increase. He thought that his remarks, on the occasion referred to, had given rise to the investigation of the subject generally, but he did not comprehend the process of reasoning by which some had come to the conclusion that there was no increase in the number of insane. If we looked at the annual reports of the Commissioners we must come to the conclusion that he had before arrived at, that the increase now is as it then was, very great, but not so much in the upper as in the lower classes. Dr. Davey referred to an article which appeared three years ago in the "British Medical Journal," entitled "A Social Blot." He characterised that article as a shameful piece of writing. It was intended to show that licensed houses were establishments contrived purely for gain. When looking at and comparing the figures on the President's tables, they suggested to him that some reason remained to be shown why the recoveries were greater in public asylums than in licensed houses. He was proposing to himself to put on record his experience through 20 years at Northwoods. Such experience, he thought, would furnish a good and satisfactory reply to the slanderous assertions and abusive epithets contained in the article named.

Dr. DUNCAN, of Dublin, remarked that the recoveries were calculated on the admissions, and from this source his was a fallacy. We get patients in private asylums which have been for a long time under treatment at home or with their friends, such cases being, as a rule, withheld from asylums until they are more or less hopelessly insane, whilst in public asylums most of the cases sent for admission are recent cases, and this is most important in calculating the relative recoveries in the two classes of asylums. But the size of the establishment has also to be considered; the mortality is considerably less in small asylums than in large, probably from the fact that the feeding is better in small establishments than in large, and this fact is of importance. In Ireland he thought that the mortality was much less than in England, and in Ireland the establishments were of necessity small; but in calculating from them, each should be considered by itself, for it is a great mistake to group 10 or a dozen such asylums together.

Dr. PARSEY, of Warwick, said that he had gone more into the subject of treatment than of increase; but he was inclined to believe in the great increase, and he should like to see the subject gone fully into. Until recent times people regarded dreams as marvellous, and were influenced by them; but with our advanced knowledge we had come to regard dreams as physical phenomena altogether, though in the country supernatural causes are still believed in regard to dreams, and also in regard to insanity. But formerly numerous families believing in the supernatural cause of insanity of some of their members, did not allow them to be placed in asylums or to come under treatment. This is a fact, and it is an important fact, in considering the increase of insanity. If we could on this point enquire into the history of every family, and we should find that there were as many insane formerly as there are now, though they were not brought within the register. Formerly the great mass of the middle class was not recognised, now a large section of the lower middle class are found in the county asylums. There is still no provision for them, and all are received into public asylums to swell the numbers. The influence of emigration also had to be considered. He did not think that emigration increased insanity, for it is the restless spirits that emigrate, and in our colonies there are extraordinarily large numbers of lunatics. He did not see how civilization tended to increase insanity. If among the higher and middle classes there was an increase of such forms of disease as general paralysis then there would be some ground for the opinion; but such a form of disease was not increasing, particularly among the commercial portion of the community.

Dr. CLOSTON said—We have two things to discuss. 1st, Is or is not insanity capable of being benefited by therapeutical treatment? 2nd, Is it increasing? In regard to the relative efficacy of public and private establishments for the treatment of insanity we have but few facts to judge from, and so we may leave this point. But we may ask the question—is insanity remediable by drugs? Is it a so called functional disturbance? Does it consist in many cases of an evanescent condition of brain cells? Do we find any allied conditions in other nervous diseases? I think we do. The physicians who treat general diseases tell us that they find functional disturbances such as neuralgia and cephalalgia which they can cure with drugs; also motor disturbances, as twitchings and chorea, and the great class embraced under the head of anæsthesia. The best men in the profession tell us that they can cure these diseases with drugs, and if we apply the same reasoning to insanity as they do to

other nervous diseases, we must conclude that it is possible for us to cure it. But it is not only by *à priori* reasoning that we come to the conclusion that we can cure insanity with drugs. Take insomnia, which is the most prominent accompaniment of insanity. Is it not a condition which we can overcome by drugs? The next consideration is what causes have these neuroses? Have they their origin in evil habits, in altered function, or in bodily diseases of other organs than the brain? If we can find such a cause, surely we have some chance of being able to treat and cure insanity. Take, for instance, that form of it dependent on uterine disorder. No one will venture to deny that we can cure this by therapeutical means. Then why not other forms of insanity likewise? If the question is, "Have drugs done any good?" I think that the experience of the largest number is that drugs have done much good. You were good enough, sir, to refer to some experiments of mine in drugs of the class to which bromide of potassium belongs, and, undoubtedly, in epilepsy it is of the greatest value, and I would ask is not this the experience of others? I would ask the question of Dr. Duckworth Williams,—does not bromide of potassium control the epilepsy and so control the insanity? It certainly controls both the motor and the sensory function. Chloral, we all know, will produce sleep, and we know that sleeplessness is a part of insanity. I believe that sleep so produced recuperates the system, and does good in the same way, though not to the same extent as does natural sleep. I am sure that other drugs do good in treatment. Mebane, Opium, and Cannabis Indica—all I believe do good in some cases. It is neither very logical nor very honest to make it appear, as some do, that those of us who believe in the medical treatment of insanity undervalue the fresh air, the employment, the good food, the hygienic conditions on which they entirely rely. We believe strongly in both, and not less in the one that we value the other also. There is little strength in the arguments of those who say that we cannot positively tell but that the cases would have recovered without drugs, and who point to those in whom it has failed. A long array of cases and facts, reported by the most trustworthy men, all show that cures and ameliorations result from drug treatment. In those circumstances the sceptics take on themselves a heavy responsibility. I cannot agree that insanity is increasing at all. It must of course increase with the increase of the population, and it is in the tendency of modern life to exclude from society all individuals not conforming to the common type; but the greatest increase is not among the artizan class, who, with the increasing wealth of the country, participate, by improved wages, in the comforts and luxuries of modern civilization, but it is in counties like Wiltshire and Dorsetshire, where the agricultural labourer is but poorly paid, and the wages barely enough for existence, that the greatest increase is seen. It is a cardinal fact, in discussing this question, that not only in those counties, but everywhere where there is great poverty, we have a greater number included in the returns of insanity.

Dr. SANKEY thought that some explanation of the discrepancies in the calculations was required. One explanation was to be found in the fact that the modern and humane mode of treatment rescued a number of the wretched creatures, who used to haunt our villages, from death. He had come to the conclusion that there was no real increase.

Dr. DEAS remarked that Dr. Sankey had said that numbers now lived and remained under care and treatment who formerly died. He did not see how the argument applied, though the fact was a striking one; there were two or three things to his mind not clear; one was how were the ratios calculated? Another was, how the increase of the population was calculated, for in these calculations we had several things to take into account. Both emigration and immigration must play some part in the actual numbers to calculate from; not so much, perhaps, migration in and out of the country, but the immigration and emigration from one part of the country to another. In regard to the difference between public and private asylums, there was this great consideration:—1st, in private asylums patients might come under treatment at once, but more often they were not admitted until late in the history of their insanity; whereas among pauper patients they came under treatment at once. And again in private many cases never came on the register at all, for they were treated at home. In the pauper classes impoverished blood, bad food, bad nourishment, and excessive indulgence in alcoholic drinks were powerful causes of insanity, whereas in the upper classes the causes which were most prominently shown were those of degeneracy. In his opinion and experience neurotic treatment of insanity was a mistake. It appeared to him that such treatment was directed entirely to

one class of symptoms; that in which excitement, noise, and disturbance were the prominent features; or those which obtrude themselves on the observer; and he thought this mode of treating symptoms was a fallacy. As to his personal experience he had refrained from using neurotic treatment, and his results of recoveries, 40 per cent., though not better, were at least as good as those of any one else. The only drug he used was chloral, which he gave to correct the bodily symptom of sleeplessness.

Dr. ARLIDGE said that his attention had been drawn to the great gathering together of lunatics in large asylums. There was some reason for the accumulation, for every parish seeks to get rid of, and send its insane to the county asylums. When he was a boy he used to see a great number at large whom we now see in asylums, and he doubted if we were right in collecting these people together. Undoubtedly the large increase was due in some measure to this fact. We now collect and keep a large number who would otherwise perish, as Dr. Sankey has said. There is really no actual increase requiring asylum treatment. The increase arises from the throwing out of a wider net in order to gather all. Referring to the Commissioners' report it appeared that in Dorsetshire there is a poor ill-fed population, and it is from these and such as these that the large numbers are gathered. The conditions which govern recovery are various, and in estimating them we have to look to the difference of asylums, to the defective information supplied on the admission of the case, and the duration of the insanity, and the various modifying circumstances. Every hospital and asylum must stand on its own basis, and cannot well be compared with its neighbour. Another fact, too, which must weigh in the consideration is that we can get actual numbers as to admissions and deaths, but not as to recoveries. Many go out of the asylum, and are not heard of again; but who is to say that they have recovered?

Dr. THOMPSON said that Dr. Arlidge had remarked that he would not collect the insane, but he would be sorry to put it out to the world that it was the opinion of this association that these poor creatures should not claim our sympathy, and that our Asylums should be closed to them. He was connected with an Asylum in which an annual report of the medical practice was published. He was sorry that the question of drugs was introduced; one said that he used this and another that drug, and one in one dose and another in another. His own belief was that there was much use in drugs, but that they might be given at the wrong time; as for instance, *Cannabis Indica* might be of much use in some stages of General Paralysis, but it was harmful in others. The same might be said for Henbane and other such drugs; suppose some change has occurred in a portion of the brain and you continue to give ergot of rye, the result is that the brain becomes impoverished, and the part supplied by that portion of the brain would go to decay; thus a prejudice would arise against such a drug as ergot of rye. And such scepticism arises more in the medical mind than in the world outside.

Dr. LANGDON DOWN did not agree with Dr. Arlidge. He thought that the individuals should be collected and cared for. There need not be too great association; the treatment might be varied in separate buildings, and special arrangements for special cases and special classes of cases; but that the miserable creatures should be left to perish amid the miseries to which they were formerly subjected was an opinion he was quite sure this society could not endorse.

Dr. YELLOWFEES believed that the increase of insanity was more apparent than real; but he also believed that drinking habits had an enormous influence in the production of insanity. He lived in a country where there had been two strikes recently among the coal miners. On both occasions the admissions into his Asylum fell to one-half among the males, but the numbers rose again after the strike had yielded—this was not so amongst the women. The number of female admissions during the same period was hardly, if at all, altered. He believed that the cause of the decrease amongst the men was because when on strike sobriety was forced upon them. On the subject of drugs he did not agree with Dr. Clouston. He believed that the neurotic treatment was very useful in some cases, when the insanity was recent or functional and sympathetic. As to recovery, he believed that there was no wonderful difference between the doctors, nor between the Asylums. In some Asylums patients were discharged earlier than in others; but he asked what did recovery mean? What was recovery? And how could it be said, for instance, that any certain case had recovered?

Dr. BLANCHE, of Paris, said—Gentlemen, I beg all your indulgence if I try to address you in your language, which, unfortunately, is not very familiar to me;

but I am induced to do so by the belief that the very few words which I intend to say may be of some interest, and, consequently, of some advantage. In a practice of about thirty years, I have a great many times seen marriages taking place between two families, and in each of them there were more or less numerous cases of insanity—it is in my opinion the consequence of what we call in French the *affinité*—and the result of those marriages between families where the insanity prevails seems to me to be one of the causes of the continual increase of the number of the insane. If I don't mistake, if it is indeed so, do you not think, gentlemen, that this side of the question of the hereditary influence may deserve your attention and your care in trying in your practice, as you do certainly when you have had an opportunity, to prevent those marriages? I should be very happy if you would be of opinion that this point of mine is worthy of your attention.

Dr. BUCKNILL said he would speak first as to the increase. One gentleman says that the figures are all wrong, but none of the speakers had pointed out upon what ground they were wrong; and he did not see the gap which should have occurred in consequence of the Act of Parliament of 1811. It has been said that to gather into asylums cases which otherwise would be allowed to run through the country was prejudicial; he would be glad to hear the remarks of the gentlemen as to what should be done with them. Then as to treatment as a whole, he agreed with the treatment as expounded by Dr. Clouston, but the patient required fresh air, exercise, baths, and, in fact, everything included in the regimen and hygienic treatment of a well-ordered asylum. It was not surprising to hear that Dr. Davey had taken up the fact in the tables that a greater number of recovered cases were discharged from public asylums than from private houses, and that he was prepared to show recoveries of 50 per cent. instead of 20 per cent; he believed that the treatment in public asylums was much more considered than in licensed houses. In how many licensed houses were there conveniences for bathing a patient without causing extra trouble? In how many were there baths for the weekly ablutions of the patients? Then, where was there a licensed house with a system of classification? There is a system of classification, it is true, but it is a classification which gives the best room to those who pay the most money. How many licensed houses had separate and padded rooms for violent patients, and how many had efficient night watches? Night watches prevented suicide, and were the means of checking dirty habits, self-abuse, and other bad practices; but he did not believe that these methods of treatment, or that drug-treatment in its integrity, were carried out fully in licensed houses.

Dr. LUSH, M.P., said that Dr. Bucknill, as the Lord Chancellor's Visitor, would not have spoken so strongly except he had had some grounds for it. But he believed that Dr. Bucknill laboured under some degree of misapprehension. The patients in private houses are not so amenable to the various modes of treatment as are the cases in public asylums. In public asylums the Superintendent has absolute authority; in private asylums the Superintendents have not the same power. The friends of the patients were constantly stepping in and objecting to every method of treatment that might be adopted for the patient's good. And he thought Dr. Bucknill's assertions sent broadcast were sweeping and unfair to private asylum proprietors. In his own place, Fisherton House, the cases admitted are mostly such as are incurable, and not sent before they are incurable. Such facts ought to be taken into consideration in making statistics. He saw in workhouses, when he was a medical officer of a Union, a tendency to send all troublesome cases to the County Asylum, and he asked whether the alleged increase of the cases was among those to be considered as purely recent cases, and whether they contain many cases of general paralysis from among the higher classes. Statistics in a society like this ought to be well analysed, and distinction should be drawn between recent cases and old cases.

Dr. SIBBALD said—I think I may venture to suggest one of the answers which may be given to the question put by Dr. Bucknill—why the figures on Dr. Tuke's table cannot be accepted as a true statement of the amount of lunacy in the country. If the source from which these figures are derived is relied on as furnishing such a statement, we are indeed driven to the conclusion that a great increase has taken place in the amount of insanity. But the rate of increase thus represented is so startling, that we are at once rendered doubtful as to its reality. In Dr. Tuke's table the increase from the years 1859 to 1871 amounts to about 20,000, or about 1,500 per annum. And if we refer to the English Commissioners' Reports, we shall find that the increase from the year 1852 to 1859 gives about the same annual

average. The number of lunatics registered in the earlier of these years was only 25,588, and if we suppose that statistics had been gathered from the previous 30 years, we might expect, while making full allowance for the smaller number of the general population of the country, to reach back to a period when insanity may be said scarcely to have existed at all. This conclusion is, however, so extravagant, that we are fully justified in refusing to accept the teaching which a superficial consideration of the figures seems to support. I do not dispute the accuracy of the figures. They have, I believe, been prepared with great care, and without doubt they have an important signification which we should try to discover. Some light may, I think, be thrown on the subject, if, instead of glancing backwards from the present to the past, we look from one district of the country to another. If we compare the statistics of the several counties, we find that the proportion of insanity is much greater in one county than in another. In the statistical tables given in the Report of the Scotch Commissioners, we find, for instance, that the proportion of pauper lunatics to the population in Renfrewshire is one in every thousand of the population, while in Perthshire it is as much as three in every thousand. It cannot be, and is not the case, that any great difference in the amount of insanity in these two counties is really to be found. But their comparative wealth and different social conditions so affect the necessity for official registration of the insane, that insanity appears by the statistics to be three times as prevalent in one county as in the other. In the Appendix to the Report of the Commissioners for Scotland there is a printed document in which I have made a partial attempt to show how relative wealth may affect the statistics of lunatics in different districts; and I believe that it is to influences such as this that we ought chiefly to refer the very remarkable augmentation which Dr. Tuke has exhibited in his table. We have the influence of the recent legislation in encouraging the registration of lunatics; the rapidly increasing wealth of the rural population; the decreasing number of those who can devote unemployed time to the care of insane members of their families; the more complete provision of satisfactory accommodation in asylums; and the broader view now taken by society of what are indications of mental unsoundness. Looking to the powerful influence of forces such as these, I think we must hesitate in admitting that a mere increase in the number of persons registered as lunatics is to be held as proving any actual increase in the real amount of insanity in the country.

Dr. YELLOWLEES said Dr. Bucknill has asked for an explanation of the difference of the results of recoveries in public and private asylums. The principal cause of the difference is in the large number of pauper patients admitted, whilst the number of private patients admitted is very small. An increase of 20,000 among the pauper classes in ten years might be shown. The tables of the Commissioners would bring out this, and the explanation might be sought for in incurable cases sent in from the workhouses, which in private could be treated at home.

Dr. STOCKER said, in addition to the remarks of Dr. Lush, he wished to answer Dr. Bucknill on one or two points. In metropolitan houses the number of patients forming the bulk of the admissions are sent in only whilst room is being made in public asylums, so that as regards these patients the licensed houses become merely houses of convenience for the unions, but they swell the number of admissions. Then, again, the friends of patients insist upon removing them before they are recovered, and, in consequence, they can only be discharged as simply relieved. As regards the supervision in licensed houses generally, the nurses sleep in the dormitories with the patients, but in all the large metropolitan houses there are night watches, and this is an additional safeguard.

The PRESIDENT said it is impossible to answer all the speakers, and my object has been attained in getting the expression of their opinions. The question of therapeutics has been met only by two, and they admit the value of medicine. One gentleman admits that there is nothing more useful in melancholia than Morphia, added to which we now have Chloral. Leaving the question of treatment which should, year by year, be more and more gone into, I insist that the increase is an absolute fact; you must not say bring other tables, and I will show you different results, for you may do this *ad infinitum*. In a table published by the Commissioners, in 1853, they gave the ratio as $3\frac{1}{2}$ per 1,000; in 1861 there was an increase of 1.1; and in 1863 the ratio had risen to 6 per 1,000. A result so startling cannot be passed over upon the plea that the basis of calculation is wrong. There is a cause for this increase; we may call it a wave of insanity, we may not know the cause, but we

must do our best to break it down. The tables on the wall were compiled in the Registrar-General's Office, and took several clerks many days to compile, and I believe are correct. I am sorry for Dr. Bucknill's statement, he is always so fair. If some public asylums give a per centage of 55 cases why do others only give a per centage of 28? There must be some explanation for this. If it be true that we do not do our duty as proprietors and superintendents of private asylums, then let private asylums be shut up and the patients handed over to the gentlemen who are empowered to use unlimited baths and the other appliances we cannot insist upon. Dr. Stocker has pointed out one source of fallacy whereby it may be shown that the public asylum has cured 34 per cent., when the large Metropolitan houses have from the nature of cases sent and removed from them been excluded from showing good figures. Many cases, too, never come under treatment in an asylum at all. Medical men in general practice treat puerperal mania, for instance, and the patients get well—we only get those which they fail to cure; they send to us for a trained nurse, and we may see the patient in consultation or we may not; but the cases never come under official cognizance. Cases from among the poor show a large number of re-admissions, as many as 12 per cent., but in private asylums the per centage is only 8; it indicates at least that in public asylums recoveries are too rashly assumed, added to which the freedom of marriage among the poor adds to the facilities for perpetuating the taint of insanity amongst them by hereditary transmission. In conclusion, I have to thank the meeting for the discussion, and I offer my thanks to Dr. Bucknill for his expression of opinion.

On the motion of Dr. SIBBALD, seconded by Dr. ARLIDGE, a vote of thanks was tendered to the President and Fellows of the College of Physicians for the use of the College.

The proceedings then terminated.

DR. TUKE'S ADDRESS AS PRESIDENT OF THE SECTION OF PSYCHOLOGY

(At the Annual Meeting of the British Medical Association, held in London, August, 1873).

The proper treatment of mental disease must always be considered as involving two distinct divisions. In the one, "moral" management, it is necessary to gain regard and willing obedience, to check wayward impulse, to beat away disturbing fears, to cheer the despairing, to restrain, not by force, but by patience and firmness, the angry and the violent, and to catch the moment in which the swiftly wavering mind may be brought to rest, and its balance permanently retained. The other division embraces the correct employment of hygienic and purely medical remedial agents.

Dr. Conolly was one of the founders of this great Association. Many I now address must well remember his ever kind and courteous manner, his evidently consummate knowledge of his subject, and the fervid eloquence with which he advocated the beneficent system to which his life was devoted. I was myself his pupil, and it is with no irreverence that I venture to dispute an opinion of one so much loved and honoured. But the time is coming when the medical treatment of insanity should assume its proper place; without it, psychology is not a science but an art—we are nurses and not physicians; a wider study of pathology, an increased knowledge of the effect of remedies upon the organism, and a higher standard of education among those specially engaged in treating mental disease, has led to the recognition of the paramount importance of prompt and judicious medical treatment. At the same time, our obligations to the great advocate of non-restraint are none the less; and no physician, however able, can forget those essential principles of gentleness and forbearance in the treatment of the insane which were so earnestly inculcated by Dr. Conolly.

The improvement in the medical treatment of the insane has also a definite history and a recent origin. In 1845, and in subsequent years, Lord Shaftesbury and the Commissioners in Lunacy were instrumental in passing through Parliament several Bills for the benefit of the lunatic poor, especially one providing for their treatment in county asylums, and placing them under the charge of qualified resident physicians. Hence arose a new race of practitioners, carefully trained and selected, and anxious to raise the character and increase the usefulness of their respective

institutions. Accepting entirely the doctrine of "non-restraint," there has been no new remedy or method of treatment that has not received due attention and trial from the medical officers of these asylums. In 1841 the "Journal of Mental Science" was suggested and commenced by Dr. Bucknill. Its pages, and those in other periodicals, and the annual medical reports presented to the Committees of each asylum, attest the zeal and talent of their officers, especially in relation to therapeutics, and a still more satisfactory proof, the report of the Commissioners in Lunacy, demonstrates that a very high and increased rate of cure has been attained.

The treatment of mental disease in private practice has improved in a still greater degree. The Commissioners in Lunacy report that the number of the insane in private asylums has diminished, and although the absolute number of the insane has increased, and must still increase, it is amongst the poorer classes only. The table before you, taken from the last report of the Commissioners, shows that while the ratio of increase in the insane population generally has been from 1.97 per thousand in 1861 to 2.49 in 1871, the increase in the pauper class has been from 3.61 to 5.98 per thousand during the same period.

I think I do not err in ascribing this great improvement to the more general knowledge of insanity as a disease, and its better medical treatment. While it was considered an inscrutable malady requiring recondite knowledge, and peculiar methods of healing, special physicians were sought for, and were, indeed, indispensable; but since the relation between the body and the mind has been better understood, and mental affections are recognised to be nervous disorders, as amenable to treatment as any other corporeal malady, psychical medicine has ceased to be the sole province of a class; the educated practitioner is now more or less acquainted with affections of the brain; the physician engaged in the care of the insane must be well trained in general medicine; they will meet on common ground, in the treatment of those numerous complaints, such as hysteria, epilepsy, and chorea, which depend, as insanity does, upon disorders affecting, primarily or otherwise, the great nervous centres.

It is sufficiently obvious that, in many cases, the knowledge and experience of the physician who has devoted himself to the treatment of a particular form of disease, is of great value, like the *tactus eruditus* of the practised surgeon, the art of controlling and persuading an insane person is a gift which is strengthened by its exercise. I do not assert that in a doubtful case of intellectual aberration the ordinary practitioner is likely to make as correct a diagnosis as the man to whom insanity is the study of his life; or, in a difficult one, that his treatment will be as successful. I say only that, in the majority of brain disorders, medical knowledge is applicable without training in an Asylum, and that the latter is useless unless conjoined with medical knowledge.

In illustration of the union, each day becoming closer, between general and psychological medicine, I would point out the valuable Croonian lectures on insanity, delivered last year by a general physician, one of the vice-presidents of this section, already known for his work on Convulsive Disease. Another of your vice-presidents, whom I am proud to see here to-day, is technically a specialist, if a physician can be so called, whose work on Statistics is a standard one, and whose researches in ethnological science are known wherever science herself is known and loved. Again, Dr. Guy, one of the professors in this College, will read to us to-day a purely psychological paper; and another, Professor Ferrier, is at this moment engaged in a series of scientific experiments, bearing on the nature and treatment of insanity, in conjunction with my talented colleague at the West Riding Asylum. But no better evidence of this happy tendency to treat insanity as a branch of general medicine is the fact that this great Association has made a psychological section an integral part of its useful work. The unremitting work of the general practitioner, the wide extent of his study, and the continued attention which the daily discoveries in medicine render necessary, make it scarcely possible that he should attempt to master all the difficult questions which are involved in psychological inquiries. The difference between the mind and the soul, the action of the will, the relation between insanity and crime, the hereditary transmission of mental disorder, the propriety of consanguineous marriages, the responsibility of criminal lunatics, the philosophy of sleep and dreaming, are special subjects which few physicians have power or opportunity to study as Sir Benjamin Brodie and Sir Henry Holland have done. He may study these if he please; it is not necessary. The one thing essential is, that he should understand something of the practical treatment of mental

disorders; and this year by year has become more widely known. I am convinced that to the more general study of mental disease by the profession generally, to its earlier recognition, and to its improved medical treatment, we owe the gratifying fact that, in spite of the hurry and bustle of this great railroad age, the press of business, the greater wealth of the middle and upper ranks of society, insanity among them is not increasing, and we may well hope that it may be materially diminished.

THE CASE OF MRS. PETSCHLER AT THE MACCLESFIELD ASYLUM.

It will be remembered that a woman called Mrs. Petschler, who had been a patient in the Macclesfield Asylum, got a firm of solicitors in Manchester a few months ago to write a long anonymous letter to some of the principal daily papers, making very serious charges against the management of that institution, and its officials. The Committee of Visitors at once requested the Commissioners in Lunacy to undertake a special inquiry into the whole matter. This has now been done by Mr Cleaton and Mr Howard, and the following are the conclusions of their report:—

“According to the evidence submitted to us there can be no doubt that Mrs. Petschler was insane when admitted, and was a proper subject for care and treatment in an asylum. Within the first two months it appeared that some improvement took place in her mental condition, and the Medical Superintendent communicated with her relatives, with a view to giving her a few days’ leave of absence, that she might see her children, the separation from whom she deeply felt. The relatives did not adopt this suggestion. Mrs. Petschler subsequently became worse in mind and more under the influence of delusions. Further, she refused to eat meat or potatoes, in accordance with an insane vow which she had made, and could with difficulty be induced to take sufficient nourishment. According to the evidence of the three medical officers of the asylum, under whose care she came, whilst resident there, she was at no time during that period fit for unconditional discharge, and it was not until the month of July that she became, in the opinion of the Medical Superintendent, sufficiently improved to justify him in regarding her as well enough for a month’s absence on trial. Some delay, possibly unavoidable, but not attributable to the asylum authorities, occurred, before definite arrangements could be made for giving her this probation, so that she did not leave the asylum until the 21st September. Mrs. Petschler does not appear at any time to have realised the fact that she was insane and required care in an asylum; but she seems to have been mainly and principally aggrieved at having been sent to a *pauper* asylum, and at having to associate with patients beneath herself in station and education. How far circumstances necessitated this course being adopted by her friends (who, it appears, remunerated the Altrincham Union for her maintenance in the asylum) was beyond the scope of our enquiry; but we had abundant evidence that Mrs. Petschler’s frame of mind was, throughout her whole residence, powerfully affected by the above-named circumstance. She was indisposed to submit to the rules of the house on the ground that she was not a pauper; a feeling of injury existed, which, coupled with her mental condition, caused her to take mistaken and perverse views of the actions and motives of those among whom she was placed, and from many of whom she received exceptional kindness and consideration. Some annoyances and discomforts which she may accidentally have suffered have consequently been magnified by her into serious grievances and have formed the subjects of complaints for which, we think, there has been no substantial and reasonable cause.

“We have, as far as possible, come to these conclusions from the independent testimony of witnesses against whom it could not be suggested that they might be influenced by interested motives. We specially refer to the evidence that was given us by the two discharged patients Miss R— and Mrs H—, at the same time it would have been manifestly most unjust to have disregarded the concurrent testimony, solemnly given on oath, of a number of most respectable witnesses, simply on the ground of their connection with the Asylum. In many instances they were the only persons, besides Mrs. Petschler, who could have any knowledge of particular circumstances. To all questions put to them they replied in an open and straightforward manner, whilst every opportunity for making the investigation as thorough as possible was afforded by the Asylum authorities. In conclusion we can say, that in the

course of a most protracted and searching enquiry, nothing was disclosed that reflected unfavourably on the general management of the Asylum."

The members of the Medico-Psychological Association, and all who are interested in the welfare of the insane, and the management of our English County Asylums, will feel sincere pleasure in reading this report. The noble institution at Macclesfield, which has been so recently erected for the care of the insane in that part of the county of Cheshire, its Committee of Visitors, and its officers, and especially Dr. Deas, are to be congratulated on the result of this most searching inquiry into this painful matter. It was supposed to be a model, not only of architectural skill and arrangement, but of careful management; its Committee of Visitors had, in the most enlightened way, adopted the most modern ideas for the cure of the insane. Dr. Deas was known to be an able, benevolent, and hard-working superintendent, and those reports were most painful to the public mind. We only hope that their complete refutation will have as wide a publicity as they had. In the interests of the insane, and of relatives of the insane, the result of this investigation should be widely made known.

JOHN HOWARD AS A PSYCHOLOGICAL STUDY.

At a meeting of the Psychological Section of the British Medical Association held at King's College, August, 1873, Professor Guy called attention to the fact that John Howard was appointed High Sheriff of the County of Bedford exactly one hundred years ago (in 1773), and so obtained the opportunity of making those remarkable inquiries into the state of prisons, and the physical and moral condition of prisoners to which this country and the world in general are so deeply indebted. Dr. Guy also alluded to the controversies which had arisen as to the character of Howard and his treatment of his only son; and as, in his judgment, there is no biography extant which affords such full and trustworthy materials on which to found a psychological inquiry, he offered a prize of £10 to encourage and promote such inquiry.

The following letter addressed to the President of the Section and of the Association fully expressed Dr. Guy's views;—

26, Gordon Street, August 14, 1873.

MY DEAR DR. TUKE,—Before leaving town, I must write you a line about the proposal I made at King's College.

1.—I offer a prize of £10 to be expended on books at the option of the winner—for the best essay on *John Howard as a Psychological Study*.

2.—I think this prize should be awarded by the *Association* of which I am an Honorary Member, rather than by the *Section* to which the offer was made.

3.—I should like the judges to be (if they would take the trouble) yourself and the Editors of the Journal.

4.—The advertisement of the prize should be made during the current year, and the award take place before the meeting of the Association in 1874.

5.—The advertisement should state that the essay, besides presenting an analysis of the character of John Howard, and the circumstances, physical and moral, under which it developed itself, must treat of the relation of the conduct of Howard during the infancy, childhood, and early manhood of his son, to the son's lapse into the mad state in which he died.

6.—The prize not to be awarded to any essay which the judges may deem unworthy, though it were the best. But in the event of no sufficient essay being brought forward, the prize to be offered for the next year. One of my motives in offering this prize, you will understand to be the vindication of Howard's memory (if consistent with the truth) from certain charges respecting his son, and I offer it *now* because we are living in the centenary of his happy appointment as Sheriff of Bedford in 1773.

I return to town on the 26th August, after which date (if you have had time enough for deliberation), I shall be glad to hear from you.

Meanwhile, I am,

Yours very sincerely,

WILLIAM A. GUY.

Dr. Tuke.

P.S.—I would suggest that there should be no limitation as to the profession of competitors; and that the usual arrangements as to mottoes, &c., be announced.

PRIX AUBANEL.

La Société Médico-Psychologique de Paris décernera, au mois d'Avril, 1875, le prix Aubanel, de la valeur de 2400 francs, à l'auteur du meilleur Mémoire sur la question suivante:—

“ Des Troubles de la Sensibilité Générale dans les diverses variétés du délire mélancolique, et plus spécialement dans le délire hypochondriaque et dans le délire de persécutions.”

Les concurrents devront surtout rechercher l'influence que ces troubles peuvent exercer sur la genèse et sur la forme du délire.

Les Mémoires, écrits en Français, porteront une épigraphe, reproduite dans un pli cacheté, renfermant le nom et l'adresse de leur auteur.

Ils devront être adressés, avant le 31 Décembre, 1874 (terme de rigueur), à M. le Dr. Inotet, Secrétaire Général de la Société Médico-Psychologique, rue de Charonne, 161, à Paris.

Les membres titulaires sont seuls exclus du concours.

THE LIMERICK DISTRICT HOSPITAL FOR THE INSANE.

We had sincerely hoped that it would not again have been necessary to refer to any further evidence of trouble and disorganisation in the above institution in the sister country; but unhappily since the notice which appeared of the proceedings in regard to its conduct in our July number, and the steps taken by the Lord Lieutenant to correct the irregularities complained of in its internal government, instead of a new order of things and a cessation of hostilities as a matter of course resulting therefrom, quite the contrary has been the case, inasmuch as a new investigation was recently entered upon by the Local Board of Governors into certain cruelties towards a patient by an attendant, stated to have occurred more than a year ago, and this on the information of a *former inmate*; but after going into the whole matter the inculpated attendant appeared plainly to have been more sinned against than sinning, and to have been singularly forbearing when seriously assaulted by the patient who was said to have been injured by him. Again the Board of Governors, not satisfied with the appointment of a new medical superintendent, have peremptorily called upon the Lord Lieutenant to give them authority, amongst other powers required by them, “for the punishment and dismissal” (no less) of the medical superintendent, and most strange to state the Lord Lieutenant has so far yielded to the high handed Governors as to inform them, through a recently published letter of the Under Secretary, that he will “bring under the notice of the Privy Council the various objections made by the Governors to their rules,” a yielding on the part of his Excellency which we cannot but think more than questionable under all the circumstances of the case, and ill-calculated to promote future well-being of the Public Institutions for the Insane in Ireland, which hitherto, with but one or two remarkable exceptions, have borne the highest character.

BOOKS RECEIVED.

The following Books and Pamphlets have been received since our last announcement. Reviews and notices of them will appear in the next number of the Journal:—

1. Twenty-seventh Report of the Commissioners in Lunacy to the Lord Chancellor.
2. Fifteenth Annual Report of the General Board of Commissioners in Lunacy for Scotland.
3. The West Riding Lunatic Asylum Reports. Edited by J. Crichton Browne, M.D. Vol. III. Smith, Elder, & Co., 1873.
4. Spirit and Mind Polarity; or, The Disentanglement of Ideas. By Arthur Young. First Part. Houlston & Sons.
5. Lectures on Madness in its Medical, Legal, and Social Aspects. By Edgar Sheppard, M.D. J. & A. Churchill, 1873.

6. On Megrim, Sick-headache, and some allied Disorders; a Contribution to the Pathology of Nerve-Storms. By Edward Liveing, M.D. J. & A. Churchill, 1873.
7. Chronos. Mother Earth's Biography. A Romance of the New School. By Wallace Wood, M.D. Trübner & Co., 1873.
8. The Convolutions of the Human Brain. By Dr. Alexander Ecker. Translated by John C. Galton, M.A., Oxon., M.R.C.S. Smith, Elder, & Co., 1873.
9. A Handbook of Medical Electricity. By Herbert Tibbits, M.D. J. & A. Churchill, 1873.
10. On the Connection of Bright's Disease with Changes in the Vascular System. By A. L. Galabin, M.A., M.D. Smith, Elder, & Co., 1873.
11. On Pseudo-Hypertrophic Muscular Paralysis. By A. Davidson, M.A., M.D.
(Reprinted from "*Glasgow Medical Journal.*")
12. The Human Mind; a System of Mental Philosophy, for the General Reader. By James G. Murphy, LL.D. Mullan, Belfast, 1873.
13. Troisième Section des Recherches sur les Conditions Anthropologiques de la Production Scientifique et Esthétique. Par Theodore Wechniakoff. Paris. G. Masson.
14. Insanity in its Relations to Crime. A Text and a Commentary. By William A. Hammond, M.D. New York. Appleton & Co., 1873.
15. Die Gehirnerweichung der Irren (Dementia Paralytica). Von Dr. Theodor Simon. Hamburg. 1871.
16. Leçons sur les Maladies du Système Nerveux faites à la Salpêtrière. Par J. M. Charcot. Recueillies et publiées par Bourneville. 2me Série. Anomalies de l'Ataxie Locomotrice. Paris. 1873.
17. Life and Mind: their Unity and Materiality. By Robert Lewins, M.D. [A notice of this book is in type, but is unavoidably deferred until the January issue.]

Appointments.

CONOLLY, S. F., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer to the Derbyshire Lunatic Asylum, Mickleover, *vice* Courtenay, appointed Resident Medical Superintendent of the Limerick District Lunatic Asylum.

DAVIES, W., M.R.C.S.Eng., L.S.A.Lond., has been appointed Assistant Medical Officer to the Northumberland Lunatic Asylum, Morpeth, *vice* Merson resigned.

KERR, A. D., M.B., C.M., has been appointed Assistant Medical Officer to the Buckinghamshire Lunatic Asylum, Stone, *vice* Alexander, resigned.

MACLAREN, JAMES, F.R.C.S.E., has been appointed Assistant Physician to the Royal Edinburgh Asylum.

MACLEOD, M. D., M. B., L.R.C.S.Ed., has been appointed Assistant Medical Superintendent of the Cumberland and Westmoreland Counties Lunatic Asylum.

MERRICK, ALEXANDER STEWART, M.D., Acting Medical Superintendent of the Cork District Hospital for the Insane, has been appointed Medical Superintendent of the Co. Donegal District Establishment, at Letterkenny, *vice* Dr. Eames, whose transfer to Cork was given in our last number; but whose name was erroneously printed Eawin.

NICHOLSON, DAVID, M.B., Assistant Medical Officer, H.M. Prison, Millbank, promoted to Medical Officer of H.M. Prison, Portsmouth, *vice* G. Wilson, M.D., resigned.

TUKE, J. BATTY, M.D., has been appointed Morisonian Lecturer to the College of Physicians, Edinburgh, for 1874-75.

In the last Number the name of Dr. Howell was inserted as Superintendent of the Limerick Hospital for the Insane by mistake.

THE JOURNAL OF MENTAL SCIENCE.

[*Published by Authority of the Medico-Psychological Association.*]

No. 88. NEW SERIES,
No. 52.

JANUARY, 1874.

VOL. XIX.

PART 1.—ORIGINAL ARTICLES.

The Morisonian Lectures on Insanity for 1873. By the late DAVID SKAE, M.D., F.R.C.S.E., Physician-Superintendent of the Royal Edinburgh Asylum, &c., &c. Edited by T. S. CLOUSTON, M.D., F.R.C.P.E.

(Continued from page 355.)

LECTURE II.

I propose in this lecture to pass in review the various forms of insanity which you find in the Table, and by a brief reference to their history and symptoms to show you how they really are distinct forms of disease, and that in each or nearly so there will be found some peculiarities in the symptoms or progress of the case which render it somewhat different from other forms of insanity; such in fact as in many instances would lead you to detect the cause, and such certainly as to justify us in classifying it as a distinct form of insanity.

Epileptic Insanity.—The first form of insanity tabulated is Epilepsy with insanity—or Epileptic insanity.

I think myself fortunate that this should be the first form, as it enables me to do three things:—First, to meet the objections to my classification on the ground that the mental symptoms may be quite different in the cases which I refer to a common cause; viz., that they might be those of mania in one, of monomania in another, and dementia in a third. This is emphatically true of epileptic insanity, yet no one ever questioned the propriety of this name as a form of insanity.

Secondly, I shall show that by this system we can do what by the old system we cannot do, describe as a distinct disease what may have three kinds of symptoms—mania, melancholia, and dementia—at different stages of its course, so preserving its individuality.

Thirdly, it will enable me to show how, in a form of insanity where the maniacal symptoms may be of the most formidable type, the monomania persistent, and the dementia hopeless and complete; yet, in all these conditions, the mental symptoms may, and indeed generally do, present such peculiarities as mark them as eminently *Epileptic*.

The epilepsy of infancy arrests the development of the brain, and we have an idiot or imbecile, and to this condition I shall not further refer.

When insanity affects the adult, after, it may be, a long continued epilepsy, it may take the form of mania, monomania, or dementia, as I have said. The maniacal symptoms generally appear after a succession of epileptic fits, and they are very peculiar in their character. The patient destroys his dress, is noisy and clamorous, and blindly and impulsively dangerous, striking out violently, or dashing himself against any one without any provocation, for no apparent reason, and without any warning. I had one such epileptic who, when excited, spoke in a high falsetto voice about the holy fathers; and, if he had an opportunity, he would fly at any one near him, and either kick at his testicles, or throw him down and attempt to gouge his eyes. I had another case in which the gentleman spun round his padded room incessantly on his head, with his feet up against the wall.

I know of no form of insanity where the maniacal symptoms manifest themselves in such blind impulsive fury. The mere presence of two or three attendants will control almost any maniac except the epileptic, whom no fear or threats of control can daunt. The duration of these maniacal attacks may vary. It rarely exceeds ten days, seldom indeed more than three, and sometimes only lasts a few hours.*

When the symptoms are those of monomania the delusion varies in different cases, but very frequently manifests itself in a homicidal impulse, less frequently in a suicidal one, often in unfounded and insane suspicion, or morbid vanity. It is remarkable how frequently the symptoms are of a *religious* character. I had an industrious, intelligent patient under

* This maniacal condition is very often preceded by a state of extraordinary unreasoning irritability and touchiness, and a positive craving for a quarrel with somebody, that is quite characteristic of the epileptic. It is followed by a state of confusion. It is a curious physiological fact well known in asylums, that the epileptic mania and the epileptic irritability are much less apt to appear if a patient sleeps after the fit, and I am sure I have often prevented an attack of epileptic excitement coming on by giving the patient a dose of chloral after a fit.

my care for many years, who, after his periodic attack of epilepsy, laboured under the delusion that he was the Saviour, and for several days he gave me, in a very grave voice and impressive manner, direct messages from above, which he stated he had received for my guidance.

I think you will seldom find a monomaniacal epileptic who does not possess and take great care of his Bible, and read, or seem to read, it attentively at certain periods.

Dr. Howden has described this religious phase of epilepsy very ably in a paper in the January number (1873) of the "Journal of Mental Science." He gives a few very interesting cases from his own experience. In some of them the delusion was that the person was commissioned to save the world; in another to kill the devil; that of another that he was sometimes Adam, sometimes God, sometimes Christ, and sometimes the devil. Such delusions are frequently formed when the patient is in an epileptic trance and sees visions; sometimes they are permanent, and not unfrequently accompanied with a strong homicidal tendency.

The consideration of the cases described leads Dr. Howden to inquire "how far epilepsy has had to do with the origin of certain religious creeds, and how far the visions of many so-called religious impostors may have had an epileptic origin?"

Accordingly he finds among other examples that Ann Lee, the mother of the *Shakers*, was an epileptic. During her epileptic trances, she had visions of the Saviour, who "became one with her in body and spirit."

The visions of the celebrated Emanuel Swedenborg, in which he received revelations from above, visited hell, &c., were probably all due to these epileptic delusions and trances.

The so-called prophet Mahomet was undoubtedly an epileptic. "I do not see" says Moreau (de Tours), "how it can be denied that the fanaticism of Mahomet arose from the maniacal delirium or diabolic enthusiasm of epilepsy, if we look carefully into his life and actions."

"By his ecstatic visions had he not become the dupe of his visions, whence sprung the first idea of his divine mission, and then had not these visions become the principal, if not the whole basis of his apostolic works, as well as the source of his audacity, and his prophetic power over the ignorant and superstitious spirit of his countrymen?"

"It seems incredible" (says Dr. Howden) "that a religion which sways the minds of 200,000,000 of the human

race at the present day should have no better foundation than the visions and dreams of an epileptic."

The homicidal impulse in many epileptics is most interesting and important in its medico legal relations.*

Before saying more on this subject I ought to mention another peculiarity accompanying the insane symptoms of the epileptic, and that is, the great frequency of hallucinations of all the senses as compared with what we meet in any other form of insanity. Hallucinations of vision are very common. Before, or in the interval between the fits mostly, epileptics see luminous bodies, or dark bodies which threaten to envelope them. Sometimes they have visions of persons and objects which are not present; and the objects appear to be presented to them with great vividness. I have seen an epileptic gunmaker busy cleaning his imaginary gun with visionary washing rods and water, or putting all the pieces of the locks together, naming each of them, and pushing them about on the palm of his hand, asking me if I did not see this, that, and the other bit of the mechanism.

Hallucinations of hearing are common among epileptics. They will hear sounds like thunder—the roll of drums, the clatter of arms, and the tumult of an engagement.

"Sometimes," says Brierre de Boismont, "strange figures address the epileptic; they insult him, or command him to do a certain act. It is highly probable that many of the crimes committed by these unfortunate persons, and for which some have been severely punished, were the results of hallucinations of hearing and sight."

De Boismont relates the following case as an example:—

"J. M. was liable to epileptic fits; at their termination he showed symptoms of great excitement, and after one of these attacks he rushed like a madman into the country, and successively assassinated three men. He was followed, secured and thrown into prison, where he was asked the reason of his actions. He stated that he perfectly recollected killing the three men, especially one who was his relative, which he very much regretted. He said that during these paroxysms of fury he saw himself surrounded by *flames*, and that the colour of blood delighted him."

* Trousseau's opinion on this subject is well known, and who that has had much occasion to consult his works on practical points will not be inclined to adopt any opinion expressed by him? He lays it down that any person who makes an entirely unprovoked and unaccountable homicidal attack, especially if he seems afterwards to be unconscious of having done so, is an epileptic, or will become one.

“The paroxysms of epilepsy” says Dr. Conolly, “are often preceded by a spectrum, and the state of the brain then existing, whatever it be, being present in other instances without being followed by the paroxysm, has often been the origin of a belief in supernatural appearances.”

Hallucinations of the senses of smell and taste are also met with not unfrequently in epileptics. They perceive fetid or noxious odours, as of putrifying matter, the smell of brimstone, and horrible tastes suggestive of drugs and poison.

Another hallucination remains to be noticed—a hallucination of the internal sensations—the *Aura Epileptica*. This aura begins at some point in the periphery—at the toe or thumb, the lower part of the bowels, or the stomach, and spreads gradually upwards until it seems to reach the head, when the patient has either an epileptic fit, or a *petit mal*, or some slight, but momentary confusion.

This *Aura* is sometimes met with in patients who have never had an actual epileptic fit, and in them it is often associated with a suicidal or homicidal impulse.

I have three females under my care now, all of whom have the *Aura Epileptica*, and all of them are suicidal, and one also homicidal after its occurrence.

The following case is very interesting and instructive:—The patient had no intellectual derangement or delusions. I may call him an epileptic maniac, for although he never suffered from an epileptic fit, properly so called, he laboured under symptoms which closely approached to those of an epileptic seizure of the milder form, known as the *petit mal*. He described a feeling like the *Aura Epileptica*, beginning at his toes, and rising gradually upwards to his chest, producing a sense of faintness and constriction, and then going up to his head, and giving rise to a momentary loss of consciousness. This *Aura* was accompanied by an involuntary jerking first of the legs and then of the arms.

It was at the time he suffered from these attacks when he felt impelled to commit some act of violence to others, or to himself. On one occasion he attempted to commit suicide by throwing himself into the water. More frequently the impulse was to attack others, and was at one time accompanied by such impetuous violence, that it required the strength of several men to restrain him. He deplored his malady, of which he spoke with great intelligence, giving all the details of his past history and feelings. His attacks, which had been frequent and severe about the age of sixteen,

had for a long time almost disappeared, but had lately recurred at intervals until it was found necessary to send him to the asylum. Sleeplessness and constipation almost invariably preceded his seizures.

Two years afterwards, although no epileptic fits had yet been manifested, the case had undergone an interesting psychological development in the same direction, the patient now having almost daily a vivid spectral hallucination in the form of a newspaper. He can see it for a short time so distinctly as to be able to read a long paragraph from it. He continues to suffer from the *Aura Epileptica*, and other symptoms allied to epilepsy. It is right to add that this patient benefitted materially from the use of the bromide of potassium, so useful, to a certain extent, in most cases of epilepsy.

The question naturally occurs here—had this patient committed a homicidal act under the influence of this morbid epileptic impulse what would have been his fate had he been tried for murder? Undoubtedly, according to the legal definitions of insanity, he would have been hanged. He had no delusions; he knew right from wrong in reference to the very acts which he felt impelled to commit. Therefore, according to law, he was sane and responsible.

To sum up on the subject of epilepsy with insanity, I think you will admit that I have made out a case for this being considered a *form of insanity* over and above the existence of the pathological cause, if we may call it so—epilepsy—and in spite of the fact that the symptoms may run through all the classes of the old system. The disease has its natural history; its *mania* is all its own, with its fury and blind impulsiveness; its monomania is unique, with its religious delusions and homicidal and suicidal impulses; and even its dementia has its characteristic ebullitions of irrational and impulsive violence, while all are more or less frequently characterised by hallucinations of the senses, peculiar in their character and frequency to epilepsy. In conclusion, the strongest possible proof of this being a disease *per se*—a form of insanity *per se*—rests in the fact that if you can cure the epilepsy you at the same time cure the insanity. This is a rare event, but it has occurred; as in cases where the epilepsy was due to a depressed portion of the cranium, and where by its removal the epilepsy was removed, the insanity being at the same time cured.

Insanity of Pubescence.—The next form of insanity in our

table is that of *Pubescence*. It can easily be imagined that the great changes which take place in the nervous system at this period, added to a hereditary predisposition, may, on some exciting cause, even of a trivial kind, give rise to insanity. The propensity to mental derangement is much greater in girls than boys at this age; in Dr. Blandford's opinion, in consequence of the superadded function in them of menstruation.

The insanity which accompanies pubescence in boys I cannot describe better than by citing a case which I regard as a typical one, illustrative of the most common and characteristic symptoms, and their usual course in this form of insanity.

This boy was seen by me three days after the invasion of his disease. He was very restless and excited, talking incessantly, and walking up and down the room, meddling with everything he could lay his hands on. He had a great deal of that self-confident, would-be-manly air, which boys are apt to assume at the period of puberty; and although not naturally of a combative tendency, nor possessed of any great pugilistic acquirements, he professed himself ready to fight with any man. He was the source of the greatest trouble to the attendant in his ward—disarranging the seats, breaking the spittoons, and annoying the older patients. This condition of excitement continued for about a week, and was succeeded by a state of depression. He would sometimes burst into tears, at other times hold up his finger on which he had received a slight scratch, and declare that it was affected with cancer. Such feelings, however, were of a very evanescent nature. They had none of the characters of true melancholy, and appeared to be but the revulsion in a not over strong constitution from the previous state of exaltation. In a day or two he became quite composed, and showed himself to be naturally an intelligent and quietly disposed lad. He was thin and weakly looking, but no signs of phthisis could be discovered on examining the chest. He continued very well for two or three weeks when he had another attack of excitement, the symptoms being very much the same as those in his first attack. A few weeks after recovering he had a third attack of the same kind, which continued about ten days; after which he recovered steadily and permanently.

I have before me in the Asylum Case Book another case described almost exactly in the same words as the one which I have given.

One more case I shall briefly relate as illustrative of those spasmodic and choreic movements and cataleptic conditions often met with, especially in girls, in this form of insanity. In this case the boy was sometimes preternaturally excited, but more often dull, and sullen—he wept, and said he had committed the unpardonable sin, and tried to tear off his clothes and throw them into the fire. Sometimes he appeared to be in a sort of cataleptic fit, falling down at times and appearing to be in a sort of trance. He had a silly and stupid look, refused generally to take his food, and would not answer questions when spoken to. Sometimes he would suddenly throw himself on the floor, but whether voluntarily or involuntarily could not be made out. For a month he continued alternately better and worse. He occasionally practised some curious movements. He would stand for more than an hour at a time working his hands backwards and forwards as if he were playing a pair of bones. On other occasions he would devote as long a period to twitching the corners of his mouth up and down, and jerking his body backwards and forwards. If any one went up to him and shook him gently he immediately stopped these movements. Within three or four months he recovered.

These cases of insanity of pubescence are not unfrequently combined with or terminate in habits of masturbation, in which case it may readily be conceived that the symptoms are modified, and partake of those of the latter vice, or tend to a settled dementia instead of an early recovery.*

Insanity of Masturbation.—The Insanity of Masturbation scarcely requires comment or illustration—it must be familiar to you all. The premonitory signs may be taken from any newspaper from an advertisement headed “Debility,” or some such name, readily recognised by the unhappy victim, and going on to tell how a certain doctor cures “Nervous debility, mental and physical depression, palpitation of the heart, noises in the head and ears, indecision, impaired sight and memory, indigestion, loss of energy and appetite, pains

* There is nearly always hereditary predisposition in these cases, and if this is very strong, dementia instead of recovery may also supervene. The salient and characteristic features of the insanity of pubescence that distinguish it from other forms of the disease may be said to be the age at which it occurs, the symptoms being ordinarily those of excitement at first, and these not delirious or raving mania so much as an aggravation and an unreasoning form of the usual high opinions of themselves entertained by young people at that age, the transient nature of the symptoms, the tending to sudden remission and outburst, the speedy recovery with usually complete mental restoration, and the constant association of the disease with hereditary predisposition.

in the back, timidity, self distrust, groundless fears, and muscular relaxation." Add to these symptoms the dislike to female society, the inability to look you straight in the face, the fear of being impelled to commit suicide, culminating in a true suicidal and sometimes homicidal impulse, and you have a pretty accurate bird's-eye view of this form of insanity. Along with these morbid impulses there are sometimes delusions of a religious character, such as that the person has committed many acts of wickedness—that he has blasphemed the Holy Ghost—has been guilty of the unpardonable sin. In other cases the patient thinks that people are watching him, and that they accuse him of crimes he has not committed. Such patients often complain of their dreams as being horrible or obscene, or full of accusations against themselves. The mental state immediately after excessive masturbation in these cases is that of stupor. If these cases are put under proper care and treatment before the mind has become too impaired to exert self-control when reasoned with, they generally recover. But when dementia has begun to show itself in impaired memory, and energy, silly vanity, and self-satisfaction, the cases assume a very hopeless aspect, with a tendency to gradually increasing dementia if the vice is persevered in.

Satyriasis and Nymphomania.—These are diseases closely allied to the one I have just described, with this essential difference, that the sexual excess arises from *desire* towards the opposite sex; that the origin of the morbid and uncontrollable passions is in the nervous centres, and not in the testes or ovaries or other sexual parts.

I think you can hardly fail to admit that I have made out a good case for the last four forms of insanity being distinct forms, having each its own natural history and characteristic group of symptoms, while each is connected more or less remotely with the sexual passion.

Closely allied in some respects to these is the next form of insanity on the table—

Hysterical Insanity.—The changes which take place at puberty acting upon a girl predisposed to insanity or to hysteria, helped, it may be, and doubtless as it very frequently is, by the habit of masturbation, terminates in the outburst of an attack of Hysterical Insanity. The insanity may exhibit itself at first by great excitement, laughing, crying, incessant talking, and restlessness, with

sleeplessness, efforts to run out of the house, violent ringing of the bells, and screaming. All these symptoms are accompanied by some prevailing symptoms of a sexual or erotic character; there is some one in love with her, she has retention of urine, or something else is wrong in or near the uterus. I need not weary you by an attempt to describe the protean features of Hysterical Insanity, from the cases of singular moral perversion—living without food, giving birth to mice and toads, passing all sorts of curious things with the urine—up through the long chain of singular varieties it presents with varied sexual and erotic symptoms, until we find it presenting a truly maniacal aspect. In all these varieties one can still recognise the hysteria—the sexual mark—which characterises each, and makes your prognosis and treatment so different from what, in the absence of that significant mark, it would have been. This is certainly a well-marked natural order. The following letter, written by a young lady while presenting acutely maniacal symptoms, illustrates very well the peculiarities in the delusions or trains of thought which I have just referred to as characteristic of *Hysterical Insanity* :—

“My dear Mamma,—It is time that I leave to return home. I have been tremendously changed to the better. I think papa will be able to get me a commission under Garibaldi before long. There are three to whom I am especially indebted—one Mr. C., the modeller, the other the doctor, a eunuch, who modelled me at the fire, and attended on me and bathed me. He is, I am sure, a gentleman—a splendid doctor. Could not papa get him into a regiment abroad? And there is the nurse. Could not papa get him any situation away from Morningside Asylum, where I am at present? I should like papa to come for me as soon as possible. Do you remember the verse, “There are, &c.” (12th verse, 19th chapter of Matthew), about Eunuchs? Then I beg to inform you that according to Scripture and my conscience Jessy, your cook, is a man, and Janet, the mad devil, is a man; and Denham and Henry boys who can have children. Aunt Isabella is a man, and yourself also, both made of men, and I am a boy made of Dr. C. and Dr. Z. Mrs. T. is a man, made of men. They are very ignorant on this subject here; but as for me, it is certain that at least the spirits have showed me, which Christ sent when I was under drugs; they showed me this. I have at times since I came here passed the shadow of death, and therefore am authorised to speak in opposition to all men and women, gentlemen and

ladies, who oppose me. I am, I can swear, as you want to know what sex I belong to, a mixture of a nymph and a half-man, half-woman, and a boy, and a dwarf, and a fairy. I know more than my fellow mortals, having expired eleven times before the time.—I am, &c.”

Amenorrhœal Insanity.—The next form of insanity on our table is Amenorrhœal. I have no doubt you have all met with cases of insanity in which there were irregularities in the catamenia—scanty or irregular menstruation, dysmenorrhœa, or menorrhagia. In some of these cases the deranged menstrual function is an effect or concomitant of the insanity, and in others a predisposing cause. Such cases of irregularity are met with in hysterical and phthisical insanity, in epileptic and anæmic insanity, and others. But the insanity which I wish to distinguish under this heading as a distinct form is one where the amenorrhœa is obviously the immediate and essential cause. There may be, and probably always is in every case, a predisposition, and very often a hereditary one, which doubtless may modify the symptoms; there may be also in some cases an exciting cause which has lit up the symptoms; but the disease is essentially one whose pathological basis lies in the organs of reproduction, and generates insanity from the periphery to the centre of the nervous system, and may be called sympathetic, or reflex, as you please. The connection between cause and effect in the cases to which I limit myself is sufficiently obvious from the fact that they occur after the suppression or continued absence of the catamenia; that they are ascribed by the patient herself very often to this cause; that the earlier symptoms are such as we would expect from this cause—headache, flushing of face, and throbbing of the temples, giddiness, palpitation, and such like; and lastly and conclusively, that the insanity rapidly disappears when the catamenia are re-established.

I have carefully collated a number of cases of this insanity from my books and notes, and I find it exhibits the following varieties in the symptoms which attend it, and in its progress.

1st. In robust young girls the early symptoms are generally maniacal, especially if the menstruation has been stopped suddenly by cold bathing, or wet feet, or some unexpected and severe shock to the nervous system. The patient is restless, noisy, violent, destructive of clothing, dirty in her person and habits, sometimes suicidal. The maniacal symptoms are occasionally succeeded by melancholy, sometimes by

an apathy amounting almost to stupor. In the earlier stage the patients often refuse their food.

2nd. In girls who are more or less anæmic the symptoms are somewhat different. At first the patient is restless and a little excited; this, however, very soon passes into depression, accompanied by delusions, such as that she has committed some crime—that her soul is lost—that people are watching for her, &c., she becomes dull, stupid, and refuses to answer questions.

3rd. In older persons above the age of 28 or 30, the symptoms are generally those of deep melancholy, with suicidal impulses, preceded sometimes by restlessness, tendency to tear and scream; but these are of short duration, the melancholy soon supervenes, and is often accompanied with some delusions about seeing some one, or being watched or plotted against. Such cases according to my experience generally recover within four or six months, if put under proper care and treatment. The symptoms of improvement shew themselves almost immediately after the reappearance of the catamenia and the improvement in the bodily health, and make steady progress towards complete recovery. Some cases, however, terminate in confirmed and hopeless dementia.

In the few cases of menorrhagia and irregular menstruation connected with insanity, the symptoms have resembled those described as characteristic of amenorrhœal insanity. In one well marked case of menorrhagia, now before me, the mother declared that her daughter was almost always menstruating, the one illness being almost continuous with the next. As in some of the cases referred to, maniacal symptoms seemed to alternate with melancholia. She was at first under delusions that her mother was the devil; that she could never die, and she shouted and raved, and had attempted to throw herself over the window. On admission she screamed fearfully, she then became deeply melancholy, and could not be induced to speak; she was restless, and muttered and moaned during the night. On the following day she was quiet and depressed, but in the evening the maniacal symptoms returned. This condition gradually deepened into dementia, when after the lapse of four months her health being gradually restored, and her catamenia becoming regular, she recovered.

Dr. Blandford very truly remarks that in such cases as those we have been reviewing, connected with the sexual organs—the insanities of pubescence, of masturbation,

hysteria and amenorrhœa, we often find combinations and complications; that in some the one state or disease leads to the development of the other habit or disease. Pubescence naturally leads to masturbation, and the latter to hysteria, which again is not unfrequently associated with amenorrhœa.

The following is a very good specimen of such a combination of morbid and consenting forces :—

A young woman having suffered from simple depression of spirits for two years, became suicidal, and at times dangerous and sleepless. She has frequently threatened her mother with a knife, using the grossest language. She says the devil urges her to commit suicide, and that his control over her is irresistible. She was pale and anæmic, and had not menstruated for ten months. Has for some time coughed up a little blood. She suffers from great weakness, palpitation, pain in her bowels, and cold perspiration at night. She suffers from the globus-hystericus. Is very selfish and indolent. Cannot look one straight in the face, nor speak in a straightforward manner. She is greatly addicted to masturbation, and says herself she has never felt quite right in these parts since she had a child four years ago, and that is the cause of her practising that habit. Here was a case in which there was a combination of four efficient causes of insanity found existing at the same time. Yet in this case, where the history is pretty full and accurate, there can be little or no hesitation in saying it was insanity of *masturbation*. That habit had been indulged in for four years by her own confession, and beginning after parturition (no uncommon thing in puerperal insanity), the *amenorrhœa* which existed ten months, and the *hysteria* and the phthisical symptoms were superadded symptoms, brought on by the same cause which originated the depression of spirits and the suicidal and homicidal impulse. In fine, I think there are few cases in which we would fail to trace insanity to an obvious physical cause, if we saw them in their earliest stages and were fully informed regarding their history, mental, and especially *bodily*.

Post-Connubial Insanity.—The next form of insanity in my table is, like those preceding it, one connected with the sexual organs, or more correctly speaking of the sexual *orgasm*—it is what I have called *post-connubial insanity*. In men of robust habit of body, and who I had reason to believe had led lives of

rigid virtue up to the time of their marriage, I have known cases where the first night of connubial felicity was followed in the male by attacks of congestion, amounting to something like congestive apoplexy, although of transient duration, or resembling the epileptiform congestive attacks of general paralysis. Such attacks are transient. More often the symptoms of the insanity brought on by this cause are those of *acute dementia*. The patient is stupid and confused, and cannot answer questions; is restless and unsettled, and morose. These symptoms generally pass off soon, leaving the patient well.

In females the symptoms are better marked and more peculiar. A woman who had married a husband in every way apparently suitable to her, of her own free will, and with the approbation of the friends of both the contracting parties, suddenly after marriage becomes morose and full of remorse that she had married; says she had no love for the man nor he for her, cannot bear to hear his name mentioned, and is horrified at the idea of ever living with him. Her feelings towards her husband amounts to actual repugnance and morbid hatred. Some such patients are dangerous both to themselves and others.

One of the most suicidal patients I ever knew was a case of this kind. She was a handsome young woman, newly married to a very promising young man, perfectly suited to her apparently, and approved of by her friends and his, all of whom, including not only relatives, but former employers and other friends, took a lively interest in the marriage.

Immediately after its consummation she became intensely melancholy and suicidal. She walked up and down, night and day, for three months, wringing her hands, and with a face full of wretchedness, repeating the words unceasingly, "Oh! misery! misery!" She had, of course, short snatches of sleep, and was fed by force. She was watched continually by relays of attendants night and day during all that time, and never ceased for a moment to cast about for some contrivance by which she might commit suicide. She attempted to choke herself on cotton reels, balls of worsted, pieces of coal or stone—to stab herself by getting hold of forks and knives, and needles and scissors—to drown herself in the pond, the bath, or the water-closet; to precipitate herself from a height when she had contrived the chance, or to strangulate herself with the tape of her apron or petticoat—under cover of the former, being thrown over her face to enable her to get a sleep—and by the time the suspicion of

the attendant was aroused sufficiently to lead her to remove it she was generally found nearly black in the face. She ultimately succeeded, at the end of three months, in effecting her purpose by snatching the attendant's key from her, bolting out of the room, carrying the key with her. Having slammed the door against the attendant, the doors locking with a spring lock, the nurse was unable to follow her. Knowing well the geography of the house, and aided by her key, she made her way to an empty room, and there hung herself long before aid could reach her.

Such are the cases we occasionally meet with of post-conubial insanity, but as I stated in the beginning of this subject, the symptoms most usually met with are those of *Acute Dementia*.

The following case I consider a typical one, of which I could readily furnish other examples:—

A young woman of thoughtful and industrious habits and melancholic temperament married at the age of 20, and immediately afterwards became affected with a great desire to wander away from her friends and husband, and has often left the house and slept in the fields all night. She says she is looking for occupation. She seems to have no desire to remain with her husband, nor any affection for him. At times she is confused in her language, and wanders in her conversation. She is depressed in spirits, and has a listless appearance. Her catamenia have not appeared for four months, and there is no suicidal tendency. The hereditary predisposition is strong. Three or four of her sisters and her father's mother were insane, and the father himself was weak-minded. On being admitted to the asylum she was quiet, dull, and indifferent, complained of her head, and of having lost the power of controlling her conduct and thoughts.

During the whole period of her residence in the asylum she displayed much indifference, languor, and want of energy. She never thought her memory was impaired. She answered questions, but nothing more. She stood, or sat, or lay as she was placed. She had always to be fed, and her movements had all to be directed. She was untidy and careless in her appearance. She was daily employed either in the washing house or garden, but without benefit. Her countenance was vacant, but had a certain wildness in its expression, her eyes being always bright and glistening. She was removed to the poor-house at the end of two months, contrary to my advice, to be consigned to the wards of the incurables, as a

matter of economy, although her case was quite a curable one.

Sexual excesses after marriage lead to symptoms of a totally different kind;—to *tabes dorsalis*, to acute maniacal symptoms, and, according to Dr. Blandford, to the general paralysis of the insane, of which he thinks it is the most frequent, if not the constant cause. This opinion we shall examine afterwards; but I may conclude this lecture with an interesting case bearing upon several suggested points.

Some years ago I visited a gentleman in Haddingtonshire, whom I found labouring under well-marked symptoms of general paralysis. His age was 50. He had gone up to London when a young man, where he got into a very large and lucrative business. Some eight years before I saw him, he resolved to marry, but being too much involved in the turmoil of business to spare time to look out for a wife for himself, and pay her the necessary preliminary attentions, he fell back upon a young girl whom he had known in East Lothian before going to London, and to whom he had displayed some attentions. He asked a friend in the neighbourhood of the young lady's residence to visit her, to open the campaign for him, and propose for her on his behalf. This his friend managed successfully on his behalf; the young lady in due time went up to London, where she was married to my future patient.

Immediately after marriage he seems to have been seized with the post-connubial insanity I have described. He took the greatest repugnance to his wife, almost daily threatened her with a knife, and for four years, during which he never had connection with her, she lived in daily fear of her life, and regarded him as quite insane. During all this time he managed, by his reticence, to pass muster with his partners and others in business. About the close of this time he began to make mistakes and errors of memory which attracted the notice of his partners, who bought him out of the business on a handsome retiring allowance. While this was going on his conduct to his wife underwent a sudden alteration: from hating her and threatening to kill her, he suddenly became amorously uxorious, to a morbid degree—the fruit of which was a child. But, in the meantime, his mental condition rapidly underwent a great change—he became excited and full of delusions of wealth and grandeur, and the mental symptoms of general paralysis appeared, running on rapidly to a fatal termination.

This case was interesting from the latency of the insanity for four years, during all which time it was known only to his wife, who kept the secret at a terrible risk.

Whether the sudden and excessive development of the sexual desire was the cause and precursor of the general paralysis, or whether it was part of the earlier *symptoms* of that disease, I shall not detain you now to inquire.

Auditory Hallucinations. By GEORGE FIELDING BLANDFORD,
M.D.

(Read at a Quarterly Meeting of the Medico-Psychological Association in London,
December 3rd, 1873.)

I trust to be excused if in these days of pathological and anatomical research, I ask you to examine with me to-night a group of symptoms. I need hardly say that the study of symptoms must ever be of importance in the treatment of disease, and especially of that disease with which we are all concerned, and although to the general medical public the subject of hallucinations of hearing may have no special interest, yet the members of this association know that they characterize a very peculiar and well-defined class of patients, and that, common as they are, their nature and pathology are uncertain and mysterious. I have, therefore, chosen them, as the subject of a paper, chiefly for the purpose of promoting discussion concerning them, and eliciting the opinions of those here present.

The subject of hallucinations is generally treated by authors as a whole, and they are divided into those of sight, hearing, smell, taste, and touch. The best known treatises are those of MM. Baillarger, Brierre de Boismont, and Michea, all of which arose, if I am not mistaken, from the competition for a prize on the subject, offered by the French Academy of Medicine. I do not, however, propose to consider now the whole subject of hallucinations, but those of hearing only, thinking that they form a class special and apart from others, a class of the highest importance and interest to all practising in this specialty, whether we examine it from a pathological, therapeutical, or forensic point of view.

Although I do not propose to consider the hallucinations of the other senses, yet it is impossible to avoid a comparison

between those of hearing and sight. These two varieties are by far the most common of all that are met with, whether in the sane or insane, yet there is a great difference between them. Hallucinations of sight belong, according to my experience, to the acute, rather than to the chronic stages of insanity. We find them in patients suffering from acute delirium and acute mania, just as we meet with them in delirium tremens and other acute febrile disorders, but from the former the patient, unless he chance to die, does for the most part recover, and the visions and spectres vanish, and even if he does not regain his reason, but remains a chronic lunatic, the hallucinations, which accompanied the acute symptoms, subside, and are no more seen. This is the case in the majority of instances, not always, for I have a lady under my care who is much tormented, after many years of insanity, by lights and flashings directed upon her in the night. On the other hand, hallucinations of hearing are not so common in very acute insanity, such as acute delirium and delirium tremens; and in the fevers and delirium of ordinary disease they are found far less frequently than those of sight. Where we notice them in the insane they are, for the most part, chronic, and the acute stage, whatever it may have been, has passed away. And yet, judging by the few cases I have seen, in which I have been able to watch the progress of the disorder almost from the commencement, I am inclined to think that there is a transient acute or subacute stage at the commencement of every such insanity. I saw the other day a young gentleman, aged 24, for whose brother I signed a certificate of insanity some five years ago. His disorder was of not more than a week's duration, but he was overwhelmed with voices which compelled him to write to their dictation quires of rhapsodies, which he called poems. Here there were somewhat urgent symptoms, sleeplessness, flushing of face, heat of head, a quickened pulse, and hysterical and impulsive outbursts, with a strong tendency towards suicide. And almost the same symptoms were found in the case of a lady aged 29, together with sleeplessness and refusal of food. In the latter case the acute symptoms, if they deserve the name, soon subsided, but the "voices" remained. Hallucinations of sight are said, and apparently with much force, to accompany a condition of deep exhaustion, whether of mind or body. The acute diseases in which they are found are exhausting diseases, and the insane patients are asthenic rather than sthenic, and the same

thing may be noticed in those of the sane, who, without acute brain disorder, do from time to time, when fatigued or weak, see spectral visions. But the patients I have just mentioned as tormented by "voices" were more than commonly stout and robust, and their insanity certainly did not merit the name of asthenic. And I have not found that the chronic patients who suffer in this way are among the worst nourished or most miserable-looking of asylum inmates, far less so, indeed, than the melancholic class who do not, as a rule, present these phenomena. We see it stated, and stated truly, that hallucinations occur in the sane, and Griesinger says that nothing would be more erroneous than to consider a man to be mentally diseased because he had hallucinations. But on examination of the examples of hallucinations occurring in the sane, we find that by far the greater number of them are hallucinations of sight; those of hearing are rare, at least I have been able to discover but few well authenticated cases, and in these, though possibly insanity did not exist in the common acceptance of the term, there was more brain disorder than in the patients troubled with spectral illusions whose condition, if removed from that of ordinary health, was one of exhaustion rather than disease. This question may become one of considerable importance if it should be stated in a court of law that a person may suffer from hallucinations of hearing, and yet be sane. In answer to the abstract principle, it would be urged that hallucinations of this kind were uncommon in the sane, and the facts of the particular case would demand a very close investigation. I am not aware that there is on record any case of a persistent hallucination of hearing a voice occurring in an individual who was beyond question sane. There is the celebrated instance of Johnson who heard his mother's voice call "Sam," but it is not related that this happened frequently, and Johnson's mental condition at times verged upon insanity, to say the least of it.

Can we frame any hypothesis as to the pathology of these phenomena? In what consist the well-known incurability and persistence of these hallucinations? Spectral hallucinations come and go almost momentarily. Delusions of all kinds and all degrees of fixity may vanish, even after considerable periods of time, and yet when these "voices" are once established in a patient's brain, they seem to defy our efforts to oust them. They may fade into distance, may become infrequent, nay, for a certain period may seem to have

departed, but they come back again, and the only thing certain about them seems to be that they will again be found at some time or other prompting a patient who seems otherwise well to swift and sudden violence, or tormenting him till he cries to us to have pity on him and bring him relief.

I think we may assume in the first place that hallucinations do not depend on any disorder of the external organs of sense. Nobody supposes that any disease of the eye brings about the spectral hallucinations of the sane or insane. Neither can we believe that the ear is concerned with the hallucinations of hearing. Such phenomena as singing in the ears, which may be due to aural disturbance, are quite distinct from the voices with which we are concerned. But although the external apparatus of sight and hearing are not involved, we cannot avoid the conviction that there is a region of the brain which is disordered, a region which is habitually employed in receiving from the external organs the images and sounds they convey, and transmitting them to the higher brain-centres. I will not presume to conjecture where this region is situated; for the topography of the brain has yet to be definitely mapped out, though we may hope that the zealous labours of the present day will ere long add greatly to our precise knowledge of it. We may, I think, be sure that some such region or regions exist, that there is a mind's ear as well as the mind's eye. It is not that by an effort of attention alone we can call up through the idea portion of the brain a sound or a voice. Often sounds—as for example tunes—rise up unbidden, and a contest ensues between them and the thoughts which attention is doing its best to keep before us. A person haunted by a tune may be almost compared to one who hears a voice, and the persecution may for a time be not inconsiderable. By-and-bye the tune ceases, spontaneously, so far as we know, and then it may at any moment recommence, and this is as analogous as anything I know to the unbidden voices which torment the insane, but the one phenomenon is physiological, the other pathological. We clearly see here that the external organs of hearing are not concerned, for all this may go on without the slightest sound, and may continue in spite of a strong effort of will to restrain or banish it. If we turn to anatomical books we find the auditory centres located in the medulla oblongata. Without going so far as to say that here is the seat of these hallucinations, there appear to be

reasons why they may be referred to such a region rather than to the higher centres of the brain convolutions.

The persistence of auditory hallucinations makes it probable that this internal ear of the brain, if I may use such an expression, is capable of undergoing an organic change which leaves it in a diseased condition, and liable to an irritation more or less persistent, so causing the phenomena with which we are so well acquainted. That the voices take their fashion and tone from the prevailing temper and emotional condition of the patient is but too certain. An hallucinated man, whose state is melancholic, hears voices that say things quite different from those which a maniacal or monomaniacal individual reproduces. Fortunately for us not everyone of these patients is impelled to homicide or suicide. We are all acquainted with eccentric men and women, whose voices talk a great deal of most arrant nonsense, but their condition being tolerably tranquil and free from depressing emotions, they pass through life, it may be, like other chronic and harmless lunatics. Yet it is not to be forgotten that, if through ill health, or bad news, or any lowering cause, their condition becomes altered, the harmless voices and the harmless patients may, with little warning, become dangerous to themselves or others. As to the nature of such an organic change nothing can at present be said, but as the microscopical investigation of the brain advances, some light may possibly be thrown upon it, and it is greatly to be desired that those who in our large asylums have the opportunity of examining after death numerous brains, will try and discover whether there be any constant change in those who, during life, have presented the symptoms we are now considering.

Who are the patients in whom we chiefly find these voices, these hallucinations of hearing? On the other hand, what class of patients are exempt from them? According to my own experience, I have not usually found them in those whose insanity has commenced at an advanced period of life. Patients of 50 or 60 years of age are not, I think, generally afflicted with voices, unless they have retained them from an earlier period. Climacteric insanity, as it is called, is usually of the melancholic type, and not characterised by hallucinations, and this may be one reason why such patients do, in a large proportion, recover. So far as I have been able to observe, patients, at the time these voices first arise, are young rather than old; nay, in many, this form commences

under the age of 30. A large number of the young men and women who are admitted into asylums, and whose age and appearance would lead us to suppose that their insanity is curable, remain permanent patients because they are thus affected. We are called, it may be, to pronounce an opinion on a recent case. The symptoms may be somewhat acute, and have begun suddenly; the general health may be fair, and youth is on the side of the patient. There may be everything to lead us to give a favourable prognosis, yet time goes on, and though there may be amendment, there is no recovery, and at one time or other, perhaps not till after a considerable period, we discover that he or she hears voices, and our prognosis changes, and instead of being favourable becomes most unfavourable.

In that other variety of insanity in which our prognosis is also unfavourable, invariably unfavourable—I mean progressive, or general paralysis of the insane—we do not, according to my experience, meet with hallucinations of hearing. In the various cases of this disorder lately met with, I do not recollect any who have been tormented in this way. Fatal as is the lesion which destroys such patients, its seat would seem not to be that of these hallucinations, and inasmuch as general paralytics present nearly every delusion, both grandiose and melancholic, which are found in the ordinary insane, we may, I think, infer that there is a special seat for voices, and that it probably is not in the convolutions of the brain. M. Brierre de Boismont, in his work on “*Hallucinations,*” states that they were found in 37 cases out of 147 of general paralysis, but those he gives are all examples of hallucinations of sight and not of hearing.

If we take a list of the various forms of insanity, such as Dr. Skae’s, with which we are all familiar, and examine it with the view of determining the varieties in which hallucinations of hearing are most frequently encountered, it will not, I think, appear that they are specially confined to certain classes, though there are some in which they are certainly rare. The data, however, on which I base my own conclusions, are necessarily limited. I trust that those with a larger experience will confirm or disprove my own impressions.

As I have not, as a rule, found hallucinations of hearing commencing in those whose insanity comes on at the climacteric period, so neither do they seem common in the insanity of pubescence. In children we should expect to find those of sight rather than of hearing, visions and spectral

illusions, or violence, and abnormal motor manifestations without hallucination or delusion of any kind. Here, again, we have a variety in which the prognosis is favourable. But when the patients are past childhood, and have reached the state of manhood and womanhood, they seem especially prone to this complication. There is a variety which has been added to Dr. Skae's list, by Dr. Clouston, termed Hereditary Insanity of Adolescence. It is not described, so that I do not know the particular meaning attached to it, nor the precise age to which he gives the name "adolescence," but, assuming it to mean the age from 20 to 25 years, this variety would, according to my experience, embrace a great many cases of insanity, accompanied by hallucinations of hearing. Such patients have not broken down in their mental health through the strain of worry or work; neither have they fallen a prey to physical causes or bodily disease, but the insanity has made its appearance because of the strong inherited predisposition, and in these cases the hereditary taint, coupled as it is with the special hallucinations we are considering, renders the prognosis very unfavourable. Dr. Skae calls all insanity due to mental or moral causes *idiopathic*, and, inasmuch as much of this must be inherited—for it is in patients who are predisposed that moral causes operate most powerfully—it follows that among his idiopathically insane we shall find many suffering from hallucinations of hearing. Another variety, the victims of which are, for the most part, young people, is the insanity of masturbation. That many of the patients who hear voices masturbate, is certain, but whether their insanity rightly comes under the head of insanity from masturbation, is a question. In fact, it is difficult to say in a great number of cases whether the masturbation is the cause, a concomitant, or even the consequence of the insanity.

There are several varieties of insanity in the classification I have alluded to, which are based on some disorder of the sexual or reproductive organs. Thus we find satyriasis, nymphomania, hysterical, amenorrhoeal, post-connubial, ovarian and puerperal insanity, and the insanity of pregnancy and lactation. I have tried to discover whether hallucinations of hearing are or are not to be looked for in patients suffering from these forms. The cases at my disposal are, I fear, too few to make my deductions at all conclusive, but I certainly have not met with them in the insanity of pregnancy, which is generally melancholia;

neither do I think them common in puerperal insanity, at any rate, in the acute stage. They are met with in connection with uterine and ovarian irritation, and I have twice found them in young women married to old husbands, both of whom were childless. Insanity from drink—insanity of alcoholism—by which I do not mean dipsomania or delirium tremens, but a chronic condition brought about by long continued tipping, I have reason to think is not unfrequently accompanied by voices. Three cases under observation at the present time are examples of this, two females and a male, and here, as might be expected, the age was somewhat advanced. One of the ladies, if not both, has also hallucinations of sight. Then we come to a number of varieties in which I believe voices to be rare. These are hypochondriacal insanity, senile, phthisical, metastatic, traumatic, rheumatic, podagrous, and syphilitic. Of malarious and pellagrous insanity I can say nothing. Post-febrile insanity, the insanity which arises in the course or decline of acute diseases, does not usually present this symptom; though there may be hallucinations of sight. In choreic and anæmic insanity I should not expect them. In short insanity complicated with other diseases seems to be free from hallucinations of hearing, which are chiefly to be found in the idiopathic and hereditary disorder, which comes on from some mental cause, or even without any assignable cause whatever.

You are aware that a distinction is made between hallucinations and illusions; that an illusion is said to be a false interpretation of a real sound, while an hallucination is a false perception, a fancied sound or voice, when there is no sound at all in reality. Some patients have hallucinations, others illusions. I do not think that there is much pathological difference between the two. Probably the inward ear, in the case of illusions, is stimulated into action by the stimulus of the sound conveyed to it by the external ear, but the idea bears no reference to the external sound, and is often a "voice" just as much as the hallucination proper. One of the most dangerous patients I ever met with was a gentleman who professed to hear no voices unless some noise was going on, as footsteps, and then he heard voices telling him to murder some one. Probably the majority of such patients have both hallucinations and illusions combined. For the purposes of diagnosis, prognosis, or care and treatment, I think it is of little consequence whether their

symptoms are hallucinations, strictly so called, or illusions. But there is a class of patients who have hallucinations of hearing, but do not hear voices, but only sounds, and this is a less formidable and altogether milder disorder, one which we may, with some confidence, hope will subside, and which if it does not, renders the sufferer less unhappy and less dangerous to himself and others. These patients, according to my experience, are not very uncommon, but their malady attracts less attention, owing to its less formidable character. The sufferer complains that noises are made in the next room or next house for the purpose of annoying him; that pipes are constructed in the wall, under the floor, or in the chimney, and he may take various steps with a view to ridding himself of these noises, such as complaining to the police, or the people next door; but this is a different state from that of the man who hears a voice commanding him to commit homicide or suicide, and straightway obeys it. I have known these noises subside and disappear for years, occasionally returning if for some reason or other the mental health of the individual had declined. I have also known patients become either accustomed to them or convinced to some extent of their falsity, and so able to live on in spite of them in their ordinary mode of life.

Other patients, though they suffered from hallucinations, were able to repress or disregard them sufficiently to carry on their daily work, or to live at home without being specially watched or guarded. Two cases I know, one that of a lady, and another of a gentleman, who thus manage to exist. Both have been away from home, but both have returned. They do not look upon the voices as hallucinations. They are fully persuaded of their reality, or were when last I saw them, but their conduct is not influenced to such a degree as to make it incompatible with life in ordinary society. How long this will last it is impossible to say, but as I shall hereafter have occasion to mention, such patients do not generally improve as time goes on.

In the years 1855 and 1856 the subject of hallucinations was discussed at great length before the Medico-Psychological Society of France, and the point chiefly in dispute was whether hallucinations are a pathological and morbid symptom, or only an exaggeration of a normal phenomenon, a modification of that which occurs in the ordinary operation of the psychical activity. On one side or the other were ranged all the chief psychologists of the day, but the debates

are too lengthy to be reproduced here. The question, however, may arise if, in a court of law, a man's sanity or insanity is the subject of investigation, and hallucinations of hearing the symptom in dispute. In the discussion at Paris no distinction was drawn between hallucinations of hearing and those of sight or the other senses; yet, as I have already said, the former differ in many respects from the latter.

Two questions are here involved:—1st. Can hallucinations occur in the normal state? 2ndly. Are they compatible with sanity? To the first I should reply that they are at all times a morbid phenomenon depending on a disordered state of the brain, or brain circulation, whether they be hallucinations of sight or of any other sense. To the second I would say that they constitute insanity, if they are of that intensity that the mind is unable to correct them by means of its reasoning and reflective power, and to recognise them to be hallucinations.

The hallucinations of sight, which are so often mentioned as compatible with sanity, are spectral illusions which can be corrected by the other senses, and are for the most part merely momentary. And in almost all the well-authenticated examples there was some degree of weakness or illness, or recent recovery from illness at the time they were seen. Even our old friend Nicolai, of Berlin, who does duty in every book in which this question is mooted, was a man so subject to attacks of congestion of the brain that he was obliged to have recourse to leeches two or three times a year.

Another case, related by Dr. Paterson, and translated by Dr. Craigie from Hufeland's *Journal*, was that of a gentleman who was haunted for two days by a phantom assembly, which only departed after the application of leeches. I believe you will find in all the cases where the details of the patient's health are fully recorded, that something was amiss at the time. A lady, with whom I am well acquainted, can almost gauge her general health and strength by the presence or absence of such hallucinations of sight. Sir Henry Holland relates a case of hallucinations of hearing which occurred in a sane man, and were recognised by him at the time as hallucinations. He was an old man of 85, and he had fallen and struck his head against a sofa, and for a time lost the power of articulation and memory. After three or four days he heard two voices, seemingly close to his ear, in rapid dialogue. Though conscious of the fallacy, he was wholly unable to check or withdraw the perception of them. They vanished the next day, and never returned.

Sir H. Holland also narrates a case, of great interest to us, of a gentleman, about fifty-two, without any obvious disease, who passed from the state in which he believed in and acted upon the reality of illusive sounds and conversations, to the condition in which, still having similar sensations, he recognised and treated them as delusions. He was asked at the later period how, when the same articulate sounds still seemed present, he had learned to regard them as delusions. He said it was partly by his never discovering any person in the place whence the voices had come, but chiefly by finding himself able, on trial, to suggest the words which were thus seemingly uttered by some one external to himself. "To these reasons," says Sir Henry, "might, doubtless, have been added some change in the actual state of the brain, however incomprehensible its nature and cause."

The latter case brings me to the consideration of the prognosis in these cases of hallucinations of hearing. You will not need me to tell you that it is most unfavourable. There can be few acquainted with asylums and asylum patients who cannot point to patients thus affected, who are both the most incurable and the most anxious of all the inmates. Many, I had almost said most, of those who make homicidal attacks on others do so at the instigation of their internal voices, and these attacks may, owing to such a source, be directed not only against the officers and attendants, but also against their unhappy fellow patients. We have to be ever on our guard, for a patient may be most friendly one minute, and in a second may change. I have a lady under my care at this time whose face changes suddenly from a smiling and pleasant expression to one of fury, and she will then rush at officers or attendants. And she is no less suicidal than homicidal, so that she can never be left alone, and can never be left at night with less than two attendants. There is an instructive case of this insanity reported by Dr. Lockhart Robertson in the "Journal of Mental Science" of April, 1861. The patient, a male, had murdered one man, and while at Haywards Heath nails, sharpened to a point, were found hidden under his mattress. He confessed to hearing voices. Concerning the latter Dr. Robertson says:—"Their influence in our prognosis is most unfavourable. Auditory hallucinations are so apt to lie dormant for a time, and again to reappear, that I should at any time be sceptical of the recovery of a confirmed case. This patient I consider to be quite incurable, and I should view the possibility of his being

set at large with the utmost alarm." You will recollect that Dr. Robertson had previously reported the case of another homicidal patient in the *Journal* of July, 1860, as one of homicidal mania without disorder of the intellect. But there had been auditory hallucinations, though Dr. Robertson was not able to detect any while the patient was under his care. I have always thought that these two cases were both of them homicides from voices, and that Dr. Robertson's caution as regards the second would apply equally to the first, viz., that these hallucinations are apt to lie dormant and again re-appear. Moreover, it is not to be forgotten that patients find out in time what it is that keeps them in an asylum. They are examined and cross-examined upon their delusions by commissioners, doctors, and officers, till they are well aware that they will not get away so long as they acknowledge certain beliefs; so they deny them, and frequently it is difficult to ascertain whether they have lost them or not; sometimes a trial alone will decide the point. Thus they will deny that they hear voices. A lady under my care a few weeks ago was full of voices, and told me whose they were and all about them. Now that she is placed in an asylum, she entirely denies that she hears any, but as her conduct is equally insane, I have not the least doubt that she does, and I look upon her case, though recent, as perfectly incurable.

Of the persistence of these hallucinations nothing can give us a stronger proof than the case I have quoted from Sir H. Holland of the gentleman who continued to hear them even while he was aware of their falsity. If we contrast this with the ordinary delusions of insanity, we shall see how organised the hallucinations must have become. A delusion ceases to be a delusion when the patient recognises it to be a false idea. He may recollect having entertained it, but that is all. But in the case I have mentioned the hallucination remained, though there was sufficient sanity for it to be appreciated as false.

I have said already that the higher brain centres are not, according to my view, affected primarily by this disorder. There appears to be but little disturbance of the intellectual functions, at any rate at first, and some patients would, and do, pass for sane people, but for this one exception. Hence, the difficulty of dealing with them. They may tell us that the voices have ceased, and then there appears to be nothing amiss. They may persuade their relatives and

friends that they are quite well, and the general medical public do not at present comprehend the grave character of these voices. My own belief, however, is, that the tendency of such patients is to get worse, that the power of repressing the voices and their suggestions becomes less and less, and that, in the majority of instances, the mental health is undermined by the constant worry and loss of rest and sleep brought about by them. The diagnosis of these hallucinations is often difficult, for patients will not always confess them. Much may be learned by observation of them when alone, for then they are most likely to listen for and answer the voices. And often we may detect a patient listening even while talking to us, and, by narrowly watching, may ascertain the existence of hallucinations, which may be quite unknown to the friends and relatives.

In my experience I have found these voices more common in chronic female patients than in male. Of 34 ladies now in an asylum, not less than 14, and possibly 16, hear them, while of 43 gentlemen I cannot be sure of their presence in more than nine. These numbers are, of course, very small for statistical purposes. I should be glad to hear the experience of those who have under their observation large numbers of the insane.

The Perception, &c., of Time as a feature in Mental Disease.
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(Read before the Quarterly Meeting of the Medico-Psychological Association at
Edinburgh, November 27th, 1873.)

The power or process by means of which Time is mentally recognised and estimated independently of, or before, its external and artificial measurement, has not received a clear or comprehensive solution at the hands of those who have dealt with the subject. Certain metaphysicians connect the idea of duration with that of extension, and conceive that the child, or the savage, may have acquired a notion of intervals, or interrupted extension, from seeing and feeling through the muscular sense the alternate extension and flexion of his limbs; all comparison of such events with the successive changes in objective phenomena, as in days and nights, being the result of subsequent experience. Certain

others conceive that our notion of Time originates in our consciousness and observation of succession in our thoughts, feelings, and mental states, a succession which necessarily involves a series of changes separated in time, and order, and nature. Sir W. Hamilton, apparently aware of the difficulty of the problem, says that "Time is a form of thought," and "if we attempt to comprehend Time, either in whole or in part, we find that thought is hedged in between two incomprehensibles." Other philosophers, belonging to a more practical school, who may be claimed as psychologists, contend that the subjective element of Time is imparted by the communication of impressions upon the external senses to the sensorium, coming as these must always do in succession with intervals of different length, and, as they often do, of regular length and intensity. It will be observed that in all these hypotheses it is taken for granted that the mind is capable of directing attention to its own conditions, and, to a certain extent, of analysing these, of marking their course, their swiftness, or slowness, their regularity, or irregularity. On the other hand, the phrenologists contend that there is a primitive and special faculty connected with a portion of the anterior lobe of the brain, by which Time, or the succession of events and intervals, is perceived or becomes known to us. My own speculations formerly led me to the theory that the perception of rhythm, or regular sequence, in sensorial impressions was conveyed by the pulsations of the cerebral arteries, either to the whole brain, or to such portion of it as may take cognisance of internal movements or changes. Sir H. Holland, that noble veteran, that learned and travelled and philosophic physician, who has just passed from amongst us, dedicated a chapter in his "Medical Notes and Reflections," p. 499, to the exposition of "Time as an element in Mental Functions," in which his chief object is to show that ideas or different modes of mentalisation arise and are propagated in different degrees of velocity and intensity in Time in different temperaments, and in the same individual at different periods, in accordance with the predominant physical or mental condition.

But whether the Perception now under consideration be an intuition, an inference drawn from reflection, or be the result of structural or what are vaguely called molecular alterations in the brain, experience shows that different individuals are endowed with the power in various degrees of strength and range, as is perhaps best exemplified by the

difference which obtains in the estimate by different individuals of the variation of Time in the transit of a star across the micrometer thread of a fixed telescope. Physical disease lays bare the fact that during the course of fever, especially of puerperal fever, there is a total, or partial, loss of the appreciation of the lapse of time. Days, weeks, months are blotted out from the Calendar of Life. There is an inability to mark the sensations which constitute the stages of decay or recovery, even to note the hours and days recorded by the ordinary mechanical means. Even in health and vigour persons are met with who have little or no knowledge of the changes going on in their own constitutions, of the appointed periods and seasons in social arrangements; who never are aware of the duration of days, hours, minutes, and who are regulated by habit and imitation rather than by an apportionment of Time. It is asserted that our Celtic forefathers were defective in the computation of Time, and calculated "days, and years, and ages past," by signal events, catastrophes, or cataclysms, rather than by divisions in Time. A similar allegation is made as to uncivilised races. Galton says *—"We had to trust to the guides, whose ideas of time and distance were most provokingly indistinct. They have a very poor notion of Time. If you say, 'Suppose we start at sunrise, where will the sun be when we arrive?' they make the wildest points in the sky, though they are something of astronomers, and give names to several stars. They have no way of distinguishing the days of the year, but reckon by the rainy season, the dry season, or the pig-nut season." At the opposite extremity of the scale may be placed the celebrated Lord Stowell, "who could at all times state the precise hour, or minute, without reference to clock, watch, or any artificial means of measurement;" † and the equally interesting, though not so celebrated, human timepiece, Chavalley, ‡ who, though deaf, by what he designated "an internal movement, or profound calculation, which neither thought, nor labour, nor anything, could stop, possessed the power to indicate, to a crowd around him, the passing of a quarter of an hour, or as many minutes, or seconds, as anyone chose, and that during conversations the most diversified and notwithstanding the recourse to every means by which his attention might be diverted." When tested by a scientific

* "Narrative of an Explorer in Tropical S. Africa," 1853, p. 182.

† "Recollections of Past Life," by Sir Henry Holland, 1872, p. 195.

‡ "Bibliothèque Universelle," vol. 27.

observer, M. Chavannes, "he shook his head at the time appointed, altered his voice at the quarter, half, and three-quarter minutes, and arrived accurately at the end of the period named." It would appear that this singular faculty continued in operation during the night, and during sleep, and that, provided his slumbers were not profound, nor had followed fatigue and exhaustion, he could within a very brief period after awakening indicate within a very few minutes what time had passed, or, in other words, how long he had been unconscious. In the infant and undeveloped mind instances of precocity in the perception of time, so far as musical intervals are concerned, are frequent. Crotch played the organ at three years old; Mozart acquired a knowledge of music by imitations of his sister at three years old, composed at five; Handel was sensible of musical intervals and practised on a deafened clarichord at three, and played the harpsichord and organ at first sight when seven years old; and Brigham mentions a hydrocephalic child who sang and kept time when he reached the age of fifteen months.* Even where the intelligence is limited and ineducable similar peculiarities have been noticed; idiots are to be met with who display, though unable to interpret our means of measurement, an accurate knowledge of regular intervals and of the passage of Time; and every asylum and school may afford examples where an accurate rhythm is preserved in their oscillations. It has been affirmed that such movements, as well as those exhibited in malleation, in the alternate pronation and supination of modifications of chorea, &c., are performed at a distance of time precisely equal.† This is perhaps correct when the observation is confined to a single individual, but the succession of acts varies greatly in rapidity in different individuals and in different forms of disease. Our inquiries, however, will withdraw us from the contemplation of what may be regarded as the normal manifestations of the perception of Time, and lead us to phenomena indicating the enfeeblement, or exaggeration, of this power; its morbid influence, either in compliance with, or in opposition to, volition, and as demonstrated in acts, habits, and muscular movements. The most notable illustrations of the association of regular intervals, or the succession of events in Time,

* "Remarks on the Influence of Mental Cultivation and Mental Excitement." 1836, p. 27.

† Much information on this point is contained in Professor Laycock's "Nervous Diseases of Women."

will be found in the periodic, or paroxysmal, character of certain nervous affections, and of the *Folie circulaire ou à double forme** of the French. Besides the more striking illustrations, we have noted periodic laughter, periodic expressions, periodic micturition†. Conolly attended a case of epilepsy which assumed, in the return of convulsions, a tertian type; and it is well ascertained that in marshy countries the neuroses are apt to take on an intermittent form. But the subject is too vast and too profound to be embraced here, and we shall confine these remarks to cases in which Time enters as a feature, or a symptom, of disease, and where it is independent of the characteristics of the class neurosis, and, to a certain extent, of the diathesis of the patient.

Everyone must be aware that as we recede from particular seasons and circumstances memory fails to recall them in their original distinctness and vividness; indeed, as age advances large portions of our personal history are deleted altogether. But under the pressure of disease there occur large gaps, with sharply defined limits, up to one side of which every event is faithfully and accurately recollected, and beyond which the recollections are equally clear and truthful; but between which all is vacuous, unfathomable, and irrecoverable. When this loss of time and everything by which it was marked occurs in Mania, it may fairly be attributed to the extreme rapidity and tumultuousness with which thoughts and feelings follow each other, and the inability of attention to mark the members of the series, for they have no sequence, and, if the expression may be allowed, to commit them to memory; when in Dementia, it is obviously owing to the absence of subjective states in consciousness, and to the obtuseness of perception in receiving and registering external impressions. Such losses are frequent in the advanced stage of General Paralysis and Epilepsy, even while places, persons, and events are still remembered. When occurring in Monomania the hiatus is the result of delusion; and when in that rare Psychose, Double Consciousness, the oblivion of the one state alternates regularly with the supervention of the other.

About twenty years ago, I became acquainted with a lady who, after recovering from an attack of what may be called

* "Traité des Maladies Mentales," par M. le Dr. B. A. Morel, p. 474.

† I am indebted for an example of the latter to Dr. Anderson, Southern Counties Asylum, Crichton Institution.

Hysterical Fatuity, had lost twenty years of her previous existence, although that period had included her youth, courtship, and marriage. She had to recommence the education of the senses, as well as of the affections and intellect; never regained any conception of her previous relations to the world, society, or her family, and never recognised her husband. Dr. Abercrombie* says, "A lady whom I attended some years ago in a protracted illness, in which her memory became much impaired, lost the recollection of a period of about ten or twelve years, but spoke with perfect consistency of things as they stood before that time." He mentions several other apposite instances, and quotes Dr. Beattie as to a gentleman, "who on recovering from an apoplectic attack was found to have lost the recollection of exactly four years; everything that occurred before that period he remembered perfectly." I have, within the last week, lost a patient who has been in seclusion for thirty-eight years. This man was well educated and acute; after a brief paroxysm of mania he became a Theomaniac; but, amid the most absurd, heterogeneous delusions as to his divinity, translation to Heaven, &c., there was conspicuous the fact that he had lost an entire year, that there was obliterated from his mind 1836, although during it had grown up to maturity his second nature.

Inmates of asylums are often to be met with who have abandoned our calendar, who have lost, or transposed, days and weeks; who declare Tuesday, or Saturday, to be Sunday; and there has recently been submitted to me the sketch of a female, in confinement, who, being 70, declares that she is 103 years old, and says that she has counted every day of it. Her general memory and intelligence are perfectly clear. She avers that February is the only true month, and that all the others are liars; her aphorism being seven days in a week, four weeks in a month, twelve months in a year. Acting upon this datum she counts the days and months, and has got all wrong in her calculation. For instance, when she comes to the 28th of Oct., she says the month is finished, and the next day, really the 29th of Oct., she calls the 1st of Nov. She has been carrying on this misleading system for thirty years.

Several demented have come under my notice who, by some mnemonic memory, the rationale of which I could not penetrate, retained a perfect knowledge of the dates of

* "On the Intellectual Powers," 1831, p. 161.

great events, and could tell precisely the year, day, and hour, of a great battle or catastrophe, realising the ideal of Mumblazon in "Kenilworth;" but who had lost every connecting link or separating convulsion which could lead to, or suggest, the different points of time, or history, in their chronology. There is another and very opposite condition to that in which the circuits of the years leave no "footsteps on the sands of time," where there is an exaggeration, an imaginary extension, of years, even of centuries, through which reminiscence travels back, gathering up fragments as proofs and monuments of its vast duration and experience. In Melancholia this erroneous measurement of suffering may originate in the prolonged extension of one unvarying misery, and in the sustained concentration which the endurance of pain calls forth. In Monomania the conviction will proceed not from miscalculation, but from a delusion that the individual is divine, immortal, has died and risen again, is Methuselah, the wandering Jew, &c. This delusion is frequently met with in the first stage of General Paralysis. De Quincey* has described such fancies as concomitant with opium poisoning. "This, the expansion of space, disturbed me very much less than the vast expansion of time. Sometimes I seemed to have lived for seventy or a hundred years in one night; nay, sometimes had feelings representative of a duration far beyond the limits of any human experience. . . I ran into pagodas, and was fixed for centuries at the summit or in secret rooms. . . Thousands of years I lived, and was buried in stone coffins with mummies and sphinxes in narrow chambers at the heart of eternal pyramids." These, which may be legitimately called morbid impressions, must follow the long-continued saturation with the drug, as its ordinary effects are the extinction and forgetfulness of Time and space. We have had patients who witnessed the siege of Jerusalem, who fought at St. Jean d'Acre, who were crucified on Calvary, who had conversed with St. Paul; and one good humoured, ignorant sailor who, besides keeping time in the disposal of myriads of coils of unseen and intangible rope, dated his acquaintance with me, as a practitioner, a thousand years back in Memphis, and endeavoured to prove his assertion by enumerating the medicines which I had prescribed, and the cures which I had effected.

* "Confessions of an Opium Eater." Black, Edinburgh, 1866. Pp. 259, 263.

All I address must be familiar with "the measured tread of marching men," with individuals who walk a certain number, and always the same number, of steps in the same direction, and then return; who walk in circles or diagonally; who touch particular points or objects at given and apparently equal distances. In asylums they must have met with others who accompany such acts with certain sounds, songs, or musical accompaniments, thus extemporising some mental perception of measured intervals. A person long under my care always turned completely round in the same direction, rising on the same heel as a pivot three times before leaving an apartment. He is still alive, but has long since discontinued the practice. Another patient who, however, preferred carriage exercise, whenever he did walk strode forward in paces of exactly a yard in length, with a solemn or military cadence in the step. When he trod on carpets he invariably and carefully placed his foot on similar patterns at precisely the same distance from each other. A like custom is said to have been rigidly adhered to by Dr. Samuel Johnson, who in going up St. James' Street paced as if in the ranks of a regiment, touching every lamp post which occurred in his way.

I have at present under my care a young lady who presents the following outward and visible signs of some mental process involving a modification of the measurement of Time. Although seventeen, she has the aspect of thirteen years. She is slow, sluggish, and defective in mental activity. These symptoms offer the greatest obstacles to her improvement, but her most prominent manifestations consist in her touching every object, in repeating all her acts twice, or oftener; she repeats what is addressed to her and what she answers twice. She plays over the same tune twice; she often goes back two steps on the road, then dances forward to regain her position, and walks on. She will return to touch a point omitted in advancing. In reading she repeats the same word, or sentence; in her muttered soliloquies she may be heard going over the last question addressed to her, and in all these acts there is a perceptible rhythm and alternation. She is conscious both of her torpor and eccentric doings, and even laughs at their absurdity, but feels constrained to deport herself in the manner described. Similar movements, although complicated and in one sense obscured by more startling and significant symptoms, have been recorded in former times and upon a much grander scale.

A boy, *æt.* eight or nine, presented the following symptoms:—After suffering from various anomalous ailments, supposed to be nervous, he was seized with an involuntary and apparently uncontrollable tendency to leap. When attacked he threw himself upon all fours, and in this position leapt four times from left to right, and he emitted a loud inarticulate cry during each movement. The saltations were in rapid but regular succession, and this quadrupedal exercise was continued until interrupted by exhaustion, or the interference of those around. This case was examined by my colleague, Dr. Gilchrist, about the year 1855, in Montrose; and it is worthy of remark that in Forfarshire, about fifty years before, had occurred that singular epidemic the leaping ague, which was characterised, not merely by the performance of extraordinary and perilous feats, such as climbing trees, walking scatheless along the roofs of houses, in a manner which an acrobat might have envied, but by swinging rapidly and rhythmically round the beams of the house, like a fly-jack, upon which the epigastrium rested, forming the axis of motion. The disease was confined exclusively to females, and in certain hysterical women I witnessed many of the traces or remains of the epidemic in 1835. In one of these—a coarse but rather sensible person—the movements were rotatory and rhythmical, the feet being the pivot; they were entirely involuntary, and ceased only when vertigo, or loss of consciousness, supervened.

From a large number of instances of Trochaicism we select the following:—1. An idiot, who during his excited periods touches his knees with his right hand and lifts it to his nose regularly and rhythmically, at the same time uttering a whistling sound, with short intervals. The number of times he executes the motion irregular. 2. A dement, who plucks at his coat rhythmically, and who, at certain intervals during this act, touches his knee with his forefinger, or the button of his coat, or the top of his neighbour's head. He also touches the palmar aspect of the left index and middle fingers with the point of the right middle and index fingers successively, and at particular intervals touches certain parts of his head. The movements are, with little variation, performed ninety-two times in the minute. 3. An idiot moves fingers rhythmically backwards and forwards before his eyes. 4. A chronic maniac, who struck the palm of his left hand with the back of the fingers of the right, then with the front

of his right, then with the back of his right again, and then loudly with the palm of his right again. 5. A dement, who strikes the palm of his left hand with his first and second fingers thrice, and then with his forefingers only at the fourth beat. He then makes a contortion three times in succession. 6. A Religious Maniac in speaking moves incessantly, steps alternately from side to side, as in setting to partners in a quadrille. In most instances he takes three short steps to the right, and then as many to the left, and so on alternately. Occasionally, though comparatively rarely, a fourth step is taken. Each series of three steps was completed in three seconds on the only occasion they were timed.*

It is, of course, open to question whether the gyrations in the leaping ague, &c., were altogether independent of volition. My own experience would lead me to believe that at first, in the initiatory act, such movements are voluntary, but that ultimately, either from cerebral congestion and vertigo, or from some other cause, they pass beyond the control of the will and stand in the same relation to consciousness as the eccentric and grotesque attitudes in chorea, where muscular motion originates in volition, though its direction and continuance is regulated by other laws. A case has just been made known to me where a person labouring under organic disease of the brain moved the right arm round and round rhythmically precisely forty times per minute, and where the narrator designates the phenomenon "mechanical." This origin is "the some cause" alluded to above, or an occult, instinctive, measure of time, unknown to perception, except by its effects, which consist in successive contractions of the heart, alternate inspiration and expiration, the regular return of secretions, &c.; a sense which may have, rather than the vibration of the lamp in the Cathedral of Pisa, suggested to Galileo the law of oscillation, and the most perfect measure of time by the pendulum. That the leaping ague was more than a mere intense form of chorea may be gathered from the epitomisation of a typical and comparatively recent example. Besides the irresistible propensity to dance and whirl around, A. B. leaped upon the furniture of the room, ran round a table, sprang upon the top of the door to swing backwards and forwards, leapt over a staircase at one bound, and desired to spring out of a window, spoke in language which those

*Certain of these have been supplied by Dr. Aitken, Inverness District Asylum; and by Dr. Cameron, Med. Ass., Crichton Institution.

around could not understand, wrote from right to left, and both in speaking and writing transposed the letters of each word, so that the last became the first. *

Dancing was the characteristic of that epidemic madness which disturbed and desolated Germany, the Netherlands, and Italy during the thirteenth, fourteenth and fifteenth centuries. It is not necessary at present to distinguish the dance of St. Vitus, or St. Guy, from Tarantism, or the Tigritia of Abyssinia. In all of these affections, which spread to hundreds and thousands of the population, both Teutonic and Celtic, children and octogenarians, there were observed wild and exuberant excitement, delusion, and antipathies with uncontrollable impulses to run, leap, all such movements ultimately passing into dancing, which was generally aggravated, though sometimes mitigated, by music. These dancers were impelled, sometimes by imitation, sometimes by fanatical exultation, sometimes by terror and the fear of being poisoned, and it was when under the latter emotion that harmony seems to have been most powerful and curative. Airs have been preserved which were employed as antidotes in arresting or moderating the frenzied rotations and leaps of those urged on by dread of the bite of the Tarantula and by other causes; and that some interference was required is evident, for although large numbers of those affected recovered, many resisted all coercion, and danced themselves to death. These tunes which were regarded as remedial are said to have been of peculiar character, and to have contained transitions from a quick to a slow measure, and to have passed gradually from a high to a low key. The sensibility to music was so great that at the very first tones of their favourite melodies the affected sprang up, shouting for joy, and danced on without intermission until they sank to the ground, exhausted and almost lifeless. Although thus excitable, no external or audible music was requisite to suggest or sustain such movements. Apparently stimulated and guided by some internal rhythm, the performers danced, sometimes with infuriated, but always with measured steps, wheeling hand in hand in circles, not merely from street to street, but from town to town, dropping down when exhausted, but having their places supplied by fresh recruits. When under this inspiration the most rude and untrained victims exhibited gracefulness, even elegance, in the dances, and manifested disquiet and abhorrence when false notes

* Vide Crichton, "Edinburgh, Medical and Surgical Journal," vol. 31, p. 299.

were introduced into the music. Besides displaying unequivocal symptoms of insanity in various forms, and in the most fearful and formidable intensity, these sufferers presented various peculiarities which seemed to connect their condition with that known to exist in other psychoses, such as intolerance of certain colours, creeping on all fours like the Lycanthropes of the Jura, genuine choreaic gesticulations, touching particular objects four times in succession and at regular intervals, as was seen in the leaping ague. While we are altogether sceptical that the fantastic and fatal dances were caused by the bite of the Tarantula, and are somewhat doubtful as to the *ratio medendi* of the Tarantella, there is no doubt whatever that a wide-spread disease, marked by rhythmical movements and influenced by music, existed in Apulia, and it is not a little striking that, subsequently, the Asylum at Aversa in the same kingdom obtained great celebrity, which has outlived its cause, by the treatment of mental diseases by music, by swinging of the cots in which the patients were placed to and fro at measured intervals, and so on.

In modern times similar conditions have been treated by similar means. A. W., æt 22, was in 1816 seized with chorea. She struck the furniture violently and repeatedly; kneeling upon one knee she sprung up and struck the ceiling; to do this she rose 15 inches from the floor; she frequently danced upon one leg, holding the other with the hand, and occasionally changing the legs; subsequently her family observed that the blows on the furniture were more continuous, and assumed the regular time and measure of a musical air, and that her leaps were regulated by the succession of the strokes upon surrounding objects. Her lips were observed to move as if in harmony with her steps and strokes, and ultimately her progression became a graduated march, or resembled the figure of a minuet or of a country dance. A spectator conceiving that he recognised the tune imitated by her blows upon the door, table, &c., sung it, when she immediately began to dance, and continued to dance until he was exhausted. A drum and fife were now introduced, the sounds of which invariably induced dancing, and attracted her towards the instruments. Whenever she lost the step or a false note occurred, she ceased to move. She confessed to her medical man that a tune was ever present in her mind, and was occasionally so powerful as to compel involuntary movements. It was discovered that when the drum was beat

in a continuous roll, instead of a tune, the motions instantly ceased, and this interruption to the morbid associations, upon which the disease was supposed to depend, having been transferred to the commencement of each attack all involuntarily action was at last permanently arrested. It is noteworthy that when pacing in her stately manner each stride placed the foot upon the joinings of the stone flags, particularly when she looked downwards.*

That, apart altogether from the measurement of intervals by the aid of successive mental states, or a special faculty, and likewise apart from all morbid exaltation of such means, there exists in the healthy and robust mind a certain rhythm, might be demonstrated in various ways, but I shall content myself with the following illustrative narrative:†—“Mezzofanti had the habit of thinking, when alone, in each and all of his various languages in succession, so that, without the presence of a second individual, he almost enjoyed the advantage of practice in conversation.” The only parallel for this extraordinary mental phenomenon, that I know, is a story which I somewhere read of a musician who attained to great perfection as an instrumental performer, though hardly ever known to touch an instrument for the purpose of practice. This man, it is said, was constantly practising in his mind, and his fingers were actually observed to be always in motion, as though engaged in the act of playing.

About twenty years ago there was placed under my charge a gentleman whose proteiform malady presented many of the features which have been described. J. M., æt. 37, an officer in the Austrian army, who had five brothers or sisters of unsound mind, was supposed to have induced mental unsoundness by gross debauchery. He laboured at one time under violent mania; then under panphobia, in violent paroxysms; then under partial fatuity, with delusions. He was attacked repeatedly by epileptiform convulsions; he was cataleptic, holding the hands upright, or in some awkward position for long periods; he was choreaic when he tossed from one side to another, assumed absurd and dangerous attitudes; he was in the habit of executing repeated summersaults; he was subject, before or after fits, to symmetrical movements of the arms and head, synchronous with respira-

* Transactions of the “Medico-Chirurgical Society,” vol. 7, p. 519. Dr. Kinder Wood.

† “Life of Mezzofanti,” p. 477.

tion, striking his chest with each hand alternately, and at regular intervals; and frequently, when not excited nor comatose, his fore-arms revolved round each other with a rapidity and force which could with difficulty be checked. The circular action was renewed whenever the obstacle was removed, and was at all times regular and rhythmical in interval. He appeared constrained to imitate the gait and manner of those around, and gave way to loud vociferations or ullulations.

I would not venture from the preceding narratives to draw dogmatic conclusions, but conceive that from them, and from collateral considerations, we are entitled to infer that, as the subjective measurement of time occurs in imperfect and rudimentary minds, and instinctively, it cannot depend upon any act of consciousness in noting the succession of mental states, although the phenomena of abstraction, concentration, mono-ideism when the mind is fixed upon one particular object, as then all conception of the passage of time is shut out, appear to countenance such a supposition. 2ndly. That the condition and the confession of the choreaic A. W., the accurate and graceful dancing of the deaf and dumb, &c., set aside the hypothesis as to the regular succession of external impressions; and 3rdly, that the bearing of all these observations would induce a belief in the existence of a time-perceiving and time-regulating power, either created and conducted by some physico-psychical operation, or by intuitions similar to those which recognise the relations of number, &c., and which certainly depend upon the integrity and activity of the whole, or of a part, of the nervous centres.

The Madmen of the Greek Theatre. By J. R. GASQUET, M.B.

(Continued from page 222.)

VI. CASSANDRA.—THE FRAGMENTS.

The seclusion in which the women of Athens lived naturally made the elder dramatists shrink from exhibiting them on the stage as under the influence of violent passion. Euripides departed from this rule, and was lashed for it by his merciless satirist; but even he, who depicted a Medea and a Phædra, did not venture to bring a raving woman before his audience. There was just one case in which the Greeks would not be justly scandalised by such a presentment—

where madness was supposed to be supernatural in its origin, and consecrated by religion, and an instance of this has been happily left us in the *Bacchæ*. My readers have been made acquainted with that beautiful sketch of an epidemic of religious insanity, and I have now to describe an incidental portrait of a "wise woman," when the spirit of prophecy is upon her, and she speaks as one raving, yet possessed by the God.

Cassandra is one of the saddest figures of Greek legend, and the faint lines in which she has been sketched add a mystery to the gloom that surrounds her. But, as being the heathen counterpart of those seers of the people of God upon whom had been laid the burthen of prophecy in vain to a doomed city and to a faithless race, her story contains elements of perennial truth and beauty, which made her a fitting subject for the tragic muse.

She is thus introduced as one of the most important characters into the *Agamemnon* of Æschylus. When taken captive after the siege of Troy, she had fallen to the lot of the king of men, and accompanied him to his Argive home. Clytæmnestra urged her to follow Agamemnon into the palace, but she remained without, absorbed in silent grief, and when at last the traitorous wife left her alone with the Chorus, she breaks into a wild cry of woe and anguish, calling upon Apollo, and accusing him as the author of all her ills. At first the Chorus endeavour to soothe her, but they soon perceive she is about to prophecy; she discerns that she has come to a dwelling stained already by many fearful deeds of blood; and then, in wild and hurried metre, and in mystic language, she foretells Agamemnon's impending doom:—He has been caught in a net; the cow has taken the bull in a snare, and is about to slay him; and next she laments over her own fate. The Chorus break in with—

"As one that raves, and yet divinely urged,*
Thy doom thou mourn'st, in notes unmusical;
Like that dun bird, insatiate of song,
The nightingale, that 'Itys,' 'Itys,' cries,
Lamenting, with clear note, the sorrows of her life;"

But she continues in a still wilder strain; she sees the Erinyes sitting on the house-top and chanting the curse that has been laid on it of old; and she appeals to the truth of this as a proof that what she now foretells shall surely

* φρενομανής τις ἔτι θεοφορήτος.

come to pass. As Plumptre remarks, the Chorus recognise her *clairvoyance*, in seeing the past tragedies of the family of Atreus; but while they hesitate and question her, she cries out that the dread burthen of prophecy is again tormenting her; the foul deeds done in that house are now more plainly shown to her. "Like the phantoms of dreams," she sees the children of Thyestes, who had been served up as a banquet to their father in that very dwelling; they are seated on the roof, having their entrails and "the meat of their own flesh" in their hands. In this a return has to be made to her master; the destroyer of Troy knows not what the false-tongued woman means who will presently murder him. The Chorus do not understand her even yet, and when she tells them plainly that Agamemnon is to be slain, still continue to question her, until she breaks out, for the last time, with—"Alas! what fire is this? It rushes on me"—and proceeds to foretell her own death. She has prophesied for the last time; she casts away her soothsayer's fillet and wand, and, though she is full of womanly shrinking from the place of blood, and from the loss of that life which is so sweet, there is no more wailing or excitement, but she goes into the palace to meet her end with a calm dignity which might be looked for in the daughter of a great king.

I have given a very meagre outline of this grand episode, which occupies two hundred and fifty verses of the *Agamemnon*, but I think something of the beauty of the original must be seen even through my inadequate description. The best proof of the esteem in which the ancients held it is to be found in the imitations it produced. Euripides was bold enough to challenge a comparison with his great predecessor by bringing Cassandra on the stage in the *Troades*; but his prophetess is tame and feeble compared with her of Æschylus; she begins, indeed, by prophesying in ordinary iambics, but soon, passing into an involved argument, she deliberately says—"Though inspired, I will cease my ravings awhile;"* as if (Paley remarks) it were a controllable impulse, and not an inspiration from heaven. The Latin imitators are better, though the fragment preserved by Cicero hardly seems to deserve his praise. Seneca errs, as usual, on the side of exaggeration: he makes the Cassandra of his *Agamemnon* a character of more importance than Æschylus does, and she

* ἔνθεος μὲν, ἀλλ' ὁμῶς
 τοσόνδε γ' ἔξω στήσομαι βακχευμάτων.

is made to appear more actively insane;* but his raving prophetess is as inferior to the Greek presentment as a statue of Bernini's is to one by Michael Angelo.

As far as I know, there is only one classical portrait of the kind which can at all compare with the Agamemnon; and that is a mere sketch. The Cumæan Sybil of Virgil is drawn with such a finished grace that I cannot help transcribing the few lines in which her prophetic "afflatus" is described—

"Ventum erat ad limen, cum virgo, "poscere fata
Tempus," ait, "deus ecce deus;" cui talia fanti
Ante fores subito non voltus, non color unus,
Non comptæ mansere comæ, sed pectus anhelum,
Et rabie fera corda tument, maiorque videri,
Nec mortale sonans, adflata est numine quando,
Jam propiore dei." †

The literary excellence of Æschylus's description is owing to its fidelity to nature: and this is why I look upon it as most important to my purpose. I take it that in this splendid scene (which Müller calls, "the most thrilling perhaps that ever emanated from tragic art") ‡ we have a picture, drawn from real life, of a woman suffering from religious mania, and venerated therefore as a prophetess.

It would be impossible for me to enter seriously here upon the large question of the way in which the ancients looked upon madness as a supernatural state; I am, therefore, obliged to pass over much that is curious and interesting, in the hope of being able to return to it at some future time. When remarking on the *Bacchæ*, I have already dwelt on another side of this subject, and I may observe that here, as

* Thus she breaks out with—

"Cui nunc vagor vesana? cui bacchor furens?
Jam Troia cecidit falsa, quid vates ago?
Ubi sum? Fugit lux alma et obscurat genas
Nox alta, et aether abditus tenebris latet.
Sed ecce! gemino sole præfulget dies
Geminumque duplices Argos attollit domos."

She sees the fall of Troy acted over again, and foretells her own approaching end; at last she falls down exhausted, and the Chorus exclaim—

"Jam pervagatus ipse se fregit furor,
Caditque, flexo qualis ante aras genu
Cervice taurus volnus incertum gerens.
Relevemus artus entheos —"

But she continues to be so persistently noisy and violent that one can hardly help sympathizing with Clytæmnestra, who stabs her at last with a—"Furiosa, morere."

† Aen : vi., 45-51.

‡ Paley: Note on v. 1039 of "Agamemnon."

usual, Plato is the best interpreter of the tragedians. I quoted a passage from the *Phædrus* in which he makes Socrates say that "there are two kinds of madness—the one caused by human disease, and the other by a supernatural disturbance of the ordinary mode of life." He goes on to say:—"Of the divine kind we make four divisions, according to the gods that produce it: assigning the inspiration of prophecy to Apollo, the knowledge of mysteries to Dionysius, poetry to the Muses, and to Aphrodite and Eros we ascribe the fourth, which we call the madness of love, and the highest of all."

Not to multiply quotations on an endless subject, I will only remark that Cicero has also put the popular view into the mouth of his brother, in the first book of his treatise "*de Divinatione*," although he combats it afterwards; and his chief example of this kind of prophecy is "*Cassandra furens*."

When this was the teaching of poets and philosophers; when Delphi and Dodona, Delos and Patara, and many another shrine were thronged by men anxious to learn the secrets of the past or the future, what wonder that women were ever to be found to suffer this divine madness? The marvel rather is, that the mischief was so long in attaining the gigantic proportions it reached at last during the decay of paganism. The contagion of prophetic madness had by that time spread from hysterical girls and women to the other sex, particularly among the excitable Asiatics and Africans; "*fanatici*" and "*theoleptici*" used to live about the temples, inhaling the odour of the sacrifices, and prophesying with strange contortions and violent excitement.*

I can only refer in passing to another cause of temporary insanity which sometimes, at least, seems to have been at work. I mean the drinking narcotic potions, or inhaling medicated vapours, which, in predisposed persons, would, no doubt, contribute powerfully to disturbing the reason. Such is the most probable interpretation, as it seems to me, of the tales of the vapour which rose from the earth at Delphi, and of the various drinks which were given to the soothsayers before they prophesied.†

* Perpetual shaking of the head (apparently involuntary) seems to have been a usual habit of these "*fanatici*," according to Quinctilian (11. 3. 71) and the lawyer Ulpian (Dig. 21. 1. 1. 9). For further information, see Döllinger, "*Gentile and Jew*," ii., p. 182.

† The similar employment of drugs in the magic of the East and of mediæval Europe is well known. As to Delphi, St. Gregory of Nyssa speaks of "a certain prophetic water, producing wanderings and ravings (*παραφορὰς καὶ μανίας*) in those who tasted it."

Besides these there must have been numerous cases of more or less deliberate imposture, which must have been very common, especially when soothsaying came to be a profitable occupation, as in the instance of the divining girl at Philippi in the time of the Apostles, who brought in much gain to her masters, just as a "medium" might do now.

The maxim of the Greek philosophers that no one prophesied unless he was beside himself, and knew not what he was saying,* was so fixed in common belief that Christian orators† were able to appeal effectively to the contrast of the prophets of the old and new law, who spoke as reasonable men, knowing what they uttered.

But I am wandering too far from my text, and must begin my examination of the lost plays of the tragedians.

As far as I can judge from a rather cursory examination of the voluminous fragments of Euripides, we do not seem to have lost anything of his which would have borne upon my subject, and even those lost plays which appear at first sight to have dealt with madness give me nothing to quote, not even hints that they would have been interesting to us if preserved. My curiosity was most excited by seeing in Aristophanes that Euripides had taken Bellerophon as the theme of one of his tragedies; for this hero was the type of a melancholic patient, "seeking desert places, whence the lines of Homer—"

"But when he was hated of all the gods,
He wandered indeed alone over the Lycian plains,
Eating his own heart, avoiding the footsteps of men."‡

But I have been unable to find any description of this scene, which would have been the more valuable to me, because unique in Greek tragedy.

The case is very different with Æschylus and Sophocles; amongst the large number of their lost plays,§ there must have been several of equal interest with any that have been preserved to us.

* Plato *Apol. Soc.*, p. 22. *Timæus*, p. 71. The Peripatetic school which took the more modern view, that the "Sibyls and Bacchæ and diviners" were merely insane (*Problem xxx.*) never had any popular following until Christianity prevailed. They attributed the soothsaying faculty to the melancholic temperament (*Cicero de Div.*, i., 81); possibly from the abstraction in which melancholic lunatics are plunged, and their use of mysterious phrases.

† S. Joan Chrysost. *Hom.* in *Ps.* xliv., and in *i. Cor.*, xxix., 1.

‡ *Aristot.*, *Prob.* xxx. *Cicero Tusc. Disp.* 3. 26. 63.

§ I have followed the arrangement of Ahrens as being the most recent and the clearest.

Æschylus had treated dramatically two subjects, which I have already described, and which I need not now dwell upon. The story of Ajax afforded him materials for a trilogy, of which only the barest outline is traceable in the fragments of his Latin imitators. He appears to have represented the violent delirium which fell upon Ajax after the adverse decision as natural, and not the act of Athene, as Sophocles preferred to consider it. One of the Fathers has preserved a fragment of his last words before committing suicide; they show the way in which this part of the subject was the same as that of Sophocles—

“ There is no sorrow that can sting the soul
Of any free man like unto disgrace.
Thus have I suffered, and a stain profound
Of trouble surges from this inmost breast
Of mine, that bitter goads of madness roused.”

The tale of Pentheus and the Bacchæ was described by Æschylus in another trilogy; the first two plays treated the subject much as we have seen in Euripides; but the last took a different line. Pentheus does not appear to have been insane at all, as is the case also in Ovid's description, but *Λύσσα*, the Genius of Madness, was personified, and possessed the Bacchæ. Suidas, who tells us this, has preserved these words of *Λύσσα*, describing the working of the spell—

“ From the feet
Up to the very crown convulsion spreads,
Like to some snaky sting or scorpion's dart.”

A similar subject was handled by him in those plays which described how Lyeurgus, a King of Thrace, was punished by Dionysius for a like contempt of his divinity and worship. It would seem that here the culprit was himself struck with madness, and slew his son; but we know so little of the story—the Homeric form of the legend being apparently different from that current in Attica—that it is only of interest as corroborating what I have before remarked of the opposition on the part of the rulers and statesmen of Greece to the introduction of this Oriental form of worship, and of the fate which they brought on themselves by it.*

* The legend of Orpheus (which seems to have been related by Æschylus in this play) tells in the same direction. It is significant that the scene of all these struggles should be laid in Thrace; and this is perhaps the reason why Homer's account (*Iliad* vi., 130 sqq) takes more thoroughly the part of the god than the tragedians do.

There were two more instances of violent insanity among the ancient Greek legends, Athamas and Alcmaeon;* both of these were taken as subjects by the tragedians; but I will merely give an outline of them, as we have nothing left of the plays themselves.

Athamas was a King of Bœotia, who incurred the hatred of Juno by taking charge of Bacchus, and concealing him from her wrath. She struck Athamas with madness, so that he supposed the palace to be a wood, and his wife and children a lioness with her cubs. He bade nets to be set for their capture, and gave chase himself, but his wife, Ino, threw herself from a rock into the sea with her son, and so escaped from his hands. It is supposed that Ovid, in his elegant description, probably followed Æschylus's version of the fable, and I therefore have sufficient excuse for quoting some fragments of a passage which abounds in matter of value to me. Juno is thus described as determining on what punishment she shall inflict on Athamas and Ino by Bacchus' own chastisement of Pentheus:—

“ Ipse docet quid agam ; fas est ab hoste doceri,
Quidque furor valeat. Penthea cœde satisque
Ac super ostendit. Cur non stimuletur, eatque
Per cognata suis exempla furoribus Ino ? ”

She goes down to the infernal regions, and entreats the Erinyes to help her, and Tisiphone accedes to her prayer. She ascends to the palace of the doomed king—

“ Luctus comitatur euntem,
Et Pavor, et Terror, trepidoque Insania voltu.”

She seizes two snakes from her hair, and casts one at Athamas and the other at Ino—

“ At illi
Inosque sinus, Athamanteosque pererrant
Inspirantque graves animos ; nec volnera membris
Ulla ferunt ; mens est, quae diros sentiat ictus.
Attulerat secum liquidi quoque monstra veneni,
Oris Cerberei spumas, et virus Echidnae ;
Erroresque vagos, caecaeque obliviae mentis,
Et scelus, et lacrimas, rabiemque, et caedis amorem ;
Omnia trita simul ; quae sanguine mista recenti
Coxerat aere cavo, viridi versata cicuta.
Dumque pavent illi, vertit furiale venenum
Pectus in amborum, praecordiaque intima movit.”

* “ Athamaem, Alcmaeonem, Ajacem, Orestem furere dicimus.” Cicero's Tusc. Disp. 3. 5. 12.

† Metamorph iv., 428. 504

I need not give the rest of the description of the violence of Athamas, which seems to have resembled that of the *Mad Hercules*; it is admirably described, and Ino finally, "vires insania fecerat," throws herself and her child headlong from a projecting rock.

Alcmæon seems to have been a second Orestes; he slew his mother Eriphyle at the command of his father, whom she had betrayed to destruction in the Theban war. He was consequently pursued by the Furies, and driven by them to madness; the rest of his legend is variously related, and has no special interest for us. The two plays in which Sophocles described the adventures of this hero are completely lost, enough only being preserved to show that they would have been to my purpose. The mania of Alcmæon seems to have been represented as relieved by sleep, and by the loving care of a devoted wife, which probably suggested the similar scene in Euripides' *Orestes*, if they were not themselves derived from the *Alcmæon* of Theodectes, an earlier tragedian.

The lost plays which I most regret are those which described the feigned madness of Ulysses, when Agamemnon and Menelaus went to Ithaca to claim his promised help for the siege of Troy. Those versions of the tale which have reached us relate that Ulysses was found ploughing with a horse and an ox yoked together, and sowing salt instead of corn. The trick was detected by Palamedes, who (it is usually said) took Telemachus from his cradle, and placed him before the plough, when the father turned aside to avoid his child. The other account given, that Palamedes threatened to kill the infant, would probably commend itself to us as a more suitable method of diagnosis; but the whole story, as it is told, is one of a very poor imitation of insanity, and much inferior to King David's simulation as recorded in Scripture. It is, however, conceivable that if these tragedies had been left to us we might have found that Ulysses' actions were the expression of some pretended delusion, but we have not even a fragment to go by—"etiam periere ruinæ." We only know that if Sophocles bestowed upon the central figure of his *Mad Ulysses* anything like the care with which he has drawn the character of the same hero in the *Philoctetes*, our loss is great indeed.

I have now—fortunately, perhaps, for my readers—finished my examination of the Greek tragedies; but I have run to such length that I am compelled to hold over my account of Aristophanes for a future number.

Four Departmental Asylums in the North-West of France.

By J. WILKIE BURMAN, M.D., Edin., Resident Physician and Superintendent, Wilts County Asylum.

In the course of a walking tour, during last summer, I visited, *en route*, four of the Departmental Lunatic Asylums in the North-West of France, principally with a view to see how they would stand comparison with our own Provincial or County Asylums. Such a comparison, however, could scarcely, I find, be made on a fair basis; for though, undoubtedly, the great majority of the patients in the French Departmental Asylums are paupers, and maintained at the expense of the several Departments, yet, in all, there are associated with these paupers large numbers of *pensionnaires*, who are maintained by their friends and divided into four or five classes, and treated according to their rate of payment. It is obvious, moreover, that the better general and special arrangements, due to and supported by the higher rates of payment of the *pensionnaires*, would prevent such associated asylums as these from being fairly compared, as to their *tout ensemble*, with our own County Asylums—in which, as a rule, the patients are all paupers, and chargeable to the different unions, and in which the arrangements are for paupers only, and so constituted as to keep the maintenance rate as low as is compatible with efficiency. Seeing, then, that it was impossible to institute any fair general comparison between the French Departmental Asylums, which I lately visited, and our own County Asylums, I determined, whilst not failing to pay all due regard to the arrangements for, and treatment of, the *pensionnaires*, to pay more particular attention to the condition and treatment of the *pauper* patients in the Asylums visited, and to take my notes accordingly. These rough notes, instead of consigning them to the waste paper basket, as has been the fate of former notes of visits made by me to Continental Asylums, I have, this time, determined to offer to my professional brethren, in the hope that they may afford, perhaps, some few crumbs of information and of interest. It will be necessary for me, however, before going further, to state—that, as the principal object of my tour was *walking* and not *mad-house hunting*, I did not follow out any predetermined plan as to which particular asylums I should visit. Indeed, it was not until I had well started on my tour that I conceived the laudable idea of

endeavouring to combine a little instruction with my amusement, and the result was that I merely visited those asylums which were in close proximity to the route which I had arranged for myself previous to starting. The asylums to which I paid these hap-hazard visits, then, were the following:—1st, “*L’Asile de Iehon*,” Dinan; 2nd, “*L’Asile St. Athanase*,” Quimper; 3rd, “*L’Asile St. Méen*,” Rennes; and 4, “*L’Asile de Pontorson*,” situated in the small town of that name; and I shall record my notes of them, *seriatim*, in the order in which they were visited.

L’Asile de Léhon, Dinan.

This asylum, often called *l’Asile des Pères* or *l’Hospice des Frères de Saint-Jean-de-Dieu*, is pleasantly situated on the slope of a hill commonly known as “Mt. St. Esprit,” to the left of the road to Brest, at the distance of about one *kilomètre* from Dinan. Having ascertained the evening before at the entrance lodge that the chief medical visit of the day was made at 7.30 *a.m.*, I got up in good time, in order to be able to make the full visit with the *Médecin-Directeur*. The building, the first stone of which was laid in 1836, is principally composed of Caen stone with granite facings, and in the distance presents a plain, solid, and prison-like appearance. The reception a stranger meets with at the lodge of entrance when he merely wants information (as I did the evening before) is, also, not altogether devoid of certain prison-like features. The external face of the lodge presents itself simply as a plain non-fenestrated gable-end with a door, in the centre of which is a small square hole screened with open Venetian lattice work arranged for hearing through, without its being possible to see through it. Instead of the door being opened when one knocks—the knocks reverberating as if the interior were a cavernous recess—one is rather surprised to hear, on the approach of a certain measured and manly tread along the stone floor towards the door, a rough voice which firmly, though politely, demands “*qui va là?*” and “*que voulez vous, Monsieur?*” On making known your wants, the desired information issues forth to you through the lattice work; then the measured tread recedes from the door, and you depart, having received your information certainly, but without having been able to see the face of the mysterious unknown, and feeling, perhaps, a little depressed at your rather austere reception. Such a gloomy barrier of entrance as this to an asylum only

tends to invest the whole place with an air of mystery and suspicion, and to impress one with an idea of utter seclusion from the outer world as regards the poor beings known to exist within the walls of the asylum; and it might, with much advantage and benefit, be altered or replaced by something more cheerful and homely. Like Death, however, it is the gate of Paradise; for, once through it, one approaches the asylum by a winding walk, of more than a furlong in length, which wends its serpentine course down the slope of the hill through extensive grounds most beautifully wooded and laid out. Intersected by numerous open and shaded promenades, the fifty acres of land, within the enclosure around the asylum, present to us Nature in a gorgeous and varied aspect. Here an expanse of beautifully green mead; there a narrow winding shaded walk up the slope of a little hillock towards its wooded crest; here and there *parterres*—huge *bouquets* in themselves,—and now and then glimpses through the trees of extensive kitchen gardens, more useful if less beautiful. After a pleasant walk through the grounds and on nearing the asylum, it is found to be a huge square-shaped block of buildings, with enclosed quadrangular inner airing courts and yards. Uniformly of two stories high, the sky-line is unrelieved, except by the towers of the new chapel inserted in the central part of the west end of the block. This chapel is one of the most beautiful and peculiar features of the asylum. Projecting as they do considerably, the towers and western porch of the chapel tend to relieve the monotony of the general *façade* of the asylum. It is built within and without entirely of grey granite, a quarry of which, worked by the patients, exists in the grounds close to the asylum. It is of the purest Gothic architecture, and built on a cruciform plan, each limb of the cross being nearly of equal length, and the interior being very lofty. It was only finished and consecrated in 1866, and though but of such a recent date, yet it is well known by those who have travelled much on the Continent, to be one of the most perfect, faultless, and beautiful little chapels in Europe, and no person visiting Dinan should fail to see it. Dinan would be worth visiting for this alone, to say nothing of the delightful and charming sail up the Rance from St. Malo, and of the picturesque ruins round about the town. I forgot to ask how many persons the chapel would accommodate, but I should say, from memory, that it would comfortably hold about from 300 to 350 patients in its nave,

body, and transepts. The great *rosace*, or wheel window in the west-end, twenty-five feet in diameter, is composed of twenty-four compartments, most gorgeous to look upon, the colours being arranged with most exquisite taste. It is a perfect blaze of brilliancy, but soft and mellow therewithal, the effect of the colouring being heightened and rendered more impressive by its contrast with the dead grey colour of the granite everywhere within, and the dim religious light of the general interior of the building. The transept windows are also most beautifully stained. I have seen the stained glass in the *Notre-Dame* of Paris, and in the Cathedral at Cologne, and I believe that the stained glass in these cathedrals, as well as at Rheims, is considered amongst the best in Europe; but it is equalled, if not surpassed, in this beautiful little Asylum Chapel in an outlying province of France. The transepts are railed off from the body of the chapel by light ornamental iron screen-work. There are some nicely carved stalls in the choir for a number of the brethren—*les frères de Saint-Jean-de-Dieu*—about 60 members of the brotherhood of this religious order living in retirement within the walls of the asylum, and devoting their life and energies (gratuitously, of course), in an admirable and praiseworthy manner, to the care of the afflicted inmates. This chapel probably owes its existence to the energy and religious enthusiasm of the brothers, which would meet with ready support in a province of France, so deeply imbued with religious sentiment, and so much famed for the beauty of its churches; and, altogether, its faultless design, as well as the beauty and good taste of its illumination, have left a lasting impression on my mind. With a well-appointed ritual, a choir of earnest *religieux*, and a body of sympathetic and attentive patients, the ordinary services in this beautiful little place of worship must be very effective and impressing. Before I leave this chapel, on which I am afraid I have been tempted to dwell too long, I may state that it is, as is customary outside the asylum, left open during the day, in order that the brethren, and such of the patients as are to be trusted, may enter and engage in short private devotion, when so disposed.

This asylum provides accommodation for the *male* insane of the departments—Côtes-du-Nord and Morbihan; the sister asylum, for the *female* insane of the same departments, being situated at St. Brieu, about forty miles westward. The number of patients in the asylum at the time of my visit was 600, about 400 of whom were paupers, and main-

tained at a cost of about 1fr. *per diem*, the remaining 200 being *pensionnaires*, and divided into three classes according to the rate of payment which was—for the 1st class, 4fr. ; 2nd class, 3fr. ; and 3rd class 2fr. *per diem*. Besides these there were a few "*pensionnaires particuliers*," who paid from 8fr. to 10fr. *per diem*, and each of which had two rooms at his disposal, as well as a *religieux* and domestic attached to his service. On arriving at the door of the asylum, I was informed by one of the brothers who acted as janitor, that the *Médecin-Directeur*—Dr. Richard—was already in the Infirmary Ward, just commencing his visit. On being conducted thither, and my card having been presented, the first words of Dr. Richard, on greeting me, were rather pleasing and flattering ; for they were, "*Je connais l'Asile des Aliénées de Wakefield par son ouvrage.*" We immediately set off on the visit, accompanied by two of the brothers, one of whom acted as a chief attendant, whilst the other, who, I was informed, was also the dispenser, carried a book, in which he took down carefully the doctor's instructions. Both of these brothers, Dr. Richard told me, were skilled nurses, having had special instruction as well as special training and experience during the late war, when one of them had the honour of being Marshal MacMahon's nurse, whilst he was laid up with the wound inflicted on him at Sedan. It was highly gratifying to me, though not, of course, surprising to see how intelligent and thoughtful these brethren were in the performance of their duties, and what a real interest they took in the patients. About 60 of these brothers, as I have said, assisted by 39 domestics, look after the 600 patients, and do the work of the asylum. The members of the brotherhood are evidently strict recluses, being habited in coarse cloth monkish robes, and having little to say beyond what concerns their charge. I saw one brother in the grounds, as I passed down, shovel in hand, supervising and directing a gang of patients at work on the walks.

But to return to my visit to the wards. The Infirmary ward was airy and clean, and the cases in it, viz., two or three cases of diarrhœa and one or two cases of phthisis, comprised all the present sickness of the house, which, to use Dr. Richard's own words, was "*en très bonne santé.*" Passing through the Infirmary ward, we entered a day-room appropriated by patients in the last stage of general paralysis and of chronic disorganisation of the brain. About a dozen in number, the most of them sat in commodious arm chairs,

and five or six of them were secured in their chairs, by means of a strap passing in front of their waist, and had their arms encased in stout blind canvas sleeves, the ends of which were secured by a string tied around them and the waist. Some of them were covered with a clean white sheet up to the neck as they sat restrained in their chairs; and altogether, though the patients were tolerably quiet, it was rather a melancholy spectacle. Passing on, I found as we went along that the patients were classified and arranged in wards according as they were quiet, excited, or epileptic, &c. In the wards of "*les agités*," and of the epileptics, I found the poor, as a rule, shabbily clothed, and many of them very untidy and looking desolate and miserable; several of them were walking about with their arms confined in light canvas strait-waistcoats. "*Il déchire*," the doctor said, as I examined more minutely the article of restraint in one case, as if the only way to prevent tearing was to make a walking-mummy of a man. All the poor wore *sabots* without stockings; but some of them had put a lining of straw into their wooden shoes. Mixed up with the paupers, who were not uniformly dressed, were the poorer *pensionnaires* in all sorts of clothing. With the exception of central plots of chestnut trees to give shade from the sun, most of the airing-courts were small, bare, and unplanted—even with grass. The dining and sitting-rooms of the poor were bare and dreary looking. The dormitories, everywhere, were nice, airy, and clean, the floors being waxed and the walls whitewashed, and each bed consisting of a hair mattress and a straw palliase. The arrangements for the *pensionnaires* were excellent; their *réfectoires* and sitting-rooms being cheerful and well furnished. I saw a very good billiard-room appropriated to their use, and in their rooms were plenty of draughts and dominoes and some books. I was told there was a library, but did not see it. The only three journals taken by the house were in one of the day rooms of the *pensionnaires*; they were fixed in wooden slips with handles, and secured to the table, on which they were placed, by slight chains. The general bathing arrangements were excellent, and consisted of a long associated bath-room, in which was a row of about twenty unfixed and painted metal baths, at the head of each being a *douche* apparatus. There were no patients in the baths at the time of my visit, but I was told that warm baths and cold douches were frequently used as remedial agents. At one end of

this long bath-room there was a smaller room, containing a needle bath and a closed wooden chamber for simple or medicated vapour bathing; whilst at the other end were some single bath-rooms for the higher paying *pensionnaires*. Towards the end of our medical visit we met the Assistant Medical Officer, who was about to go round the wards to attend principally to cases which might require *surgical* treatment, which branch of the treatment Dr. Richard, being a physician, left to his assistant who must necessarily be a surgeon. Leaving him and the two brothers to continue the ward visiting, Dr. Richard and myself went to inspect the kitchen, chapel, and outlying buildings, &c. The kitchen was very good, but called for no special remark, though, whilst speaking of the kitchen, I may as well state that the diet of the paupers consists of three meals—in the morning, soup and bread; at mid-day, soup, meat, and vegetables; and in the evening, soup, vegetables, and bread. I saw all the usual workshops with their complements of patients. In the large granite quarry near the asylum, I saw many patients at work, and from the bed of this quarry most of the water supply of the asylum is derived. The amount of land attached to the asylum is large—amounting to 200 acres in all, about 150 of which is farm land, and gives employment to about 80 patients daily.

After finishing the visit, Dr. Richard took me through the grounds to his house, which is a nice detached building at the far corner of the grounds and close to the main road to Brest as it passes the Asylum grounds; and over some good Bordeaux with him in his study, as well as during the progress of my visit to the wards, I obtained the following disjointed information concerning the asylum, for which, and Dr. Richard's kindness and courtesy generally, I must here acknowledge my sincere thanks. The *religieux* are, of course, simply clothed and fed. The paid domestics are but poorly remunerated as compared with our attendants, getting only, in money, about 20fr. a month. The total number of general paralytics and of epileptics in the house at the time of my visit was 20 of the former, and 32 of the latter. About one-sixth of the asylum population suffered from insanity due to alcoholic excess, cider being the most common drink, next brandy, and last, among the rich, *absinthe* and other spirits. The recoveries are about 15 per cent., and the deaths about 10 per cent. on the average numbers resident. Referring to the small pro-

portion of recoveries, Dr. Richard remarked that they had in the asylum much insanity of an incurable nature, especially amongst the *pensionnaires*, many of whom have made divers sojourns in various asylums. The medical staff consists of a Médecin-Directeur and a Médecin-Adjoint, the former getting, as pecuniary remuneration, 4,000fr. *per annum*, and the latter just half that sum. Two medical visits are made daily. According to Dr. Richard, the hydrotherapeutic treatment of insanity is most beneficial, and the drugs he principally uses, and from which he has derived most benefit, are opium and its derivatives, aloetic purgatives, bromide of potassium as an anti-epileptic and “contra-stimulant,” and the hydrate of chloral, which he says has given him most excellent results. Before I left, Dr. Richard informed me that he was engaged in working up the subject of the temperature of the insane, and that, according to his observations, the mean temperature of the healthy lunatic is *above* that of the ordinary sane person.

L'Asile St. Athanase, Quimper.

This Asylum is a plain building, situated behind the *Hospice Civil*, on an elevated piece of ground, at a distance of about ten minutes' walk eastward from the fine Cathedral of Quimper, which town, by the bye, is the birth-place of the great Laennec, and contains, in its chief *Place*, a magnificent bronze statue of the celebrated inventor of the stethoscope; he is represented as seated in his professorial chair in academical costume, divers books on auscultation being visible, under the chair, in graceful disorder, and one of his old fashioned stethoscopes being in his hand. This asylum gives accommodation to the *male* lunatics of the Department of Finisterre, the sister establishment, for the same department, being situated at Morlaix, about 60 or 70 miles north. The number of patients in the asylum, at the time of my visit, divided into classes, according to their rate of payment or maintenance, was as follows:—

1st Class	...	8	...	3.33fr. per diem.
2nd Class	...	8	...	2.50fr. "
3rd Class	...	14	...	1.66fr. "
4th Class, Paupers	320		...	0.90fr. "
Total		...	350	

Having previously ascertained the hour of the medical visit,

I presented myself at 7 *a.m.*; and, in the absence of Dr. Baume, the Directeur Médecin-en-Chef, who was confined to his house through illness, I was conducted round the asylum and had every courtesy shown me by the Assistant Medical Officer, M. Deberiat. The Medical Superintendent has a large and handsome private detached house in the grounds, with spacious private flower and kitchen gardens attached. We first inspected the grounds and outlying buildings. Within the walls, and around the enclosed land, which is considerable, runs a boulevard, well lined by chestnut trees, and having seats here and there in the shade. From this boulevard magnificent views of the surrounding country can be obtained, the enclosing wall, though lofty, being situated in a deep fosse and thus readily seen over. About 48 *hectares*, or nearly 120 acres of land, are attached to the asylum, and on this land farming operations are conducted by about 100 patients. There is an excellent block of farm-buildings within the enclosure with all the arrangements very complete; in the cow-shed there were no less than 42 cows, a good many Alderneys and Guernseys being amongst the lot. Whilst we were standing talking near the farm, I heard the noise of a drum, beaten *aux militaires*, and, following it, the sounds of approaching feet: it was a regular body of patients, headed by a drummer, who were coming out to commence work for the day on the land. This regiment of workers was composed of from 80 to 90 patients of the poorer class, all being stoutly shod, uniformly clad in clean white smocks and trousers, and wearing broad-brimmed straw hats; on the shoulders or in the hands of most of them were agricultural implements of various kinds. In the rear of these pauper workers was a body of *pensionnaires*, in all sorts of clothing, amongst whom I observed two or three military men in uniform, and one or two priests in clerical costume. Most of them had books in their hands, and they all came out for the purpose of sniffing the morning air, promenading on the shady and pleasant boulevard already referred to, and enjoying the views, or of sitting and reading in the open air on the seats 'neath the chestnuts. Proceeding inwards from the farm-buildings, and passing through large and well-kept kitchen gardens, we soon came upon the laundry—a detached block, fitted up with all the usual appliances, steam and otherwise. Near this, on one side, were the general bath rooms, communicating with the main building by covered ways; and, on the other side,

the general associated kitchen and bakehouse, which was also detached, and at some little distance from the main building, but communicated with it by means of a tramway, on which a close waggon ran for the purpose of conveying the cooked food to the inmates of the institution. The kitchen and bakehouse called for no special remark; but the general bathing arrangements were admirable and noteworthy. There was a large associated bath room, with a common dressing room, for the poorer patients, and, adjoining, were private baths and dressing rooms for the better class of patients. All the baths were mobile and of painted metal. At one end of the associated bath room were smaller rooms, containing special baths and bathing apparatus. In one of these there was a needle-bath, a douche bath with all sizes of douche roses, and a plunge-bath, about 6 by 4 yards in superficial dimension, and of a depth sufficient to reach up to the shoulders. At the side of the plunge-bath there was a crane, by the chain of which was suspended a special arm-chair, in which refractory patients could be strapped and lowered into the bath. In another of these rooms were two wooden chambers for the administration of medicated vapour baths. Off the latter room was a dark and closed chamber, about 12ft. by 8ft., containing three tiers of stone seats and a wooden couch; this was used as a simple hot air or vapour bath, and being close to the douche-room, was very convenient for the administration, in a simple manner, of the bath *à la Turque*. The cold douche, M. Deberiat told me, was much used voluntarily by the *pensionnaires*, and much resorted to as a remedial agent, being found to be of great service in cases of active congestion of the brain. Leaving the baths and passing into the building, I found the ward arrangements for the *pensionnaires* to be, as usual, excellent; and, in the inner enclosure, and surrounded by gardens attached to them, were two pavilion residences for four and two patients, respectively, of the highest class. Passing into the pauper part of the asylum, I found oblong airing courts, round which were ranged, on the ground floors, the day rooms and *réfectoires*, and in the (only) story above, the dormitories. The former looked more cheerful, and were better furnished than at Dinan, and the latter were, as usual, clean, tidy, and airy. In the ward of "*les agités*," though there seemed to be an attempt at uniformity in the dress—most of the patients wearing straw hats, white or blue blouses and trousers, and *sabots* or shoes—yet many of them were very

untidy, and several went about barefooted. On each side of another airing-court in the pauper department, and on the ground floor, were rows of strong single rooms, with a door on one side opening into the court, and an iron grating on the other side looking into an inner corridor. The floors of these rooms were of wood, as were also the beds, which were old-fashioned and fixed to the floor. In one of these rooms I saw from the corridor through the grating an acute maniac in bed, and restrained with the *camisole*. On the ground floor, also, in another part, were small dormitories for paralysed and feeble patients who were wet and dirty in their habits. In these dormitories the beds were box-shaped and deep; and at the free side near the bottom was a drawer, having in it a *vase de nuit* which communicated with the patient by means of a hole in the mattress. For the use of these feeble and dirty patients there were several single bathrooms in the main building; but they were small, dark, and miserable. In the airing courts I saw several patients walking about with their arms restrained in strait-waistcoats, and altogether, throughout the building, I noticed about seven or eight cases of restraint of some sort or another. I forgot to mention that I observed, in the upper general dormitories, a good and wise distribution of jugs of spring water, with mugs for its use by the patients during the night. The infirmary ward was on the first floor, communicating with the dormitories; it was neat, but crowded with beds, though at the time of my visit there was very little sickness, and most of the beds were unoccupied. Between the general infirmary ward and the dispensary was a smaller infirmary for more serious cases, with special arrangements for poultice making and nursing, &c; there were three patients in bed here. I saw the usual workshops for the occupation of the patients during my progress through the asylum, and I finished by inspecting the nice little chapel attached to it, which is in the centre of the building, and semi-detached.

Before leaving I got the following scraps of information concerning the asylum from M. Deberiat:—The daily diet of the poorer class consists, on an average, of bread, 750 grammes; meat, 250 grammes; fresh vegetables, 500 grammes; and dry vegetables, 120 grammes. The proportion of attendants to patients, throughout the building, is about 1 to 11 or 12; and their rate of pecuniary remuneration, in addition to their board and lodging, varies from 230 to 270fr. *per annum*—not much certainly, being only about from

£10 to £12 a year. After ten years' service a retiring allowance is granted to those officers and servants who may have to retire from sickness; but, otherwise, the period of service required to entitle one to a retiring pension, of half their former emoluments, is 30 years. At the time of my visit there were altogether in the house 30 general paralytics and 20 epileptics. About one-fourth of the cases admitted suffer from insanity attributable to alcoholic excess—the principal liquor drunk being *cau-de-vie*. They have about 40 deaths and 40 recoveries, on an average, each year. The pecuniary remuneration of the *Médecin-en-Chef* and *Médecin-Adjoint*, is, for the former, 7,000fr., and, for the latter, 1,800fr. per annum. Two medical visits are made daily. About 1,200 francs are annually expended in drugs, the chief of which in use were—Choral, Opium, and Quinine. As adjuvants to drugs in the treatment of mental diseases, the physicians of this asylum consider there are none better than exercise in the open air, and the hydro-therapeutic treatment.

(To be continued.)

CLINICAL NOTES AND CASES.

A Case of Traumatic Insanity cured by Trephining. By C. HOLLAND SKAE, M.D., Medical Superintendent, Ayr District Asylum.

(Read at the Quarterly Meeting of the Medico-Psychological Association at Edinburgh, November 27, 1873.)

J. McB., æt. 21 years. Admitted into the asylum 25th November, 1869. Married, with small family; no member of his family known to have been insane before; light hair, eyes and complexion.

His wife gave reporter the following information regarding the history of her husband's illness:—

Four years previous to admission, while working in a coal-pit, he was felled to the ground by a huge mass of falling coal, which struck him on the head about three inches above the left extremity of the left eyelid, causing fracture of the skull at that point. He lay insensible for four days after the accident, when he gradually recovered consciousness, and a few weeks afterwards resumed work in the pit.

Not many weeks after doing so, however, his wife and friends began to notice an alteration in his habits and nature,

which became more and more marked and obtrusive as time progressed. He had formerly been a very cheerful, rather merry, sociable, and very goodnatureed man—what his fellow-workers would have called a “neighbourly chiel”—and at all times, previous to the accident, was kind and loveable to his wife and children, with whom he delighted to pass his evenings in sober enjoyment.

About this time, however, he began to evince a different spirit and nature altogether; he became irritable and moody; at work he would separate himself from his fellow-workers, and when spoken to by them would barely return a civil answer; sometimes he was quite taciturn—at home, of course, the change was still more striking. He would return home cross, and sit moping over the fire all evening; he would rudely repulse his wife’s affectionate efforts to rouse him out of his unhappy humour, and “shut her up” with some snappish expression; if his children ran to meet him on his return from work, as was their wont, the “envied kiss to share,” he would push them impatiently aside; altogether his conduct was bearish, disappointing, and ill-natured. This unhappy state of matters got worse and worse; he often got excited and used threatening and violent language to his wife, whom he until lately loved so well, but whose presence now seemed only to excite angry and dangerous feelings; to his children and neighbours he conducted himself in the same manner. Eventually he became acutely maniacal; attempted to take his wife’s life; assaulted every one who approached him; and even attempted suicide. He then had a succession of epileptic fits about a week before being brought to the asylum.

When admitted, the reporter on entering the receiving room found him handcuffed and sulking in a corner; and when he approached him and spoke to him, he turned his face towards the wall, and humped up his shoulders, much in the same sort of fashion as a child does when one who has offended him advances with overtures of reconciliation. He was taciturn, and had a very morose and ill-natured expression. He had a well marked depression, with an ugly cicatrix as previously stated, about three inches above the left extremity of the left eye-lid, which latter slightly drooped, giving him a half-sleepy, half-stupid look. He was about two months in the house before the operation was performed, and during that time he slightly improved; that is, he became conversable to a limited extent, only with certain persons, but

his conduct generally was that of a man whose mind was monopolised by some unhappy thoughts to the exclusion of all others, which tyrannised over his mind and regulated his actions and behaviour; he was averse to doing anything at all, either in the way of work or joining in amusements. He was suspicious of those about him, and had the expression of one labouring under suspicions. He laboured under a fixed delusion regarding his wife's and friends' conduct towards him, declaring that he was the victim of a conspiracy originated by his wife, and joined in by her friends, to deprive him of his liberty and independence; and when interrogated on the subject, he always expressed himself in bitter and resentful terms.

He continued much in the same way up to the beginning of 1870, when he underwent the operation of trephining, which was skilfully and successfully performed by his former medical adviser, Dr. Clarke Wilson, of Ayr.

A depression was distinctly visible at the point where he had sustained the blow, and on the finger being applied to the place it was as distinctly felt, and on the overlying portion of scalp being dissected off, it was still more evident both to the eye and to the touch.

The depressed portion of bone was removed, and the patient, after a week or two in bed, was moving about again when a gradual improvement week by week took place. His wife visited him constantly, and on each visit expressed herself pleased with the additional improvement, and extra step towards his former natural and healthy condition; indeed, he very soon became a different person altogether; all his old affection for his wife revived in full force. He became a cheerful, active, lively fellow, never satisfied if he was not doing something. He made friends with the attendants and amongst the patients, and not very long after he was trephined he was discharged sane.

He has ever since supported his wife and family, and has regularly paid visits, at about six months' intervals, to the asylum, generally passing the whole day at it.

The reporter saw him on each occasion, and talked for some time with him, and felt satisfied that he was quite sane, and has satisfied himself by careful inquiry that he has continued in a perfectly sound state of mind since his discharge from the asylum. The operation was performed in February, 1869, and reporter last saw the subject of it in the spring of 1873.

Notes of a Case of Insanity dependent on Syphilis. By
H. HAYES NEWINGTON, Assist. Physician Royal Edin.
Asylum.

(Read at a Quarterly Meeting of the Medico-Psychological Association, at
Edinburgh, Nov. 27, 1873.)

I have designated the case, a description of which I have the honour of laying before you, as one of Insanity dependent on Syphilis, discarding the generally used term—Syphilitic Insanity. It will be better to state the reasons for so doing after I have given you an account of the patient. I will, however, premise that the Diagnosis is that of a syphilitic tumour or other affection, acting as a foreign body within the cranium. To substantiate this fairly, it seems to me that the presence of intercranial disorder should be made out, and then evidence be sought to determine the nature of that disorder. I have, therefore, endeavoured to classify symptoms as much as possible in accordance with this plan. The general history is as follows:—

Mrs. J. H., æt. 52, admitted August 1st, housewife. No hereditary predisposition ascertainable, except that her father "could take a glass as well as any man," and a maternal uncle was a drunkard; members of her own generation healthy, as far as could be discovered. She married at 17, and has been a good deal knocked about by her husband, from whom she has been separated for 12 years. Has had a family of seven sons and one daughter, four dead and four living. I will refer to this point again. She ceased to menstruate three years ago, and from that time she dates all her present troubles. She then "took fits," as she expresses it, each convulsion standing alone, and occurring with great regularity at the time that the menses would have occurred, if that function had been continued. A month before admission, after one of these attacks, she first showed decided symptoms of insanity, which, however, seemed to have disappeared in a day or two. Two days before being put under her present certificates, she again showed these symptoms, being certified to be noisy, threatening, and dangerous. She was quiet on admission, but very dull and confused. Only once has she since shown any indications of excitement. She is deteriorating in mind, her memory being very defective, and she owns to a certain amount of hastiness of temper, which she states to have been foreign to her before. Notwithstanding the occurrence of many seizures at home, she was returned in the statement on her admission paper, as not epileptic, and, in the absence of any reliable history, her case was regarded as one of climacteric insanity of an asthenic type. After a short time she was set to kitchen work, and soon had one or two seizures, falling suddenly without a cry, with a

blanched face, no foaming at the mouth, nor biting of the tongue, nor subsequent struggling. Still again the nature of the attacks was not clearly made out, and but for the occurrence of quiet death-like coma, they might have been looked upon as syncopal. A close observation of succeeding attacks demonstrated their epileptiform nature, and she is still subject to them, modified in the following manner. Whereas at first there was no warning, not even the squeamishness that she now feels,—there are often present for a short time beforehand tingling and formications in both upper extremities, chiefly in the hands. No evidence of an aura. She always wets herself during an attack. The fits have become more frequent (Oct. 2nd, 14th, 18th, 26th, and two on the 30th). But they are less severe, and are followed by slight clonic spasms, which continue till consciousness has returned. Their duration is from 10 to 30 minutes. Hemiplegic symptoms have not been found either during or between the attacks.

The occurrence of these fits so late in life, taken along with their anomalous character, at once debarred the idea of epilepsy proper, and the existence of a cerebral disease was suspected, and later on confirmed by other appearances, at first very slight, but now so well marked as to leave little doubt as to the state of things.

There is a depression in the os frontis in the left supraorbital region, and in the skin covering it is a small jagged cicatrix. A constant pain, liable to exacerbation, is referred to this spot, and passes thence to the vertex. There is no tenderness in this line either on tapping it or on firm pressure, and the pain is not apparently deep-seated. Both eyelids droop, but the left one has decided ptosis. The left side of the face, though not actually paralysed, is heavy, impassive, and wants those lines and rugæ which give life to the features. This is more noticeable when she laughs or attempts to whistle. The tongue is pointed slightly to the left side, and is very tremulous at times. No anæsthesia found nor inequality in the action of the nerves of the senses of the different sides, with the exception of those of vision. This latter depends probably on organic changes in the weaker one, the left, rather than on intercranial causes. The ophthalmoscope, at least in my not very experienced hands, has not revealed any symptoms of the latter.

A complete history of Syphilis has now been obtained, and perfected the diagnosis by throwing a light on the origin of the frontal depression, etc. It appears that a few months before marriage she had a sharp attack of the disease, which was not placed under medical care, owing to shame and want of means. The consequence was that she suffered severely from all the secondary symptoms and some of the tertiary. Six months after marriage a small bone, as she puts it, came away, leaving behind the present depression and scar. She also had iritis and corneitis apparently. The left pupil is almost immovable, somewhat irregular and undefinable, the inner portion of the iris

being homogeneous in appearance and nonstriated. Below and rather external to the line of vision is an opacity in the cornea, and in the sclerotic surrounding the iris is a faint line of enlarged vessels. This latter appearance is, as far as I have found, permanent after an attack of syphilitic iritis. This state of the eye I believe to be the cause of the weakness in its function, and also of a slight convergence in certain positions. I should have mentioned before that the movement of the organ is in nowise impaired. The pain in the head is often increased on her getting warm in bed.

She lost her first three children at ages of between six weeks and as many months, all very puny and weak—the eldest one having had a rash on it for some time. The fourth died lately, *æt.* 21, of phthisis, leaving one healthy child. Her last four are all healthy and doing well. There is thus abundant evidence of her being syphilitic, and I think that there is sufficient connection between it and her psychological troubles to enable one to fix it as the prime cause of her insanity. She commenced to take 5 grains of Iodide of Potassium combined with 30 grains of Bromide of Potassium thrice daily. She did very well, but became iodised shortly. The Iodide was omitted, the Bromide being continued. She gained colour, and a comparatively healthy appearance, the left side of the face gaining some expression likewise; but she had a nocturnal fit of no great violence on the 24th (25 days' interval). It, however, brought back the facial symptoms and left her very confused and silly for 24 hours, when she became very excited and noisy, laughing, dancing, and using very foul language. The Bromide was given in 5i doses, and after the second dose she sank off to sleep, awaking next morning very quiet, and feeble looking. The whole of the left orbit very much engorged, the temporal veins very marked, the eyelids swollen, etc. The vessels of the sclerotic were very full, and the opacity in the cornea above mentioned seems to have spread upwards until it has almost entirely occluded the line of vision.

The etiology of this case is very interesting and complicated—in fact, there are more ways than one of reading it. There is little doubt that syphilisation stands as the first link of the chain of factors, and, of course, the insanity may be regarded at present as the last. The difficulty lies in rightly allocating the intervening factors. Were hereditary predisposition ascertained, it would take the precedence of syphilis; but, as I before said, there is none to be discovered, nor does it seem to be essential in this case. Foremost, then, we have syphilis—primary, secondary, tertiary—in which last stage the first important cranial affection occurs, external and most probably internal as well. The first question arises here—How far did the in-

ternal disease—*i.e.*, of bone and meninges—proceed? Did it advance as far as it has gone at present, and then become, as it were, latent, waiting for times more favourable to its development? Though far from impossible, that is hardly probable. At her age at the time of contracting syphilis, disease of the meninges, if much inflammatory mischief has taken place, has a great tendency to run an acute and evil course, often leaving behind dementia. Here we have a woman, for upwards of thirty years after, leading a life of struggling that would certainly find out mental defect, without showing any such alteration.

On the other hand, can the original disease have stopped short at the inflammation of the meninges, leaving behind, so to speak, a potentiality of a future development at the time when the system became too weak to resist, as in this case in all probability occurred at the climacteric period? In favour of this view is the entire absence of symptoms for thirty years, but still more strongly against it can be urged that immense period intervening. The most reasonable theory is to be made out of a blending of the two preceding, *viz.*, that a certain amount of disease arose at first, that the foreign material then left has gradually, but very slowly, been developed, and that when the patient was thoroughly played out by her troubles and the arrival of the climacteric period, the development became hurried on quite out of proportion to its previous growth.

Next we come to cessation of the menses, marking the grand climacteric. This in any case stands as the determining cause. It is hardly necessary to revert to the important part that it plays in the development of Insanity of Females. The substitution of tolerably regular convulsions, directly after the monthly period has first been missed, serves to show a much closer connection between the two conditions than can be found in the majority of cases.

Then as to the tumour. This we must consider to be the immediate cause, and it may have acted thus: either directly by pressure, or irritation, or inflammation, influencing the nutrition of the subjacent portions of the cerebrum; or secondly and indirectly through the intervention of epileptiform convulsions. Here, again, a mixture of the two modes is most probable; the epileptiform convulsions hurrying on the mischief that had been begun by the pressure or structural change caused by the tumour.

And now having arrived at the insanity—the last link in

this chain—how is it to be classified? There is no doubt that in making a tabulated statement, it would be returned as a case of Syphilitic Insanity. This is a form that requires considerable definition, as I think will appear from the following considerations. Dr. Wille, as I gather from Dr. Addison's German Retrospect in the Jan. No. of the "Journal of Mental Science, '73," has been able to assign a syphilitic origin in 2·5 per cent. or 1-40th of his cases, and states that even then the average is underrated, from the difficulty of obtaining proper histories. I have turned over the tables of Causes of Insanity on Admissions in the 1872 reports of 47 Asylums (20 Eng., 9 Sc., 2 Ir., 14 Amer., 2 Colonial), and find six cases only noted—1 in Eng., 1 Sc., 3 Amer., 1 Col., being an average on total admissions of ·1 per cent., or 1-900th. What is the cause of the discrepancy? It can't be that Germans are more prone to syphilis in its worst forms than we are. It must lie in the manner and degree in which the disease is recognised. Giving full weight to a possible over-eagerness on the part of the Germans, and to the fact that the statistics which give such a high percentage are drawn from the whole population of Asylums, whereas, ours are drawn from the Admissions only, we must own that our recognition is very limited; in fact, the causation is almost always allowed only in such cases as the one I have just described. Take our text books for instance. Such a recent one as that of Dr. Maudsley only deals with tangible intercranial disease as a cause. Still more recent, that of Dr Blandford hints at nutrition changes produced by syphilis having a hand in causing Insanity; but he also writes this—"Syphilitic Insanity is usually spoken of as Syphilitic Dementia." I have been able to find in various works the following relations between Syphilis and Insanity:—1st. Acute mental disease may occur coincident with or even preceding and following the eruptive stage. This is a rare form, and seemingly requires great brain vulnerability for its production. 2nd. As a companion to the tertiary stage may occur a condition that is found with other forms of meningitis, to be followed often by dementia. Dementia also occurs sometimes without any appreciable intervening changes; but then it would be impossible to say that syphilis unaided had been the cause. 3rd. We meet with cases similar to this one of Mrs. J. H., caused not so much by a specific brain destruction as by the sequelæ of a syphiloma. This

condition might be well described as Syphilomatous Insanity. The name would, at all events, tie one down to a precise diagnosis, and at the same time afford pathological information to a reader of Statistical Tables of Insanity. 4th. We again find syphilis existing in a relation to melancholia; not a specific one, but, on the other hand, one that requires careful investigation before it is admitted in any given instance. Of course we at once reject mere syphilophobia without any manifestation of the disease. But we admit the power of corporeal diseases, such as irregularities in the alimentary canal, to determine at least an attack of melancholia; indeed, our first anxiety is to find out some such trouble, and we often find that, by setting that to rights, we ameliorate the mental condition. Therefore, it is reasonable to include Syphilis as an agent in producing this form of disease. Dr. Wille gives considerable prominence to melancholia as a special symptom of Syphilitic Insanity.

In conclusion, I venture to hope that you will consider it appropriate to describe the above case as one of "Syphilomatous Insanity;" and also to suggest that, instead of using the too comprehensive name of Syphilitic Insanity, the causation and form of mental disease should be combined—*e.g.*, Syphilitic Dementia, Syphilitic Melancholia, etc.

Two Cases of Syphilitic Insanity. By Dr. BATTY TUKE.

B. A., æt. 52. Admitted January, 1873. Member of a liberal profession.

History.—Patient's father died suddenly, at the age of 64 years; his mother is still living. No hereditary history of insanity.

Patient was an intelligent, energetic man, and always busily employed with professional work up to about two or three years ago. While in Edinburgh, some years since, he contracted a chancre, which was followed by the usual secondary symptoms. Shortly after this he had fits of great inaptitude for business and depression of spirits; at other times he was excited and in high spirit, doing his work as usual. This condition gradually improved, and he became much as he used to be, *viz.*, cheerful and happy, until one day, after some very anxious professional work, he was suddenly seized with loss of consciousness, and fell down in the street. Patient cannot tell much about this attack, but he noticed after this that his speech was affected, and he was unable to remember words he wished to use; he became much concerned about his health, and again got into a very low state. He had one or two more of these attacks of unconsciousness, which were

always followed by more marked aphasic symptoms ; he then had distinct epileptic attacks, and after one of these became so excited and violent that he was obliged to be removed from home. Patient can give no information regarding the commencement of the paralysis.

Present Condition.—Patient is naturally a spare man. Height, 6ft. 1in. ; hair, scanty and becoming grey ; skin, moist ; temperature, 99° F.

Digestive System.—Tongue a little furred at the base ; has marks of a bite at the edges. Appetite good ; bowels constipated. Patient has suffered from constipation for some time past, always requiring laxative medicine.

Circulatory System.—Pulse 74, full and regular. First sound of the heart is sharp, otherwise normal.

Nervous System.—Patient has only partial power of right hand, the grasp of the left hand being much firmer than that of the right. The muscles of the right hand are wasted ; the thenar and hypothenar prominences are markedly wasted, as also are the interosseous muscles. The use of the right hand is much impaired, particularly for finer work, such as writing, &c. The muscles of the right fore-arm are slightly affected, those of the right leg are not much wasted ; the muscles of the right thigh are much wasted. When patient walks he slightly drags the right leg.

MEASUREMENTS.		RIGHT.	LEFT.
Circumference at	wrist	7in.	7in.
"	8 inches above radial styloid process	10in.	10½in.
"	4 " " "	8in.	8¾in.
"	ankle	10in.	10in.
"	8 inches above External Maleolus	14in.	14½in.
"	4 " " "	10½in.	10½in.
"	5 inches above Internal Condyle	16½in.	18in.
"	8 " " "	19in.	21½in.

Sensibility is difficult to ascertain correctly, from the presence of aphasia ; it is unimpaired to touch and to heat, but he cannot always tell correctly how many objects touch him at once—often saying "twenty," and then immediately saying that he meant to say "two," &c. Eyesight is not good, he has suffered from syphilitic iritis, pupils are small, but regular and equal. Hearing is defective, more particularly on the right side.

Patient suffers from aphasia, which is of an amnesic character chiefly ; he forgets the names of articles even when he sees them, but can always say what they are when told ; he occasionally misuses words, often asking for "beef," meaning butter, "sweet" for sugar, "tea" for coffee, &c. He cannot spell correctly, and has difficulty in writing, missing out important words, and using wrong words for the meaning he wishes to express.

Mental Phenomena.—Patient's expression is calm, but when talking he becomes excited. His memory is bad, he forgets about past events ; he can generally tell something about the subject spoken of,

though even the little he does know is not always correct. Had delusions and hallucinations, but these have disappeared. He is still restless and excited. Other symptoms normal.

Course of Case. June 28.—Patient has had three epileptic fits since admission, viz., on April 8th and 21st, and on June 1st; they were always preceded by a state of restlessness and excitement, which subsided after the attack, when the patient got depressed and miserable about his health. Beyond this there has been no change until to-day. Motor power is much the same as on admission, with the exception that the right leg seems more affected, and instead of dragging it after him while walking he brings it forward with a sort of "hoist." Patient has internal squint of the right eye; this was first noticed to-day about 1 o'clock p.m. He complained of not seeing so well this morning at visit, when his eyes were examined, and no squint was then present. Patient has only partial power over the right eye, as on being told to follow the finger when moved, it does so by jerks, and not steadily as the left eye. He also complains of seeing double; he sees an object on the floor of the room, but also at the roof, or on looking along a straight road he sees it perfectly, but also another exactly the same diverging from it. The right pupil is larger than the left. The face is drawn to the right side; the right angle of the mouth is drawn upwards, and is on a higher level than the left angle; tongue is protruded straight. Sensibility of left arm is more perfect than that of the right, particularly about the hand; sensibility of the legs equal; sensibility is slightly impaired on the right side of face. Patient can stand perfectly well with his eyes shut; speech is more affected to-day than usual. He has a dull pain in his head, not confined to any particular part, and says he feels more confused and stupid than usual. Pulse 64, full and regular; tongue furred; bowels acted freely this morning.

August 30th.—Patient has had three epileptic attacks since last report, otherwise he has been going on in his usual way, the squint has now entirely disappeared, and the face is not so much drawn to the right side. To-day patient had an epileptic fit while at dinner—there were no premonitory symptoms; he suddenly gave a shrill scream, lost consciousness, and the right side of face became convulsed, the angle of the mouth being drawn upwards and to the right; the eye lids were spasmodically closed and opened, while the muscles of the left side were scarcely, if at all, affected. The muscles of mastication were at the same time convulsed, as, on withdrawing the finger from the mouth, after clearing away the food patient had been taking, it was covered with blood. This state lasted for a few seconds, then the right arm was thrown into a convulsed state, also the right leg; then the head was thrown backwards, and the convulsions extended generally over the right side of the body, while the left side remained almost entirely free from convulsions. Patient then foamed at the mouth, breathing became interrupted, and face very con-

gested ; this state continued for two minutes or so, then the convulsions ceased, and patient gradually recovered. About a quarter of an hour after attack the right side of the body was noticed to be pale and blanched, while the left side was of a healthy, florid colour. The muscular atrophy is slowly progressing, the muscles of the right upper arm are now affected, as also are the gluteal muscles of the right side, which was not the case on admission.

C. D., æt. 42. Unmarried. Member of a liberal profession.

History.—Patient's relatives have been all long lived, except his father, who died some years ago from the effects of an injury to his spine, received by a fall off his horse, prior to the patient's birth. Mother is still alive, and in good health. All the members of the family are of a marked nervous temperament. Patient has been a hard-working man all his life ; besides having regular professional work, he managed his estate abroad, and has thus been exposed at times to much mental anxiety, and unhealthy climates. He was temperate in his habits, and always enjoyed good health up to time of present illness, with one exception, when he contracted a chancre, which was followed by secondary symptoms, viz., skin eruption and iritis ; this occurred about three years ago.

Patient began to suffer from severe headaches, giddiness, and sparks floating before his eyes ; shortly afterwards he had occasional attacks of vomiting ; his memory began to fail, and his friends state that he became a changed man in his manners and habits. This condition continued for about two months, when he became restless and excited ; he wandered about without any apparent object ; squandered his money, &c., so was obliged to be put under medical care.

Patient presented the following condition on coming under treatment:—He is fairly nourished, but muscular development is small ; has been losing flesh lately. Hair is becoming gray, and he is also a little bald. Skin of natural moisture, Temp. 98.6° F.

Digestive System.—Tongue furred, appetite good, bowels inclined to be constipated.

Circulatory System.—Pulse 96, small, weak, but regular. Heart, first sound accentuated.

Respiratory System.—Patient is troubled with cough, but unaccompanied by expectoration. Breath sounds are a little harsh all over the lungs, otherwise normal.

Genito-Urinary System.—Urine is scanty, and loaded with urates. There are two cicatrices on the glans penis.

Nervous System.—Motor power of the left hand is diminished, also that of the left leg is slightly diminished, and patient walks as if the leg could not carry the weight of his body ; the extremities are equally nourished. Sensibility is normal as far as can be ascertained. Patient states that he has occasionally a feeling of numbness in the left arm and leg, also a pricking sensation in the fingers and toes of

the same extremities. The use of the left hand is much impaired for performing finer movements, thus he cannot pick up small objects so well or so quickly with the left hand as with the right, which used not to be the case. The sight is impaired, the pupils are contracted, but the right is slightly larger than the left. Hearing is also impaired.

Mental Phenomena.—Expression is care worn, and at times vacant. His conversation is rambling and incessant, chiefly about himself and his delusions. He has extravagant notions about his great wealth, and how he is going to increase the value of his estate abroad by buying up all the springs in the neighbourhood, &c. He also believes he is the most favoured person living, as he has had a vision of heaven; he was taken up by the neck and a curtain was drawn asunder, then he saw most lovely sights, and heard the most charming music, &c. He believes that through this he is to live one half his life over again. Memory is impaired; he can always tell something about an occurrence, but colours it to his own advantage; sleeps fairly. Habits cleanly. He is very restless and excited.

Course of Case Condensed.—During a period of six months the restlessness and excitement gradually subsided, the exalted delusions lessened, and he acknowledged he could not think why he had talked such nonsense. He still maintained that he heard most peculiar sounds, and saw sights such as he had never seen before, when he thought he had a vision, and said he could only account for it by the diseased state of his mind at the time, as he now knew it could not have been a vision. Physical condition remained much the same; there was still great impairment of sight, but the pupils were equal, though small. The power of the left leg was improved, but that of the arm remained much the same. His mind remained much impaired, and his friends state that he is not like the same person regarding business matters, &c., and that he is totally unable to resume his professional work.

About a week ago he fell off the sofa in what appears to have been an epileptic fit, as he was quite unconscious and frothed slightly at the mouth. The numbness of the left arm and leg has returned; he sleeps badly, groaning in his sleep, and is very restless and excitable.

Case of Mental Excitement during the Secondary Stage of Syphilis. By FRANCIS CADELL, M.D.

The subject of this case is a gentleman, 48 years of age, who contracted an infecting chancre in January, 1870. Nothing of any note occurred until the month of April, when a squamous syphilide made its appearance, and at the same time marked mental excitement came on, with an extreme amount of restlessness. This mental condition reached its height during August and September, almost amounting to delirium. The patient took almost no rest in bed, and was in the habit of riding and driving about recklessly during the night. To-

wards the end of October the excitement began to diminish until, in December, nothing remained to remind one of the dangerous mental condition the patient suffered from five months before. At this time all trace of the secondary syphilide had disappeared.

The mind remained healthy until April of the following year, 1871, when the hair of the head, eyebrows, and beard began to fall out. This was attended by gradually increasing mental despondency, which became so intense in July that the patient several times threatened to commit suicide. What the Germans call "paralysis of energy" now clearly manifested itself; and the patient showed great disinclination to leave his bed. From October, 1871, to the beginning of 1873, he seldom left the house. At this time the bodily health was fair, the hair had grown in again, and there was a slow tendency to recovery. By the month of June, 1873, this patient had quite regained both his bodily and mental vigour.

Clinical Memoranda. By GEORGE THOMPSON, M.D., Medical Superintendent, Bristol Asylum.

There is in the Bristol Asylum an idiot girl, E. G., whose arrested mental development seems to be due to hereditary syphilis, as she is blind through interstitial keratitis, and has the well-known notched teeth and imperfectly developed alveolar processes described by Hutchinson. When first admitted, she was the subject of paroxysms of excitement, lasting over several days and nights at a time. The more common sedatives had no effect. Remembering the treatment adopted by my former teacher, Mr. Pridgin Teale, in all cases of hereditary syphilis, whatever form the symptoms had assumed, I gave her 20 min. doses of tincture of Belladonna, which had the effect of cutting short the then existing attack, and, by continuing the treatment, subsequent ones were at first lessened in severity, and then apparently warded off altogether. After discontinuing the treatment, the good effect of the former administration wore off, but at any time three doses of the drug, in the same amount, given in successive hours, relieve the excitement.

Occasionally a case is admitted with scabies. The treatment adopted here is to touch each individual pustule with Tinct. Ferri Perchlor. by means of a camel-hair brush. If carefully applied the disease disappears in a few days.

Case of Idiopathic Acute Mania. By THOMAS A. CHAPMAN, M.D.

S. S., æt. 28. F. Admitted on the 28th July, 1873.

History.—No report of hereditary tendency; was some two years ago in very low spirits for some time; this is the only trace reported of a previous attack. The first change denoting present attack occurred three weeks ago, and for two or three days she has been

violently maniacal. The medical certificates give the following information as to her state just before admission:—"She throws herself about in a violent manner, shouting loudly, without apparent cause; asking about her deceased aunt and brother, who, she said, come up from their graves, as they are uncomfortable from being buried in water. She says that all are bad besides herself." "Has threatened to throw herself through the window if not allowed to run out of the house. She has several times run into neighbours' houses, whom she did not know, and acted very madly when there." "Excited, frightened, and very violent; dressing and undressing; uttering scraps out of the prayer-book; continually holloaing and raving; abuses her father, and yet is constantly calling him, and then sending him away again."

State on Admission.—Is brought to the asylum almost nude, apparently from her having torn up all her clothing, and from the difficulty of keeping anything about her. Is shouting, screaming, and abusing those who come with her. Is short in stature, robustly built, fair complexion, and red hair. A physical examination is difficult, owing to her excitement; but when partially made, after she had become somewhat calmer, shows nothing amiss in heart and chest sounds; none but the most trivial bruises; complains much when touched in various places, and seems generally somewhat hyperæsthetic; has some small boils, and on lips a small patch of Herpes. Bowels stated to be regular; also menstruation, last period being a few days ago; has taken no food for 24 hours; took nearly a pint of milk just after admission.

July 20th.—Bowels have been opened by *Ol. Tiglii*, $\text{m}\frac{2}{3}$; could not be got to take any other medicine; takes a fair quantity of milk; also tea, but no solids; is noisy and restless; slept one hour last night and the previous one.

July 24th.—Has had no medicinal treatment; bromide of potassium was ordered, but not taken. Is very restless and excited, rushing about the airing court, sometimes shouting, and has clothing sufficient for decency with difficulty kept on her. Has twice had to be fed by stomach tube, and is now taking a bare sufficiency of fluid; has slept very few hours since last entry; tongue dry; ordered *gr. xx* of chloral at bedtime.

July 27th.—Bowels again opened by *Ol. Tiglii*; is doing rather better as regards food (fluid only), and has some rest; for two days the right parotid gland has been swelling, and is now markedly enlarged and tender; pulse 80; tongue and teeth dry and coated; is decidedly weaker; chloral continued; ordered twenty grains of sulpho-carbolate of soda every three hours.

July 29.—Has been very quiet, and confined to bed since last entry, partly from prostration, and partly from some little mental improvement; pulse still 80; swelling of parotid very tense; cannot open mouth only $\frac{1}{8}$ in., but tongue is cleaner; appetite improved, and looks

altogether better ; chloral continued, and dose of sulpho-carbolate to be taken thrice a day.

August 4th.—Has steadily improved since last entry ; is tolerably rational ; is up and about ; able to take a little solid food, and to open mouth a little ; swelling still considerable ; no distinct indication of pus ; treatment continued.

August 10th.—Rather dull and quiet, and inclined to cry on slight provocation, but otherwise seems rational ; improving in bodily health, appetite fair, can open mouth very little, swelling being still considerable, fluctuation under ear, opening made, and a little very thick laudable pus evacuated—no medicine.

August 27th.—Seems well, except a little stiffness about angle of jaw.

September 6th.—Discharged recovered.

I record this case as a typical one of a form of acute mania, which has seemed to me to deserve recognition as a distinct nosological entity. The cases which I have seen have been few ; they have all been marked by the wildest excitement, with refusal of food, parotid inflammation supervening at the end of a week or ten days. Two cases which I remember best, as they made a strong impression on me, ended fatally within a week of the parotid swelling occurring. I attribute the more favourable result in this case to the free use of the sulpho-carbolate of soda, which I have found very valuable in all cases of inflammation of a low (the therefore possibly septic) type, and also to the rest obtained by the use of chloral. During the first few days the case was under care hardly any treatment was possible.

This form of mania has no name under Dr. Skae's classifications, being placed under the head of Sthenic or Asthenic mania. Should further observation prove it to be a distinct disorder I would suggest that it be called Acute Mania with Parotitis.

OCCASIONAL NOTES OF THE QUARTER.

Lord Derby on Idiocy and Insanity.

On the occasion of the annual festival of the Royal Albert Asylum for Idiots, the Earl of Derby, who presided, made the following thoughtful remarks concerning idiocy and insanity, and the establishments necessary for the care and treatment of those afflicted with defect or disorder of mind :—

It is only within the last 100 years that the condition of persons mentally incapable, from whatever cause, has received in this country

any serious attention. In earlier days people were content to accept the fact of mental infirmity where they came in contact with it as one of those visitations sent by the Higher Powers which it was impossible to fathom, and regarding which it might be presumptuous to inquire into the cause. They considered that all they were bound to do, and all that there would be any use in attempting to do, on behalf of the patient, was to keep him from starving and to put him where he would not be a trouble to his neighbours. Now, the theory generally fell below the practice, and they, in fact, did very much less than this. Up to 100 years ago a great majority, both of imbeciles and lunatics in this country were left with very little care of any kind outside their own families, but as civilization goes on the belief grows that most diseases, whether mental or bodily, whether affecting the individual or society, are both curable and preventable—they are one or the other if you set to work the right way; and with that conviction there comes the more stringent sense of human duty and a higher sense of human destiny. Just on that account it is that in these times, when there is really the greatest activity in all matters of social improvement, you find people less contented with what is being done, and more apt to look at the defects of the actual practice, as compared with that which they think ought to be. Now, in regard both to lunatics and imbeciles, within the last hundred years there has been a complete revolution in their treatment. That revolution arises principally out of the growth of a stronger and more active feeling of humanity; partly also from the substitution of the scientific for the mere fanciful point of view. When it became recognized that diseases of the brain or defect of brain power was just as much, and in the same sense, a physical infirmity as disease or defect in any other bodily organ, the old notion of persons mentally afflicted being subject to some mysterious visitation which it would be useless, and perhaps improper, to attempt to interfere with, had to disappear, and the question was raised, and had to be answered, "Are these diseases curable; and, if so, how are they preventable; and, if so, by what means?" Well, I need not tell you what has been accomplished in regard to one class of those mentally afflicted—lunatics. If we are to measure the civilization of the country by the care which is taken of those who are incapable of taking care of themselves, and who can render no substantial return for the benefits conferred upon them, we may fairly claim to hold our own in the first rank of civilised nations, because I believe that, notwithstanding some little abuses, which under the peculiar circumstances of the case it is impossible should not exist, our asylums in this country are better arranged, better managed, and better supported than any others in the world. One proof of that is increased confidence, which, in passing, let me say has created, what I believe to be, a very unfounded impression as to the increased mental infirmity among our populations. I do not think it has ever been

proved that any such increase has occurred; but what is certain is this, that formerly affectionate friends and relatives, if they had any person of unsound mind, kept him at home as long as it was safe to do so, and very often a great deal longer, because they were convinced—and, under the circumstances, reasonably convinced—that he would not be safe from neglect or even from active ill-treatment; whereas now, having confidence in the treatment which they find existing, their first thought in a case of this kind is to send the patient to an asylum, where they know he will have a certainty of careful attention and the best chance of recovery. Well, with regard to imbeciles, who are a class in which we have now to deal, less has been done than in the corresponding case of lunatics, partly, I am afraid, from a more or less selfish motive, because, as a rule, they are a less dangerous and a less troublesome class; but partly, also, from a more definite reason, because there was really a much greater doubt as to the possibility of effecting a cure, or even a material alleviation of their condition. It is, in fact, in consequence of the observation and experience of the last 25 years that it has been ascertained that in a very large proportion of cases of congenital mental infirmity a patient may, by care and training, be made able, at least in part, to contribute to his own sustenance. If he is not able to do that, he is at least qualified to do without being watched. If even that second result has not been obtained, he may and ought to cease to be the source of annoyance, or disgrace, or danger to those about him. Now, both of those are very considerable results to accomplish. It is much, in an industrial point of view, to be able to turn idlers into workers, more especially when those idlers are not only themselves incapable of labour, but by the necessity of being looked after are keeping other persons from what might be useful and productive employment; but it is still more important, I think, to assert, as we do by our care of these unfortunate persons, the principle that a human being is to be respected and valued as such, not for his capacity of productive labour, not merely for the sharpness of his wits, not because there is anything about him which is pleasant to see or agreeable to have to do with, but simply because he is a member of the human race, born on English soil, and, therefore, in that double capacity has a claim upon us, as human beings ought to have. Well, gentlemen, the greater part, I do not hesitate to say, of the value of an asylum as a hospital consists in its usefulness as a school where the particular complaint treated may be studied, not merely that we may know how to cure it, but how to alleviate it when it comes before us in incurable cases, and, if possible, that we may trace it back to its cause and so guard against it in the future. Now, this, I am afraid we must allow, is still comparatively untrodden ground. In the case of insanity, I suppose no one would undertake to affirm that we could trace with certainty the conditions under which it will appear, or the cause to which it is due. In the case of idiocy and imbecility I

think we are safe in affirming that, not invariably, but most frequently we shall find it connected with physical or mental weakness, or with abnormal conditions, either the fault or the misfortune of parents. That fault or misfortune, whatever it may be, is often very likely inherited or inborn. We know that excess of all sorts—intemperance, extreme anxiety, or absolute vacuity of mind, either a great excess of work or a total absence of work, residence under specially unhealthy conditions, intermarriages among a limited number of families, and more especially in cases where weakness of brain already exists—that all these are recognised and allowed to be predisposing causes. Now, all these are causes within human control, and I do not, therefore, see why we are to despair, if not of absolutely stamping out imbecility as we have almost stamped out small-pox—at any rate, to put it more modestly, why we are to despair of greatly limiting its area and scope in future. Beyond that hope I think we cannot safely go. Our knowledge of the conditions which regulate human existence, as those who have studied them most closely will always be first to admit, is very limited and very imperfect. We know nothing, to take one instance, of that mysterious law which we see in operation generation after generation—that law by which certain races of mankind seem to decline and to die out without any physical, or, at least, any adequate cause; and so it is in the instance of which I have been dealing. We must be content only as far as we see our way clearly to do the work which lies before us ready to be done, and for the rest trust to the wider observation and longer experience of those who come after us. Meanwhile we know this—that every town or village thoroughly ventilated or drained, every model lodging-house set up, every case in which healthy labour is substituted for unhealthy labour, every brain healthily employed—above all, every individual rescued from the slavery and degradation of habitual drunkenness, does something to prevent the necessity for establishing and for keeping up institutions of this kind. If we are to look at it as a work of humanity and charity, an asylum such as this is admirable. If we are to look at it as an index of our actual social condition, its existence is a matter of regret rather than of pride. Being wanted, it is better we should have it; still it would be better if within these walls and within the walls of other establishments such as this, the lesson could be learnt which should render their present application superfluous and obsolete in the future.

We agree with Lord Derby that it has not been satisfactorily proved that insanity is increasing at the present time, but that there have been other causes at work adequate to account for the increased number of insane persons under care. If these causes are carefully investigated, and the operation of them traced, we believe that strong evidence will be furnished that there is not an increased production

of insanity in proportion to the population. To contrast the number of registered insane persons at the present day with the number registered ten years or twenty years ago, and to found upon such contrast a conclusion as to the increase of insanity in the population, is certainly not a scientific procedure; it is very much, in fact, as if one were to contrast the number of persons treated in hospitals at the present day, when there are so many hospitals in the country, with the numbers of persons treated in hospitals fifty years ago, when hospitals were few and far between, and to conclude thereupon that there had been a vast increase of disease; or very much as if one were to contrast the numerous names and various descriptions of skin diseases at the present day with the few such diseases which were described fifty years ago, and to conclude from such contrast that there had been a vast increase of skin diseases in the country. By adopting such a mode of drawing conclusions, an alarmist might go even further, and startle the world with the information that there was an enormous increase in the mortality of the people as compared with the mortality in those "good old times," when there was not an accurate registration of deaths. It is an easy and common fallacy in reasoning to fix upon an antecedent as the sufficient cause of an effect, without taking into consideration other causes which were present, and might have produced the effect. There is the well-known instance of Sir Kenelm Digby's sympathetic powder, the marvellous virtues of which, in the cure of wounds, gained such a reputation that Parliament made him a large grant of money for his discovery. But the singular thing was that the powder was to be applied, not to the wound, but to the knife or other instrument which had inflicted the wound. The latter meanwhile was to be carefully bound up and not to be interfered with. Under these circumstances the wound healed kindly; but the happy result was attributed to the virtues of the sympathetic powder. When kings touched people for scrofula, and recovery afterwards took place, the cure was attributed to the royal touch, and whosoever had dared to question its miraculous virtue would probably have fared worse than one who should at the present day question the uses of a king. It may be that insanity is on the increase; but it has certainly not been proved to be so, and it is wrong to base such a conclusion on the increasing numbers of registered lunatics, without taking into consideration and tracing the

effect of the causes other than an increased production that have been at work, and, as competent inquirers think, are sufficient to account for the increase.

Although we do not think it proved that insanity is increasing in the country, we agree with Lord Derby in looking forward to a time when the amount of idiocy and insanity shall undergo a diminution. In saying, however, that "no one would undertake to affirm that we could trace with certainty the conditions under which insanity will appear, or the cause to which it is due," although this may be done in regard of idiocy, he hardly does justice to the amount of exact knowledge which has been acquired. There is nothing miraculous, nothing mysterious, in the occurrence of the disease, and although we are not able to trace exactly its causation in each case, we are none the less able to point out certain recognised causes which account for a large proportion of the existing insanity. If we look at any book which treats of it, or at the first asylum report which comes to hand, we shall find that hereditary predisposition, intemperance, and mental anxieties and troubles of some kind or other cover nearly the whole field of causation. These are causes which it does not lie beyond the power of man to remove, or if not to remove entirely, at any rate to abate considerably: hereditary predisposition, by abstention from marriage or by prudent intermarriage; intemperance, by temperance in living; mental anxieties, by the cultivation of the mind and by the formation of a habit of self-government. Avoiding intemperance and other excesses, we shall cut off not only the insanity which is directly produced by such excesses, but we shall prevent their indirect effects by removing a fruitful cause of hereditary predisposition to physical and mental degeneracy; and by preventing such native infirmities of brain and mind, we shall cut off the emotional agitations and explosions which are the consequences of such infirmities, and which act as the so-called moral causes of insanity.

If we may rely upon the observations of travellers, there has always been comparatively little insanity among savages. Admitting this to be the case, it is not difficult to guess at the reasons of their comparative immunity. From the three classes of powerful causes of insanity just mentioned they are almost exempt. They do not poison their brain with alcohol until the white man introduces it to them. The weak in mind and body are not carefully attended to and

kept alive as among civilised people, if they are not actually destroyed; by natural or artificial means they are got rid of, so that they do not themselves swell the numbers of insane in their own generation, nor increase them in the next generation by propagating their kind. Savages, again, do not intermarry in the same family; among them the prohibition of marriage extends often to distant relatives; persons having the most distant blood-affinity being forbidden to marry. It can scarcely be doubted that the reason of such prohibition was their experience of the evils resulting from the intermarriages of relatives—an experience which, distinct as it is in the lesson which it teaches, has not yet availed to check the intermarriages of first cousins among civilised people. Lastly, the savage has few and simple wants springing from his appetites, and these he gratifies; he is alike free from the manifold artificial passions and desires which are incident to the multiplied industries and eager competition of an active civilisation, and from the restraints upon his natural passions which civilisation would impose. With him there is no eager straining beyond his strength after social aims that are not intrinsically worth the efforts which they cost, no disappointed ambition from failure to compass such aims, no dejection from the reaction which follows the realisation of an over-rated ambitious passion, no anxious sense of responsibility; he has no life-long hypocrisies to keep up, no tormenting remorse of conscience, no painful reflections of an exaggerated self-consciousness; none, in fact, of the passions which constitute the chief wear and tear of civilized life. The savage rarely or never goes against his conscience, such as it is, by which we mean that moral sentiment which is embodied in the beliefs and customs of his tribe; although, not deeming such things wrong, he may cheat, lie, steal, and violate all the dicta of a true moral sense in his relations with other tribes, or even with the members of his own tribe; he obeys it, as the animal obeys its instinct, without feeling a temptation to violate it. So it comes to pass, perhaps, that he is free from many of the powerful causes of mental derangement which act upon the civilised man, and from some of the forms of mental derangement which afflict the latter.

We can hardly venture to look forward to a time when asylums for idiots and insane persons shall become superfluous and obsolete, but we may confidently look forward to the time when a more exact knowledge of the causes of

idiocy and insanity, and of the laws of their action, shall teach us the way to guard against them, and when a proper education of mankind in accordance with the scientific or inductive method shall get rid of false beliefs and false aims, strengthen the intellectual faculties, and generate an unwillingness, which, accumulating and being transmitted through generations, shall become a moral repugnance to disobey those natural laws which govern, with unflinching constancy, the development of the physical, intellectual, and moral nature of man. There is a boundless perspective of labour and attainments for our descendants,

Et nati natorum et qui nascentur ab illis.

Another Classification of Insanity.

In the "Lancet" of November 15th last, Dr. Bucknill has propounded a new classification of insanity. The criticisms which he passed upon the etiological system of Morel in a former number of this journal (No. 38, p. 286), may be applied in the main, he thinks, to Skae's similar but more elaborate one. He had at one time intended to criticise the system of natural groups which has been proposed by Dr. Skae, but, on re-consideration, he determined to construct a system of his own, "which might more fully answer the purpose for which we needed it—namely, as a nosological scaffolding of form for the guidance of treatment." We append Dr. Bucknill's preliminary remarks, and the scheme which he has constructed:—

The novelty of the scheme of classification now proposed consists in the combination of psychical characters or phenomena with pathogenetic relations and pathological conditions; the first forming the Classes, the second the Orders and Genera, and the third the Species.

Since the etiological classifications of Van der Kolk, Morel, and Skae have been published, a most important step, in my opinion, has been taken in advance by the pathological classification of Dr. Batty Tuke; but even this thoughtful writer entirely omits all consideration of mental symptoms, and such an omission in a classification of mental diseases seems to me somewhat like the omission of flowers and foliage in a botanical system.

In the formation of classes I have followed Griesinger's simple division into states of psychical depression, psychical exaltation, and psychical debility; substituting, however, the conventional and now thoroughly established terms of Melancholia, Mania, and Dementia.

I have reversed the usual order of mania and melancholia, because

I believe that melancholia is the dominant psychical condition, and that Guislain was only wrong in being too exclusive in his theory that *preналgie* was the source of all *phrenesie*. Idiocy I have relegated to a sub-class. Pinel included it in dementia, and it was only separated therefrom by Esquirol. Pathologically, the distinction between primary and secondary dementia is at least as great as between brain-defect occurring before and after infancy. Cretinism is not congenital but toxic dementia.

The foundation of the *orders* and *genera* on pathogenetic relations is no doubt a natural one, and I think it can scarcely fail to be practically useful by impressing on the mind the kind of relation which the mental disease has with the bodily condition; for the treatment of the patient, both as to mind and body, must necessarily depend to a very great extent upon this relation.

I do not presume to think that I have enumerated all the *genera* which, eventually, it may be found desirable to distinguish; and I am well aware that the correctness of the position which I have assigned to some of the *genera* in the *orders* is quite open to discussion.

The inclusion of puerperal insanity in the Climacteric order is open to grave objection. This order, however, is intended to include *vesanias* which arise from or in conditions which are not pathological; and, although a deviation from bodily health generally precedes puerperal insanity, still the puerperal state can no more be considered necessarily a diseased state than that of puberty or old age. If there be a difficulty, the identification of *species* will resolve it, seeing that puerperal insanity may be septicæmic, anæmic, or neuralgic.

Of the *Species* there is little to say, except that they are the most important of all the divisions, and the most imperfect. Much has been left out which ought to have been admitted if knowledge had been sufficient. I trust, however, no condition has been admitted which ought to have been excluded.

Such conditions as are vaguely expressed by the Brunonian terms "sthenic" and "asthenic" have been omitted. The conditions of all the secreting organs have been omitted, simply from lack of sufficient knowledge; and the excess or defect of irritability of the muscles, which form such marked features in mental disease, have been omitted for the same very unsatisfactory reason.

On the other hand, the consideration of abnormal cerebral conditions which have not hitherto been sufficiently regarded in nosologies have been introduced. The ill-understood but undisputed state in which either the brain or the nerves, or both, wear away their physiological powers without interruption or repose, and its reverse, I have designated by the terms *hypertriptic* and *atriptic*—*τριβω*, to rub.

The *hypertrophic* and *atrophic* conditions of nutrition are well defined, if not yet well investigated; but the *cacotrophic* is a wide field of inquiry, in which ground has hardly yet been broken. Sclerosis of the brain and of the spinal column is *cacotrophic*. How

many varieties of it are there? If there is a paresic variety, is there not also a syphilitic one, and, may be, some others? In this division into species I claim the aid of the microscopic and chemical pathologist, for upon it is founded the all important question of ultimate diagnosis.

The field for clinical research is the correlation of the classes, species, and genera; but, even while this correlation is in process of being worked out, any concrete case of mental disease which is assigned to its proper place in the divisions of this system will have attributed to it a succession of characteristics which will scarcely fail to aid in the more systematic knowledge of its nature and the more definite aim of its treatment.

If it should be objected that this system is a complicated and artificial one, like the botanical system of Linnæus, the validity of the objection will be fully admitted, with the proviso that a complicated system is needful for complicated and ill understood phenomena. With larger knowledge a more simple and more natural system will take its place.

CLASSES of *Psychical Phenomena*.

1. Melancholia.
2. Mania.
3. Dementia.

SUB-CLASSES of *Psychical Combinations and Transmutations*.

1. Melancholia, simple.
2. " combined with excitement.
3. " with stupor (*dementia attonita*).
4. " mania, and dementia alternating (*folie circulaire*).
5. Mania, simple.
6. " with depressing emotions.
7. " intercurrent with melancholia.
8. " " dementia.
9. " alternating with sanity (*recurrent mania*).
10. Dementia, simple and primary.
11. " consecutive on mania or melancholia.
12. " congenital. Idiocy and imbecility.

ORDERS of *Pathogenetic Relations*.

1. Simple Insanity. *Idio-encephalic*.
2. Allied insanity.
3. Sequential insanity.
4. Concurrent insanity.
5. Egressing insanity.
6. Metastatic insanity.
7. Climacteric insanity.

GENERA of Pathogenetic Relations.

Simple Insanity :

1. Insanity from hereditary predisposition.
2. " moral influences.
3. " intellectual overwork.
4. " direct cerebral injuries.
5. Insanity of general paralysis (*encephalo-rachitis*).

Allied Insanity, influencéd by other diseases, but independent :

1. Insanity with cardiac disease.
2. " pulmonary disease, emphysema, phthisis, &c.
3. " enteric disease.
4. " renal and visceral disease, &c.

Sequential Insanity, caused by other disease which has subsided :

1. Insanity following idiopathic and exanthematous fevers.
2. Insanity following inflammations, as pneumonia.
3. " injuries to the cerebro-spinal axis, apoplexies, &c.

Concurrent Insanity, caused by other diseases or diseased conditions which continue to exist :

1. Insanity from cachexias—syphilitic, chlorotic, cretinic, &c.
2. " epilepsy.
3. " chorea.
4. " alcoholism.
5. " masturbation.
6. " starvation.

Egressing Insanity, growing out of the former disease, of which it is an exaggeration :

1. Insanity egressing from hysteria.
2. " " ecstasy.
3. " " hypochondriasis.

Metastatic Insanity, from the shifting or ceasing of other disease or suppression of discharges :

1. Insanity from rheumatism.
2. " erysipelas and skin diseases.
3. " suppression of habitual discharges, hæmorrhoids, or ulcers.
4. " suppression of the catamenia.

Climacteric Insanity, caused by natural conditions of development and decline :

1. Insanity of the pregnant and puerperal state.
2. " pubescence.
3. " climacteric decline.
4. " old age.

SPECIES of *Pathological Conditions differentiating the Genera by Pathological Conditions of the Brain and Nerves, of the Blood and the Nutrition.*

Neurotic :

1. Hyperæsthetic.
2. Anæsthetic.
3. Neuralgic.
4. Sympathetic.
5. Apathetic.
6. Hypertriptic.
7. Atriptic.

Hæmic :

8. Hyperæmic.
9. Anæmic.
10. Septicæmic.
11. Uræmic.
12. Toxic.

Trophic :

13. Hypertrophic.
14. Atrophic.
15. Cacotrophic or cachectic.

Restrictions to the Liberty of Marriage.

Mr. George Darwin contributes to the *Contemporary Review* of August last a very thoughtful paper on beneficial restrictions to the liberty of marriage. The following extracts which we make will serve to exhibit the author's stand-point, and to stimulate reflection upon a vastly important question which mankind will sooner or later have to face and answer. We do not think it has been proved that insanity has increased out of proportion to the population; but there can be no doubt of the influence of hereditary predisposition in the causation of such insanity as exists.

"The object of this article is to point out how modern scientific doctrines may be expected in the future to affect the personal liberty of individuals in the matter of marriage. Up to the present period of the world's history the social struggles of mankind have been principally directed towards the attainment by the individual of an ever increasing emancipation from the restraints exercised over him by other members of society. One of the most prominent ideas of Christianity is the personal responsibility of each man for the salvation of his own soul, and, as a consequence, his mental independence from others; any other idea than that of the complete independence of his bodily frame would not be likely to present itself to the mind until evolutional doctrines had obtained a considerable prominence. But these modern doctrines go to show that our mental, as well as our bodily structure, is the direct outcome of that of preceding generations, and that we, the living generation, are like the living fringe of the coral reef resting on an extinct basis afforded by our forefathers, and shall in our own turn form a basis for our descendants. We are now beginning to realize that the members of a society form a whole, in which the constituents are but slightly more independent

than are the individual cells of an organic being, and, indeed, according to the belief of many great physiologists, each cell is to a certain extent a distinct individual, and vast numbers of such individuals are, in fact, associated in a colony for the purpose of mutual assistance, and form in the whole a living organism. I have in this article assumed the truth of evolutionary doctrines, and persons who do not accept them will find the force of what I have to say either much weakened, or wholly destroyed."

* * * * *

"If we bear in mind the result of M. Béhic's investigation, viz., that insanity is transmittable to a greater extent after the development of the disease in the parent than whilst it is still latent, we are led almost irresistibly to an enactment that when a divorce is sued for, it shall not be refused merely on the ground of the insanity or idiocy of either party."

* * * * *

"A next step, and one to my mind as urgently demanded on the grounds of justice as the former, is that insanity or idiocy should of itself form a ground of divorce."

* * * * *

"Further changes in the same direction may be made by providing that proof of having never suffered from insanity should be a prerequisite to marriage."

"There are many diseases which seem to require attention on account of their strong hereditary characters."

"That consumption runs in families is too notorious to need any remarks on my part. We shall, to a certain extent, in combating insanity and idiocy, combat all these diseases, since, as was before remarked, they are mostly commutable with mental incapacity; but we can only make a really successful attack by compelling the production, before marriage, of a clean bill of health in the party, and ultimately in his parents and ancestors. Syphilis would have to be included, in case, as is only too likely, medical science and other preventive legislation should fail in depriving it of its hereditary character, or in confining its ravages to small limits."

"Simultaneously with the diffusion of the belief in the truth of the doctrine of heredity, will come the recognition that it is as much a duty to transmit to the rising generation vigorous minds and bodies, as to hand down to them a firmly constituted society and government—to which latter point attention has hitherto been almost exclusively directed."

"It is in his own case that man ventures to neglect the knowledge he has acquired of the beneficial effects of careful breeding."

"The general result to be deduced from these, and from other passages of a similar nature, seems to be that mental diseases are and might *à priori* be expected to be, on the increase, and that, as I

before observed, such increase will proceed by a geometrical ratio (although such ratio may not greatly exceed unity), that the extent to which the disease is inherited is enormous and very alarming, and that other diseases act and react on one another in the production of insanity." * * * * *

"Does it not appear, then, that we are bound to consider steps for the excision of this canker, and that those races which delay making the endeavour must fall behind in the struggle for life? Let us hope for the good of the world that the Teutonic races will take the lead in the attempt."

* * * * *

"The ultimate restrictions, then, to liberty of marriage would be (besides those already in force, less the absurd laws against marriage with a deceased wife's sister or husband's brother)—(1.) Divorce on the appearance of certain diseases; (2.) the passing of a medical examination for this same class of diseases; and (3.) the production of an untainted pedigree. The medical examination might in some respects be modelled on that in force in Germany for military service, when a man is not ultimately rejected until he has been refused in three successive years. Could such legislation come into force, coupled with some such scheme as that proposed by Mr. Galton, not only might 'a cubit be added to our stature,' but the capacity for happiness in the world might be largely augmented, by the destruction of that most potent cause of unhappiness, ill health; several years might be added to human life, our ability for work and mental power immensely increased, and the coming race might end by becoming as much superior to ourselves in mind and body as the racehorse is superior in form to a shaggy pony." * * * *

"Does not this serve as an answer to those objectors who would say, 'We shall never submit to having our marriage laws more restricted?' For when one can point out so great a diversity of restrictions, many of which are no longer maintained for any good reason, it is surely absurd to say that nothing new will be endured, even though it may be founded on the best of reasons. Our state of civilization has so diminished the force of natural selection that we cannot much longer afford to neglect some process of artificial selection to replace the method which nature has been carrying on from the beginning, and that nation which has first the courage to adopt some such plan, must undoubtedly gain on others in the vigour of its members in mind and body."

Dr. Gregory on Madness.

The following letter, written by Dr. James G. Gregory (the third), the celebrated Professor of Practice of Medicine in the University of Edinburgh, and the author of "Philosophical and Literary Essays," has been forwarded to

me by my relative, Mrs. Balfour, having been found by her amongst the papers of her grandfather, the late Principal Baird, of the University of Edinburgh. It is evidently a reply to queries addressed to the Professor by the Principal, and is interesting as supplying Gregory's definitions of some terms, as to the exact meaning of which we are still disputing.

J. CRICHTON BROWNE, M.D.

Edin., Monday, 2nd Dec., 1816.

DEAR SIR,

I am very sorry that I have kept so long your paper (your Schedule of Queries) and the printed (very shocking) report about mad people.

Your Queries appear to me very judicious and complete. Nothing of any consequence occurs to me that I could wish to add to them.

It is not easy to describe briefly, or define in few words, what is meant either by *ideotism* or by *madness*.

A person whose *memory* and *judgment* are so weak and imperfect as to be unfit for the common business and duties of life is deemed an idiot.

A person who adopts and believes (not from false information, but spontaneously and without any *rational* or *plausible* ground of belief) *erroneous notions*, and gives way to *violent emotion* or *passion*, without any adequate moral cause, and whose looks and demeanour are particular, and wild, different from those of people who are in their senses, and from what his were when he was well, is held to be mad.

But either madness or idiotism may come on very gradually. Madness often does so. I have seen idiotism do so along with or after paralytic or epileptic affections. I have seen very furious madness supervene, sometimes suddenly, sometimes gradually, on such idiotism. Violent madness often passes into perfect hopeless idiotism. In short, sound sense, great talents or genius, downright madness and perfect idiotism may pass into one another, either quickly or by insensible degrees.

When a person has *erroneous notions* on *one subject only* or even on a *very few particular subjects*, but has *just notions* on other subjects (like Don Quixote on "Knight Errantry," or "Simon Brown about his soul being miraculously taken away from him," &c., &c.), it is called in our *slang* language Melancholia; when a person has *erroneous notions*, very generally on many or all subjects; when his thoughts are not connected in the usual manner (by their natural or habitual relations), but are desultory and rapid, so that he has not the natural command of them, we call such a disorder Mania. This much more frequently than Melancholia is connected with violent passion and ferocity.

Yours most truly,

J. GREGORY.

PART II.—REVIEWS.

Mind and Body. The Theories of their Relation. By
ALEXANDER BAIN, LL.D. Henry S. King and Co.
1873.

This is the fourth volume of the International Scientific Series now in course of publication. When the series is complete, it should, if the fair promise of its announcement be kept, furnish general readers with an instructive account of the present state of knowledge in various interesting branches of scientific inquiry. The difficulty of the respective authors will be probably to steer a happy course between a too elementary treatment of their subject, and a too technical exposition of it. We suppose that the volumes are not intended to be of a character such as would fit them for use in schools, but to set forth in as popular a manner as may be practicable the highest results of knowledge, and the direction which inquiry is taking in the different subjects with which they deal.

Mr. Bain has been modest in the plan which he has laid down for himself; he has been content to expound in the plainest terms his views of the relations of mind and body, and the theories which have at different times been propounded on the subject. In fact, the book is mainly a concise summary of some of the views which he has enunciated in his well-known works on the Senses and the Intellect, and the Emotions and the Will. If we were to make any complaint it would be that it is in some parts, at any rate, a little too elementary. Sentences like these, for instance, read somewhat strangely in an *international* volume.

The red flesh of meat, called muscular tissue, is a stringy substance made up into separate masses called muscles, of the most various shapes and sizes, but all agreeing in one property, called contractility or forcible shrinking. A muscle has its two extremities attached to bones or other parts, and in contracting it draws the two attachments nearer one another, and thereby effects the movements that we see.

Again :—

On examination we discover a set of silvery threads, or cords of various sizes, ramifying from centres to all parts of the body, including both sense-surfaces and muscles. These are the nerves. The

centres whence they ramify are constituted by one large continuous lump, principally of the same silvery material, occupying the skull or cranium as a rounded mass, and continuing into the backbone as a long flattened rod, about half an inch across. The mass in the skull is the brain; the rod in the backbone is the spinal cord.

This style strikes us as almost too simple and didactic. Moreover, we doubt whether, taking it on its own ground, it is adapted to convey to those who need such simple instruction, correct and useful notions of what muscles and nerves are. However, if it be an error, it is an error on the right side, and Mr. Bain is the best judge of the most suitable means for accomplishing his plan. His book has already reached a second edition, and that must be accepted as a sufficient answer to criticism.

It is not necessary to inform those who have read Mr. Bain's systematic works that he fully accepts the physiological basis of mental function. His comprehensive statement of the physical conditions of all consciousness is as follows:—"An increase or variation of the nerve-currents of the brain sufficiently energetic and diffused to affect the combined system of the out-carrying nerves (both motor nerves and nerves of the viscera)." Although this statement is physical enough to satisfy the most earnest advocate of the physiological method of the study of mind, it is perhaps a pity that Mr. Bain uses the term nerve-currents so much as he does. So far as we know, there is really no evidence of the existence of such currents as the actual conditions of any state of consciousness. No doubt there is some molecular change in the nerve elements as the physical condition of all function, which might be described as a current of molecular action, and which is probably all that Mr. Bain means to imply by the expression nerve-current, but we cannot help thinking that it is an expression which will convey much more than this to his readers. Moreover, his statement fails to convey the idea—would seem implicitly to exclude it—that there are nerve-currents sufficiently energetic and diffused to affect the out-carrying nerves which are nevertheless not accompanied by consciousness; for it is certain that ideas, or the physical changes that are the condition of them, may be excited into activity, and may be expressed in movements, without an excitation of consciousness.

When speaking of the physical theory of pleasure and pain in its bearing on punishment and prison discipline—of states of pleasure as connected with an increase, states of

pain with an abatement, of some or all of the vital functions—Mr. Bain drily makes a suggestion which may be commended to the consideration of the advocates of flogging. As the sole object of flogging is to produce a painful condition of the nerves, this might be effected, without injury to the skin, by having recourse to electricity.

By electrical shocks and currents any amount of torture might be inflicted; and the graduation might be made with scientific precision. The punishment would be less revolting to the spectator and the general public, than floggings, while it would not be less awful to the criminal himself; the mystery of it would haunt the imagination, and there would be no conceivable attitude of alleviating endurance. The terrific power exercised by an operator, through the lightest finger touch, would make more deeply felt the humiliating prostration of the victim. If capital punishments are to be permanently maintained, much could be said for discarding strangulation, and substituting an electric shock.

Without doubt there are many persons who, though earnest advocates of flogging as a punishment of criminals, would look upon the mode of graduated torture suggested by Mr. Bain, as a cruel thing; who would, in fact, be sincerely horrified at it, without being conscious of any inconsistency in themselves. It is not the custom of the large majority of mankind to use their reason to examine the ground work of what they are pleased to think their beliefs.

The groundwork of volition, or the physical foundation of the will, Mr. Bain believes to be formed of two primordial elements, on which a large superstructure of acquired connexion between feelings and specific movements is built in mature life. The first of these is the spontaneous energy or surplus activity of the system, or the disposition of the moving organs to come into operation of themselves, previous to, and apart from, the stimulation of the senses or the feelings. In the course of education the spontaneity comes under the guidance of the feelings, and is so linked with them as to be an instrument of our well-being, in promoting pleasures and removing pains. "The voice by mere spontaneity sends forth sounds, the ear controls and directs them into melody, and the wants of the system make them useful in other ways." For the second element we must refer to the principle of self-conservation or fundamental law of pleasure and pain—the law that connects pleasure with increase of vital power, pain with the diminution of

vital power. A pleasurable feeling is the stimulus of heightened activity, the pleasure thus feeding itself. In that connexion we have, as Mr. Bain believes, the deepest foundation of the will.

In his chapter on the groundwork of Thought, Intellect, or Knowledge, Mr. Bain goes rapidly over the same ground as he has gone over in his larger work. But he seems to us to be more deeply inspired with the physiological spirit than he was formerly, and he is more instructive and suggestive in consequence. He makes an interesting estimate of the number of nerve cells and their connexions in the grey matter of the convolutions, for the purpose of showing that numerous as are the embodiments of thought to be provided for, the nervous elements are on a corresponding scale, and that there is no improbability in supposing an independent nervous track for each separate mental acquisition. After pointing out that cerebral growths, of a certain typical complication, cannot be adequately stated in hundreds; that they amount to thousands, and even tens of thousands; that they scarcely count by hundreds of thousands; he says:—

Let us make a rough estimate of the nervous elements—fibres and corpuscles—with a view to compare the number of these with the number of our acquisitions.

The thin cake of grey substance, surrounding the hemispheres of the brain, and extended into many doublings by the furrowed or convoluted structure, is somewhat difficult to measure. It has been estimated at upwards of 300 square inches, or as nearly equal to a square surface of 18 inches in the side. Its thickness is variable, but, on an average, it may be stated at one-tenth of an inch. It is the largest accumulation of grey matter in the body. It is made up of several layers of grey substance divided by layers of white substance. The grey substance is a nearly compact mass of corpuscles, of various size. The large caudate nerve-cells are mingled with very small corpuscles, less than the thousandth of an inch in diameter. Allowing for intervals, we may suppose that a linear row of five hundred cells occupies an inch; thus giving a quarter of a million to the square inch, for 300 inches. If one-half of the thickness of the layer is made up of fibres, the corpuscles or cells, taken by themselves, would be a mass one-twentieth of an inch thick, say sixteen cells in the depth. Multiplying these numbers together, we should reach a total of twelve hundred millions of cells in the grey covering of the hemisphere. As every cell is united with at least two fibres, often many more, we may multiply this number by four, for the number of connecting fibres attached to the mass; which gives four thousand eight hundred millions of fibres. Assume the respective number to be (corpuscles)

one thousand, and (fibres) five thousand millions, and make the comparison with our acquisitions as follows:—

With a total of 50,000 acquisitions, evenly spread over the whole of the hemispheres, there would be for each nervous grouping at the rate of 20,000 cells and 100,000 fibres.

With a total of 200,000 acquisitions of the assumed types, which would certainly include the most retentive and most richly endowed minds, there would be for each nervous grouping 5,000 cells and 25,000 fibres. This leaves out of account a very considerable mass of nervous matter in the spinal cord, medulla oblongata, cerebellum, and the lesser grey centres of the brains; in all of which there are very large deposits of grey matter, with communicating white fibres to match.

Mr. Bain next goes a step further, and proceeds to inquire, and to illustrate by diagram, how the various groupings may arise, and how they can be isolated so as to preserve the requisite distinctness in our terms of thought. For the description of this ingenious hypothetical arrangement we must refer the reader to the book itself.

A chapter follows, entitled "How are Mind and Body United?" Though agreeing with most of what Mr. Bain says in it, there are some statements which seem to us to be open to criticism, and which, if space permitted, it would have been interesting to have discussed. Here is one of them, which we are tempted to pronounce not only inconsistent with Mr. Bain's whole position as a thinker, and with both the spirit and the letter of much that he has said in this volume, but very much like a contradiction in terms, or an incomprehensible paradox, if it be not a metaphysical dust-raising for the benefit of weak-kneed brethren. Speaking of mind, he says—"There is an *alliance with matter*, with the object, or extended world; but the thing allied, *the mind proper*, has itself no extension, and cannot be joined in local union." Here, then, we have a *thing*, which has no *extension*, which is in *alliance with matter*, and which, nevertheless, cannot be *joined in local union!* In so far as the proposition has meaning, it would seem to be a contradiction in terms. The fact is that Mr. Bain, in propounding the dogma, is harking back to an extraordinary definition of mind which he enunciated long ago, "as the sum total of subject-experiences, that which has not extension," in other words, the sum total of the experiences of that which has not extension, and yet that something a subject! It would have been well, perhaps, if he had taken another step, and given—what is certainly

needed—a further definition of the subject, and of its position in regard to extension.

The volume concludes with a concise history of the various theories which have been entertained at different times with regard to the soul. Although the book is fragmentary, and, as a whole, hardly fulfils the high expectations which its title and Mr. Bain's reputation had led us to form, we have no doubt that it will do much good, and that it will be a welcome addition to the library of the earnest student of mind and body.

On Megrin, Sick-Headache, and some Allied Disorders. A Contribution to the Pathology of Nerve-Storms. By EDWARD LIVEING, M.D., Cantab. London: J. and A. Churchill, 1873.

This a very complete treatise on the subject with which it deals. In the first chapter the author has set himself to work to define and identify a natural group or family of disorders which may properly be included under the comprehensive term *Megrin*. These disorders he holds to be intimately allied—to be, in fact, merely different degrees of development, or, perhaps, slightly different localisations of the same essential kind of disturbance traversing the sensory tract of the encephalon. The descriptions of illustrative cases bring out in an effective way the particular features of the different varieties of the group, which range from the simplest hemicranial pain, transient half-vision, or sick-giddiness, to cases which present marked phenomena of sensorial disturbance, and even disorder of ideation and failure of speech. The close affinity of them, as members of the same family, is shown by the gradual transition between the different forms of seizure in different individuals, by transformation in the character of the seizures in the same individual, and by their hereditary nature; the same type being transmitted from parents to children as a rule, but occasionally two or three forms of the affection being met with in the same family.

The second chapter is devoted to an enumeration and discussion of the bodily conditions which seem in any way to favour the development of the disease, and of the usual exciting causes. One fact which Dr. Liveing brings into prominence, and on which he lays much stress, is its hereditary character. "There is no feature," he says,

“ which is more constant in the history of the malady than its hereditary character, and none which so forcibly confirms its claim to be regarded, in the majority of instances, as an idiopathic affection, or links it more closely to the natural family of neuroses.” For what he says of the different accessory and exciting causes, the influence of each of which he discusses at length, we must refer to the book itself.

In the third chapter Dr. Liveing describes at length the phenomena of the paroxysm. The character and the meaning of the different symptoms, the frequency and order of their occurrence, their pathological nature, and their termination, are discussed fully in the light of his own observations, and of the observations of those who have given attention to them. We have been pleased to see that he has found occasion in this chapter to refer to some of the suggestive reflections and acute observations of Dr. Darwin, the distinguished author of the “Zoonomia.” It is, indeed, one of the merits of Dr. Liveing’s book that he has embodied in it the results of his studies of old writers as well as of recent works.

The fourth chapter, in which he treats of the affinities of megrim with other neuroses, will probably be the most interesting to the readers of this Journal. With Epilepsy, Epileptic Vertigo, Spasmodic Croup, Spasmodic Asthma, Angina Pectoris, Gastralgia, Tic-douloureux, Intermittent and Paroxysmal Insanity, and some other disorders, he believes megrim to have intimate relations. After setting forth in a connected way the common characters of the leading members of the group, including the influence of various exciting causes of the seizures, he points out a still more intimate relationship between them in the occasional replacement of one form of paroxysm by another in the same individual, as well as in the occurrence of intermediate and transitional forms. With regard to the common characters of these neurosical affections, as they are described by Dr. Liveing : they are all so-called *functional disorders*, the phenomena recurring at intervals in paroxysms of irregular and unco-ordinated nervous action ; the predisposition of the nervous system, or of some parts of it, to these modes of irregular activity appears to be, in a large proportion of cases, *innate and hereditary* ; they exhibit a tendency to make their first appearance at certain ages, and frequently *an approximate limitation to a determinate period of life*, varying with the nature of the particular neurosis ; the influence of sex is

often strikingly apparent in these neuroses, some being much more frequently met with in males, others in females; the seizures are of a *paroxysmal character*, that is, the disorder manifests itself from time to time in fits of morbid nervous action, which often rise gradually to a certain pitch of intensity and then subside, with intervals of health or comparative health between; they *return periodically*, or approximately so, as if they were the result of a gradually accumulating tension; a kind of *compensation* is observable in many of them, a longer interval being followed by a stronger seizure, or a stronger seizure by a longer exemption; they resemble one another in the variety and similarity of the influences which operate as existing or accessory causes of the seizures.

In the fifth chapter Dr. Liveing treats of the pathology of megrim and allied disorders, enumerating the different pathological theories that have been propounded, and discussing them in a thorough and comprehensive manner. It is a long chapter, but we do not think that the reader will find it either tedious or unprofitable reading. It has an importance beyond that of the malady to which it more immediately refers, as the author holds the pathology of megrim to be in the main the pathology of the whole group of disorders to which it belongs, and as it has been his intention accordingly to exhibit the gradual progress of opinion as to the nature and cause of neurosal phenomena up to the present time. Some few of the theories that have been propounded he puts aside as purely imaginary; but he believes that many of them are not so much antagonistic as they are partial and incomplete representations of the facts with which they deal. He advocates finally a view which considers these paroxysmal nervous affections in the light of nerve-storms, a view which, while not ignoring any facts embraced by other theories, assigns them a different value and interpretation. But we shall allow Dr. Liveing to expound this theory in his own words:—

The fundamental cause of all neuroses is to be found, not in any irritation of the visceral or cutaneous periphery, nor in any disorder or irregularity of the circulation, but in a primary and often hereditary vice or morbid disposition of the nervous system itself; this consists in a tendency on the part of the nervous centres to the irregular accumulation and discharge of nerve force—to disruptive and unco-ordinated action, in fact; and the concentration of this tendency in particular localities or about particular foci, will mainly determine the

character of the neuroses in question. The immediate antecedent of the attack is a condition of unstable equilibrium, and gradually accumulating tension in the parts of the nervous system more immediately concerned, while the paroxysm itself may be likened to a *storm*, by which this condition is dispersed and equilibrium for a time restored.

We have instances of sensorial storms in the paroxysms of epileptiform neuralgia, which have been described by Trousseau; of ideational, in epileptic delirium and mania transitoria; of motor, in the convulsive attacks or eclampsia of infantile life; of vasomotor or trophic, in acute pyrexial or local inflammatory paroxysms, like those respectively of ague or gout, and in the profuse perspirations or copious diuresis of certain nervous and critical states.

The last chapter deals with the treatment of the disease, and it is followed by an appendix containing a description of some additional cases, and by an analytical table giving the essential particulars of sixty-seven cases. It only remains for us to add, in concluding this notice, that we cordially recommend the book to the attention of our readers, who will find it instructive and suggestive in its matter, comprehensive in its plan, and clear and pleasant in its style. Representing the result of genuine work, it will long occupy a position as a standard treatise.

The West Riding Lunatic Asylum Medical Reports. Edited by J. CRICHTON BROWNE, M.D. Vol. III. Smith, Elder, and Co., 1873.

We ought to have noticed this excellent volume of Reports before now, and to have noticed it more at length than we are able to do on this occasion. Dr. Browne is certainly doing not a little by his organization of workers to remove the reproach which has been cast upon medical superintendents of asylums, that they leave unused the vast amount of valuable material for scientific research which lies at their disposal.

The first paper is an address on the convolutions of the human brain, considered in relation to the intelligence, which was delivered by Professor Turner, of Edinburgh, at a medical conversazione, at the West Riding Asylum. We need hardly say that it is marked by the thoroughness of knowledge and caution of statement which characterise all that Professor Turner writes. He considers, first, the mass and weight of the brain, coming to the conclusion, after a

careful enumeration of observations, that "the size and weight of the brain cannot *per se* give an exact method of estimating the intellectual power of the individual, and that a high brain weight and great intellectual capacity are not necessarily correlated with each other." He next deals with the external configuration of the brain, concluding his summary of the observations which have been made on the subject with the statement that "it is clear that a correspondence in morphological configuration by no means necessitates either equality or similarity in functional power. In estimating the value of the convolutions, therefore, either when the brains of men are compared with each other, or with those of animals, other factors are to be considered than those afforded by size, or weight, or form, or modes of arrangement." Passing next to an account of the general facts of the internal structure of the brain, he reaches the important conclusion that the convolutionary area of the hemispheres does not form a system dissociated from the other nerve-centres, that not only are convolutions in the same hemisphere and in opposite hemispheres connected together, but that they are anatomically continuous with the various centres from which the cerebro-spinal nerves arise, and through these are brought into relation with the outer world." Lastly, he takes into consideration the vascular supply to the brain, pointing out how abundant it is to the grey matter of the convolutions.

Having gone through the survey of the more important facts, the question arises—"Are the convolutions distinct organs, each endowed with properties peculiar to and characteristic of itself?" After passing in review the general character of the evidence which has been adduced in support of the proposition that particular faculties are localised in special convolutions, Professor Turner points out that the convolutions, though they exhibit special forms, are not so individualised as to be disconnected from each other, but that the grey matter on the surface of one convolution forms invariably a continuous layer with the grey matter of all the convolutions which immediately surround it. Whether there be a specialisation of internal structure is a question that cannot be answered until we have fuller and more precise information. He thinks that it is in the study of the deeper connections of the convolutions—the differences in their commissural connections, that we must look with most hope for evidence in favour of their functional differences. "The fact

that communications are established between certain convolutions, and not between others, points to the inference that certain gyri are not only anatomically but physiologically associated directly with each other; and it is possible not only that particular combinations of convolutions, through an interchange of commissural fibres, may condition a particular state of intellectual activity, but that these combinations associate various convolutions together in the performance of a given intellectual act, just as in the muscular system several muscles are, as a rule, associated together for the performance of a given movement."

The second paper in the volume contains a description of Prof. Ferrier's now well-known researches into the functions of the cerebral convolutions. These were first undertaken at the West Riding Asylum, Dr. Browne having furnished a liberal supply of fowls, guinea-pigs, rabbits, cats, and dogs. In our last number we gave the conclusions to which Dr. Ferrier has come; and as the researches will no doubt be soon presented in a more complete form, we shall not attempt to discuss their meaning and importance on this occasion.

Mr. Herbert Major continues his observations on the "Histology of the Brain in the Insane." In a case of chronic brain-wasting he found an increase in the number of the cells of the convolutions, taken collectively, the increase being due to an excess of the small corpuscles; a deficiency in the number of the large pyramidal cells, a want of distinctness in their outline and branches, the nuclei of large size, but altered in form; an increase in the density of the outer nerve layer, and want of definition of the others. There was also a great increase in the size of the vessels, due in most instances to a state of dilatation, with thickening of the walls by a proliferation of nuclei and morbid deposits of hæmatoid in fat, &c.; while there were large perivascular canals. In a case of senile atrophy he observed a deposit of fatty granules and small compound granular bodies on the walls of the vessels, and a fatty and pigmentary degeneration of the cells, especially of the large pyramidal cells, reaching in its last stages such an extent that the whole cell is reduced to a simple mass of granules, without branches, cell-wall, or nucleus. "It must not be supposed that in the case of a few cells only is the degeneration to be observed; on the contrary, it is rarely that a cell having fairly normal characters is to be seen." He describes also the morbid appearances met with in four cases of general paralysis. In one of these

he met with a peculiar condition, such as he has never before met with either in health or disease: it consisted in the presence of nerve-cells of immense size, situate about midway in the depth of the cortical layer. They had a more or less pyramidal form, their branches were large and numerous, sometimes as many as eight to a single cell, and they were few in number compared with other cells. As to their pathological significance Mr. Major is not able at present to form an opinion.

Dr. Milner Fothergill contributes a paper on the "Heart Sounds in General Paralysis of the Insane." From an examination of the patients labouring under that disease in the West Riding Asylum, he arrives at these conclusions—that in general paralysis, and in other conditions of cerebral hyperæmia, the heart's aortic second sound is usually accentuated; that the cerebral hyperæmia is connected with the perivascular lymph-spaces; and that a species of antagonism would appear to exist between heart disease and insane conditions associated with cerebral hyperæmia and mental exaltation, heart disease being somewhat rare among the insane, while disease of cerebral vessels is the reverse.

A paper on the "Power of Perceiving Colours" possessed by the insane, by Dr. McDowall, is preliminary to a series of extensive inquiries which he proposes to make, and to describe in a future report. He hopes to supplement these investigations by ophthalmoscopic and microscopic observations of the retina, when possible, and by the record of inquiries made of convalescent patients as to the disturbances of vision which they experienced during their illness.

Dr. Crichton Browne gives the results of his experience of the use of Nitrite of Amyl in Epilepsy. Epileptic patients are highly susceptible to the inhalation of the nitrite, while general paralytics are much less so. He administered it regularly to a patient who, at the time, was having one fit every day with considerable punctuality, in the hope that it might, when inhaled near the time when the fit was due, so dilate the vessels as to counteract the spasmodic contraction which is presumed to occur at the commencement of the seizure. The results in this case exceeded his most sanguine expectations. And the results of further experience have been such as to convince him that the inhalation of the nitrite will be found invaluable in many cases, in not only postponing but altogether preventing epileptic seizures. He

has also found it most useful in the condition called the *status epilepticus*, where there is a rapid succession of fits without intervening consciousness. At some future time he intends to place on record the results of his further experience of this agent in the treatment of epilepsy.

Dr. Hughlings Jackson has contributed a paper entitled "Observations on the Localisation of Movements in the Cerebral Hemispheres," and another paper on "The Anatomical, Physiological, and Pathological Investigation of Epilepsies." They are a reiteration of views which he has expressed on former occasions, but they fitly have a place in the same volume which contains the results of Dr. Ferrier's investigations. But why does Dr. Jackson deal so profusely in italics? No young lady in her teens writing to her dearest friend could be more liberal in underlining words and sentences. As an observer there is no one for whom we entertain a greater respect than for Dr. Jackson, but as a writer he drives us to despair; having done which he proceeds cruelly to pelt us with italics. We trust he will pardon us for laying down this as a literary canon: that a writer who has clearly conceived his ideas, and who has acquired the power of clearly expressing them, may presume the existence of sufficient intelligence in his readers to render it unnecessary for him ever to use italics.

Dr. Wilkie Burman contributes an elaborate paper in which he considers fully the existence of a probable causal relation between Heart Disease and Insanity. He believes "further observation will show—as I believe my own results justify the statement—that heart disease has really more to do with the production of insanity than is now commonly supposed." He finds, in fact, that there is a very striking and remarkable relation between the two diseases in their comparative local distribution, a relation which cannot be doubted to have some special significance, and that heart disease, in its various forms, is "exceedingly common amongst the insane, and, presumably, much more frequently met with in asylums than out of them." His results, it will be observed, are not in accord with those reached by Dr. Fothergill. "The forms of insanity most commonly associated with heart disease are," Dr. Burman thinks, "*hypochondriacal melancholia*, that particular form of chronic mania termed *monomania of suspicion*, and such *modified* forms of general insanity as those in which the patients are *sullen* and *morose*, or *impulsive*; and the very great frequency of heart disease

in those forms and modifications of insanity justifies a strong suspicion that it is associated with them in some *causal* relation, whether it be exciting, modifying, or predisposing."

Two or three other papers, which we are unable to notice now, go to make up an interesting volume of reports.

A Phrenologist amongst the Todas; or, The Study of a Primitive Tribe in South India. By WILLIAM E. MARSHALL, Lieutenant-Colonel of Her Majesty's Bengal Staff Corps. Longmans, Green, and Co. 1873.

The Todas are a primitive tribe, numbering about 700 souls, dwelling on a plateau among the Nilagiri mountains of South India, and occupied in pastoral pursuits, the chief of which is the herding of buffalos, of which they possess a very fine species. They keep no other description of animals save cats. The country which they inhabit, consisting of rounded hills and tracts of rolling prairie—the hills as accessible as those of Malvern, and the prairie stretching like the billows of the ocean in long undulations—is covered with a good soil, which in the moist hollows is eminently rich and productive. The land is accessible to the plough, and there is excellent clay for pottery. An industrious and energetic people might make it a paradise, that is, we presume, convert it into brickfields, and cover it with smoke-belching manufactories. But the Toda cares not to do more than provide for his daily needs. His cattle afford him nearly all he wants, for he subsists almost entirely on milk: why should he work? The rice, wheat, sugar, salt, and tobacco which he consumes he obtains from neighbouring tribes by the barter or sale of his surplus nei—a clarified butter. They are not flesh-eaters, and used no intoxicating liquor before they came in contact with the English. A simple, thriftless, idle race, without any taint of the ferocity of savages, building for themselves small beehive-like huts, to enter which they must crouch, or crawl on all fours, they go on as their forefathers for generations apparently have gone on before them—scrupulously following certain peculiar customs without being able to give any other explanation of them than that "It is our custom."

Colonel Marshall, who is an ardent phrenologist, made many examinations and measurements of their heads, and he found their qualities of mind to conform exactly with the phrenological conformation of their heads. They are,

without exception, dolicho-cephalic or narrow-long-headed ; wanting, in fact, those active qualities which, he holds, are invariably accompanied by large size of the groups of organs, situated at the sides of the cranium, and forming, when well developed, the brachy-cephalic head.

As is the case in many other parts of India, there is a great disparity between the numbers of the sexes, the ratio of males to females being at 100 to 75.

The Todas are not troubled with much religious superstition. They do not address supplications to any personal god, have no idols or images, and make no sacrifices ; they salaam to the rising and setting sun, and to the moon at night, looking apparently on these luminaries as God or Lord, without having any clear ideas with regard to their powers. Colonel Marshall is not prepared to say that they have really no god, for they acknowledge vaguely the existence of Usuru Swâmi, a sort of chief god, but he is certain that they have no definite conception of a Supreme Being. One clan among them, the Pekkans, who are poor and have few herds, have no occasion for a god. " They don't want a god," said his informant. No property, no god ! When they die the Todas go to Amnôr, the next world, which is exactly like this, and to which their buffalos go also, to supply them with milk. It is situated far away in the west, " where the sun goes down." Most of their words referring to religion being almost pure Sanscrit, the Colonel believes that the vague and rude ideas on religious subjects which they have have been acquired by them quite in modern times, from Brahminical sources, through their neighbours, the Hindu Badagos, with whom they have for several generations been on intimate terms.

Formerly it was the custom among the Todas to kill female children, one or two girls being considered enough in a family, but the practice has now died out. An old woman used to take the child as soon as it was born and suffocate it by pressing a cloth over its mouth and nostrils. For this she received four annas, which is equal to sixpence. Colonel Marshall accounts for the present disparity of numbers between the sexes by supposing that the result of long continued infanticide has been to create a male-producing variety of man. If the males are kept alive, and the females are killed, a proportion of the males will represent families in which the tendency to produce sons is great, while a proportion of the extinguished females would belong to families

in which the tendency was to produce female children. With their extinction there would be an extinction of much of this tendency, while with the survival of the males would survive a proportionate tendency to produce male children. Hence the continuance of the disproportion between the number of the sexes after the cessation of the practice of infanticide.

Polyandry is a recognised institution among the Todas, one woman being sometimes the lawful wife of several men, either brothers or near relations. In this custom they resemble our British fathers of Celtic days, of whom Cæsar wrote, "It was common for a number of brothers or other near relations to use their wives promiscuously." Formerly the custom was very general among the Todas, but there seems to be a growing tendency for a man to have a wife to himself when he can afford it. Colonel Marshall does not seem to be aware that the practice of polyandry may account for the preponderance of males in the population. It is a result of observation that where polygamy prevails, as among the Mormons, there is a preponderance of female over male births; in lands where polyandry is the rule there is a preponderance of male births. Indeed, it must be confessed with regret that, throughout his book, he has indulged in speculations that are hardly warranted by adequate knowledge. He has failed, too, to give a full and exact description of facts, much of what he writes being vague and conjectural. Moreover, he is seduced, by a love of fine writing, into a style which is sometimes not grammar, is not always in good literary taste, and which with manifold words makes little understood.

More facts concerning the Todas and fewer comments concerning things in general we should have desired. But his object has been praiseworthy, though his opportunities of observation were evidently insufficient.

The Human Mind: a System of Mental Philosophy for the General Reader. By JAMES G. MURPHY, LL.D. Belfast: Mullan. 1873.

"The mind is the man; the body is only its tenement and instrument;" and the proper mode of investigating mind is, not to proceed from matter to mind, from physiology to psychology, but to go "directly to the mind itself, to ascertain the facts of consciousness, and arrange them under their

proper heads in a systematic form." These quotations declare the author's views of the nature of mental philosophy and of the proper method of its study. His treatise is intended for the general reader, or rather for the young of both sexes, and is therefore, he says, comparatively free from technicalities.

We know not the capacities of the young for mental philosophy, but we had not read many pages of Dr. Murphy's treatise before we began to doubt our capacity. One or two sentences like this we failed at first to understand at all. "The physical potences belong, not to matter itself, but to the principle of life in its diverse forms;" and it was only after referring to a note at the end of the book that we found that the author gave a special meaning to the word *physical*; using it, in fact, to designate the organic and to exclude the inorganic! The young of both sexes must, we fear, find this use of the word not a little confusing.

We had thought to have given an account of the author's views, but the task is beyond our power. To us it is simply a marvel that anyone could persuade himself that in such a treatise he was imparting knowledge to the general reader; or, we had almost said, imparting knowledge at all; and we feel not a little curious to know who will be the readers of it. However, as the faults may be in our intellectual capacity, and not in the treatise, it is only fair to allow the author to declare his own opinion of what he has accomplished or endeavoured to accomplish.

The writer has done his best to arrive at the real facts of the human mind, and to convey them in simple and intelligible language. He has also endeavoured to trace their mutual connection and reduce them to a system in harmony with itself, with the world around, and with the God above. It (the treatise) offers at the same time some amendments in the explication and arrangement of the functions of the mind. It suggests a somewhat different division of the mental faculties, and signalises intuition as a special function of the understanding. It attempts to rectify the distinction of matter and mind, of sensation and perception, of quality and relation. It endeavours to determine the function of consciousness, the proper meaning of idea, and the real division of the qualities of bodies. In the region of will it points out the place of emotion, and the character and function of conscience. It raises power, properly so called, to a primary place in the spirit, and assigns to it a separate discussion. For these results the writer's appeal is to the facts of consciousness. And he submits his work with all deference to the

consideration of the mental philosopher, as a somewhat nearer approach to the real character of the mind than that of Reid, the founder, or even Hamilton, the lucid and eloquent expositor and defender of the true system of mental philosophy.

Troisième Section des Recherches sur les Conditions Anthropologiques de la Production Scientifique et Esthétique. Par THÉODORE WECHNIAKOFF. Paris: G. Masson. 1873.

It is not an easy matter to convey an exact idea of the aim and character of these researches. The author of the contribution before us, who is a Russian, distinguishes two leading mental types—the ideo-emotional or the *sensory-emotional*, and the intellectual or *anti-emotional*, and traces their influence in the character and the works of the men of different countries, who have been eminent in the arts, in the sciences, and in philosophy. First of all, however, he points out that there are two kinds or groups of scientific labours having distinctive characters. These are the group of *original labours* (*travaux primitifs d'Initiative*) and the group of labours of *elaboration* or *completion* (*travaux dérivés de Perfectionnement*). Now the work of those who have taken the initiative, or first broken ground, in a new line of thought, often remains for a long time unknown—unregarded by contemporaries. When it is taken up by others after some time, after a period of prolonged and latent incubation, it is often done in such a way that the filiation between it and the new labours cannot be easily traced, especially as these are presented often as new and independent. We have used the author's style of expression, which, here as elsewhere, is somewhat laboured and involved. But the observation is just: an original idea is evolved by some thinker; it remains latent for years, no one appreciating its worth; then comes some one who appropriates it, expounds, illustrates, and verifies it, whereupon he is proclaimed, and probably ever afterwards takes rank, as its discoverer. Sometimes, however, the evolution of the original idea and its subsequent elaboration are accomplished by the same person: witness, says the author, the cases of Geoffroy St. Hilaire, Claude Bernard, Ch. Robin.

After this preliminary digression he proceeds to the consideration and illustration of the two great intellectual types,

the merit of first indicating which he assigns to Dr. Maudsley. We must say, however, that whoever was the author of the *travaux primitif d'Initiative* in this matter, all the merit of *travaux dérivés de perfectionnement* belongs unquestionably to M. Wechniakoff. As examples of the contrast of the two types of mind in the same department of science, he cites, in astronomy, the anti-emotional type of Tycho-Brahé, Laplace, Leverrier, as contrasted with the emotional type of Kepler, Zöllner, Thompson, W. de Fonvielle; in biology, the anti-emotional type of Cuvier, Valentin, Frerichs, Ludwig, Ranke, Marey, Schacht, as contrasted with the ideo-emotional type of Lamarck, Blainville, Geoffroy St. Hilaire, Ch. Vogt, Mirbel, Broussais, Magendie, Virchow; in sociology, the anti-emotional type of Adam Smith, as contrasted with the ideo-emotional type of Turgot and St. Simon; in history, the anti-emotional type of Hume, Guizot, Mignet, Froude, as contrasted with the ideo-emotional type of Carlyle, Michelet, Macaulay, Augustin Thierry. It has somewhat surprised us to find Mr. Froude placed in the anti-emotional group of historians. For an elaborate analysis of the distinctive fundamental characters of the different types we must refer to the book itself. Indeed, we should despair of giving anything like an adequate summary of the author's views, and of the elaborate way in which he has expounded and illustrated them, under the conditions of space and time imposed upon us in this notice of his philosophical researches. We are afraid that he has systematised too much, and that his classifications of mental qualities do not fulfil the promise of their philosophical pretensions; but we have read with interest an elaborate comparative examination of the characters, as scientific investigators, of the two great Englishmen, Faraday and Graham. Among the leaders in science this country happily still holds its own.

The Convolutions of the Human Brain. By ALEXANDER ECKER.
Translated by JOHN C. GALTON, M.A. OXON., M.R.C.S.
Smith, Elder and Co. 1873.

This will be found a most useful little book, and the translator, who has done his work well, has been well advised in presenting it to English readers. It is a book which all

those who would have an accurate knowledge of the geography of the cerebral convolutions for the purposes of exact pathological observation, should not fail to obtain, and to read, mark, and inwardly digest. It will be a useful accompaniment to the pathological charts just issued by Dr. Howden and Dr. Batty Tuke, which every medical officer of an asylum should possess.

The Physical Basis of Mental Life. A popular Essay. By R. R. NOEL. Longmans, Green, and Co. 1873.

A considerable part of this essay formed the subject-matter of a lecture delivered before the Literary and Philosophical Society of Leicester. The author, who has written a book in German entitled "Grundzüge der Phrenologie," has made a collection of casts of the heads of eminent men, criminals, suicides, and of national and other skulls, and in this essay he gives a popular exposition of the conclusions which he has arrived at from his observations and physiological studies. We must confess to a feeling of some disappointment after perusing his essay, for the title of it had led us to expect something more than an elucidation of the doctrines propounded by Gall. Not that the author commits himself to the details of the system which phrenologists advocate; for he points out what Gall really did by way of observation to reform the method of studying the brain as an organ of mind, and what an uncompromising hater he was of mere theorists and systematisers; and he has himself given no little attention to the study of the anatomy and the physiology of the brain. It would not be correct, therefore, to describe him simply as a phrenologist, as that would imply that he was a more thorough supporter of the phrenological views with regard to the localisation of the mental faculties, than he really is; he should rather be described as one who was convinced that there is a considerable foundation of truth in the doctrines first promulgated by Gall, and subsequently developed by Spurzheim and Combe. But his opinions, as set forth in the essay, appear to be somewhat vague, unless it be that the popular form which it takes is answerable for the generality and seeming vagueness of them.

Life and Mind: Their Unity and Materiality. BY ROBERT LEWINS, M.D. 1873.

We shall allow the author, whose outspoken sincerity deserves all praise, whatever may be thought of his opinions, to speak in his own words, and our readers to make their own comments or criticisms:—

My present purpose is to attempt, in quite popular and intelligible language, divested of all technicality which is not familiar to all fairly educated persons, to ascertain the verdict of modern physiology and pathology on the real nature of life. Upon this physical basis, disregarding all metaphysical systems, from Plato to Comte, as so many *ignes fatui*, which have only served during thousands of years of mis-directed activity to perplex and mislead the human mind, I propose to formulate, in a few sentences, a consistent and rational theory of human existence, in which everything super-natural and exceptional to familiar, every day observation and experience, is removed from the domain of sense and fact into that of fancy and fable.

I have chiefly at heart to bring to bear, in a purely scientific and judicial spirit, on the so-called inspiration and infallibility of our own Bible, one single, well-established physiological canon, *the non-existence of a vital or spiritual principle as an entity apart from the inherent energy of the material organism.*

This one fact alone, I am fully satisfied in my own mind, proves conclusively that all super-naturalism, alike "sacred and profane," is explicable by quite familiar phenomena of deranged cerebration and innervation, and that, as a corollary, the pretended "fundamental truths of Christianity" are palpable fallacies, ill-analysed and misinterpreted signs of disordered functions of the brain and cranial nerve-centres, of no more authority or claim to especial sanctity than analogous pretensions in the case of the Koran, or other extinct or extant idolatry. Mahomet, indeed, from being subject to epilepsy, must be considered by modern pathology as labouring, during his whole public career, which was much more extended than that of the Prophet of Nazareth, under actual organic brain disease, and the wide-spread religion of Islam may therefore be dismissed at once, as a purely medical question, from the serious notice of all who are not Pathologists. The Grecian Oracles, also revered by the most civilized nation of antiquity as superhuman utterances of Divine Wisdom, were merely the ravings of women temporarily insane from the inhalation of gases which disturbed, by poisoning the blood, their cerebral functions. Insanity and Idiocy, to this day, are still venerated in the native lands of Jesus and Mahomet as the manifestation of divine inspiration. Christianity will thus be found, when examined by the light of the 19th, to be simply what the impartial Greeks and Romans described it in the 1st century—a Syrian superstition. Syria, the "Holy Land" of the Bible and Koran (as if in sound philosophy any one place or thing can be holier than another)

seems in all ages—doubtless from geological and meteorological peculiarities—to have been notorious for the mysticism of its inhabitants; by which term I mean such excess of the idealising over the reflective faculties that sober reason and observation, the seeing things as they are in the open day-light of fact and nature, become quite disguised and obscured by the phantasmagoria of illusion. This radical defect, which necessitates the intellect to revolve perpetually in a vicious circle, fatal to all real progress, is characteristic of the human mind throughout all the East, as every impartial traveller perceives on a very cursory acquaintance. * * *

This radical principle of true knowledge, which the human mind has only reached after persevering for thousands of years in false methods, is the confidence, *based on fixed scientific data, and not merely on conjecture*, in the all-sufficiency of Matter to carry on its own operations, and the consequent absurdity, uselessness, non-necessity of any hypothesis which assumes, that from outside the sphere of sensible, material phenomena, there intrudes an immaterial, spiritual, or supernatural factor, to perform functions which Matter, by virtue of its own in-dwelling energy, really performs for and by itself. I confidently submit to the judgment of my readers the assertion that the whole hypothesis of Immaterialism, of an overruling of matter by "Spirit" (in the transcendental, not etymological sense of the word), the former the passive instrument, the latter the active agent, received its death-blow on the fall of the Cartesian, and establishment of the Newtonian, Philosophy. Our great English astronomer, by his discovery of universal gravitation, was the real founder, in Christian times, of scientific, common sense materialism, though, from prejudices of his own education in the scholastic methods of his age, he himself failed to carry out his own data to their legitimate conclusions in the domain of Biology. The tremendous revolution in European thought, at the close of the 17th century, can even yet be well appreciated by comparing the mystical idealism of Milton's "Paradise Lost" with the common sense realism of Pope's "Essay on Man." From the awe-struck manner in which the intellectual representative of Puritanism hails Light as too sacred even to be named, we recognise the fatal tendency of that primeval mysticism which renders free thought, free investigation, and real progress, an impossibility. There is no room for doubt, from his cosmological and psychological stand-point, that had Milton been aware of the prismatic experiments and cosmical demonstrations of Newton, he would have turned from them with abhorrence and proud contempt. To us, at all events, a century and a half later, it seems perfectly patent, whatever may have been the doubts and quibbles of Newton, Locke, and their learned and unlearned contemporaries, that as soon as it became a demonstrated fact that Matter was active, not passive, and that its every particle was in motion itself, and the cause of motion in every other particle—the belief in an energising

principle as a separate entity, apart and distinct from Matter itself, became an untenable fallacy. The whole fabric of Immaterialism, the idea of the necessity of supernatural influence in inorganic matter, was annihilated at once.

And the generalization cannot be restricted to "brute" matter, but is equally applicable to the organic kingdom of nature, to plants, animals, and man. Sensibility and voluntary motion (animal life), just as in the case of the self-acting cosmos, are not the outcome of a vital or senso-motor principle, spiritual or immaterial, animating, vivifying or vitalising the material organization; but just as in the simpler, though not less wonderful, (for in an infinite scale there are no absolute degrees) case of inanimate matter, animal vitality or conscious existence, with all its marvellous and complicated processes of body and mind, is merely the active expression of the material machinery of the microcosm. In this microcosm special anatomical structures or tissues manifest special functions, one of them being consciousness—egoistic and altruistic—of which mentation or cerebration is only a mode. Thought and Moral Feeling are thus only localised sensation, the special life of the hemispheres of the brain, organs familiarly known to be exceptionally developed in the human, as compared with all other animals. Modern physiology, just as in the case of modern physics, has been compelled entirely to discard the Oriental, classical, mediæval, metaphysical, ante-Newtonian speculation that organic function has for its factor a spiritual or immaterial entity or soul. The question of the *anima mundi* and *anima humana* (using the term in the sense of soul) is at bottom one and the same. The speculation, explicable and excusable even so late as the prevalence of the Cartesian system, while the erroneous idea of the inertness of matter vitiated Philosophy, had no longer a *locus standi* after its refutation by Newton. If Matter acts by means of its own *vis insita*, and depends on no extraneous "influx," or impulse, the whole problem of Immaterialism and Materialism is solved in favour of the latter. No modern physiologist has any difficulty in realising what seemed so insuperable a stumbling block to the Ancients and Locke—that sensation and thought are due to matter (nerve substance). The whole difficulty seems to us purely imaginary, depending on preconceived fancies as to the twofold existence of spirit and matter in the universe, and the inferiority of the latter to the former—ideas of no greater value than the old prejudice of mathematicians as to the "perfection" of the circle, so mischievous in astronomical discovery—or the fanciful notion of peculiar sanctity attached to the numbers 3 and 7. We know nerves feel or sensate. We know equally well, both from physiology and pathology, that a special portion of the nervous system (the hemispheres of the brain) thinks. From the medical or natural stand-point, the metaphysical notion that man is a dual being, compounded of soul and body, is in reality only the last lingering relic of the vicious, obsolete School-Physiology—the parent of occult therapeutical practice in the middle ages, and familiar in medical

literature as the system of Van Helmont, a Flemish physician, who died about the time of Sir Isaac Newton's birth. This system was based on the fallacy of the essential passivity of matter, and presupposed that in every organ of the body there is an Archeus, a ruling spirit, an Eu-demon in health, a kako-demon in disease—the active agent in function, whose sole *raison d'être* is the presumed incapacity of matter, “living or dead,” to exhibit, *proprio motu*, energy of any kind. This theory, identical with that of Divine and Demoniac possession in the Bible, which is quite incompatible with rational, theoretical and practical Physic, has long since fallen even into popular contempt as regards every other organ or series of organs in the body, except the Sensorium. * * * *

The bearing of this unity, and not duality of nature in man on what are called the “fundamental truths of Divine Revelation,” must be apparent at a glance. What has been mistaken for supernatural interference resolves itself into Hyperæsthesia or Anæsthesia, dependent on increased or diminished nervous and cerebral action. It is quite unnecessary, from the physiological vantage ground, to allude seriously to the portents, miracles, prophecies, &c., claimed by mystagogues, successful or unsuccessful, which sanction their pretensions, as exceptionally privileged beings, to dictate authoritatively to their fellow creatures the behests of Heaven, from Moses to Pius IX., and the author of the Book of Mormon. All such must be uncompromisingly negatived by science in the 19th century as impostures—conscious or unconscious—the promulgator of an untruth not being, of course, less an impostor from being his own first dupe, even though he be the victim of circumstances beyond his own direct control.

It were an impertinence in the present state of physiology and physics to argue in refutation of the incredible assertion that human beings can arrest the motions of sun and moon, change water into wine, lay the winds and waves by a word, cure old standing or congenital organic disease or deformity instantaneously by a touch, by the invocation of any name under Heaven, or in any other way alter or suspend the regular order of the universe by means corresponding with the idea of a miracle in theology. When we eliminate from matter the vital principle we nullify entirely the venerable hypothesis of Divine or diabolic inspiration and possession, and give scientific sanction to the Sadducean doctrine that all reported visions of angels and spirits, good or evil, are spectral appearances—symptoms of disturbed bodily function of organs within the skull, “coinages of the brain, bodiless creations,” like the apparition in Hamlet and the apparitions everywhere else. Such assumed supernatural visitations as the “descent of the Holy Ghost” at Pentecost, and the conversion of Paul, to whom, and not directly to Jesus Christ or any of his immediate companions and disciples, Protestantism is chiefly indebted for its Evangelical doctrines, on his journey to Damascus—phenomena lying at the very root of the alleged Divine origin of Christianity—belong to the very alphabet of medical science, and may be confidently

diagnosed as not preternatural occurrences at all, but merely symptoms of over-excitement—the result either of Anæmia or Hyperæmia—of the nervous centres in the head. “The sound of Heaven as of a rushing, mighty wind, the cloven tongues of fire,” are symptoms familiar to every clinical tyro of morbid action in the encephalic sensory ganglia connected with the auditory and optic nerves, and are, indeed, only exaggerations of that “singing in the ears” and “floating of motes” before the eyes, which every one who reads this must have himself experienced from the most trifling derangement, centric or eccentric, of the circulation of the blood within the brain, or from over-tension of the brain, eye, or ear nerve-tissue itself. The exaltation of the faculty of speech—a parallel case to which is well known as the Irvingite epidemic of “Unknown tongues”—is also the external sign of excited function at the origin in the brain of another cranial nerve, the lingual or motor nerve of the tongue. The mental tumult, panic, and metamorphosis of ideas, feelings, and character, are all quite ordinary symptoms consequent on the participation of the cerebral hemispheres—seat of the moral feelings, ideas and character—in the excited condition of the sensory ganglia. Identical symptoms, affecting both the organs of sense and the mental and moral faculties, are now quite familiar to us as exhibited by fanatics in “camp meetings,” and religious revivals, not uncommon since Whitfield and Wesley’s time, in Great Britain, North America, and Protestant Ireland. All such occurrences, whether they happened 1800 years ago in Palestine, or yesterday at our own doors, have no connection whatever with supra-mundane agency, but are simply the usual, constantly recurring, every-day indications of abnormal states of the sensorium.

The conversion of Paul falls under the same category, and resolves itself into an apoplectiform attack of the nature of sun-stroke with temporary amaurosis—a very common sequel to protracted cerebral tension and excitement; the probable proximate cause of the paroxysm, the active symptoms of which only lasted three days, though, as often happens in illness of this character, it revolutionised the whole future life of the sufferer, being exposure to the noon-day blaze of an Eastern sun. Such instances of mistaken diagnosis merit as little notice, other than professional, from contemporary medicine, as do the tales of witchcraft in former ages, or the shameful spiritualistic delusions of to-day. All such supposed evidences of supernatural power are merely indications of natural bodily *infirmit*y. * * * *

The following twelve theses—partly taken from the German—summarise the chief points contended for in this paper:—

1st. The genuine disciple of Nature and Life, which are one and indivisible, takes nothing on trust, but only believes what is known with positive certainty—that is, *on data* which can be universally verified.

2nd. Doubt is not, as Fiction pretends, the herald of dismay and despair, but the necessary preliminary of all order and progress; as without it there cannot be any inquiry, clear insight, or settled convictions whatever.

3rd. Natural Science is bound in conscience to divulge *all* her results, however much they may conflict with contemporary prejudices, in order to satisfy the human mind and leave it free for the further pursuit and enjoyment of truth. Mental Reservation and Prevarication, as habitually practised by contemporary English thinkers and savans, is disloyalty to humanity and reason; dangerous alike to their country, and to the cause of civilisation throughout the world.

4th. Natural Philosophy in recent times has rendered trite the axiom, that everything in the Universe proceeds by unalterable law.

5th. The sum total of Natural Law constitutes the system of the world (axiomatic truths of logic and mathematics).

6th. The world is from eternity to eternity. Nothing is ever created, nothing lost. Beginning or ending there is alike none. Only the form and condition of things is perishable. Everything that exists dates from eternity. x

7th. The Universe is boundless in space and time. The divisibility of matter is infinite. The Universe *can* have no limits, eternity in time and immensity in space being correlative.

8th. As the logical inference from the above, millions and millions of millennia are before us, in which new worlds and systems of worlds shall flourish and decay; at their lapse the Universe *can* be no nearer its dissolution than at the present or any former period.

9th. Cosmical space is not a vacuum. Our atmosphere has no limits. The first living being had its germ in eternity, which is equivalent to negating Creation altogether. The present human being is only a link in an endless series—the goal of a past—the starting-point of a future developmental form in the Animal Kingdom.

10th. The so-called "Personal God" is merely an idol of the human brain—a pseudo-organism of pre-scientific man endowed with man's attributes and passions, a remnant of Fetichism. Jehovah, Jove, or the "Lord and Father" of the New Testament, are alike anthropomorphic inventions. Absolute Atheism is, however, no postulate of Science, which does not venture to impugn the evidence of Cosmical Design, or the existence of an unknown, inconceivable, intelligent First Cause, of whose Eternal Mind the Eternal Universe may be a hypostasis. Some such belief is, indeed, a necessity during the earlier stages of our life, while, even in the soundest intellect, imagination is dominant over judgment.

11th. The further development of our race in intellect and moral feeling depends chiefly on education—the disuse of *à priori*, intuitive methods, and the systematic practice of rational habits of thought based on actual experience. At bottom this is equivalent to saying, superior enlightenment depends on proper exercise, in every possible direction, of the cerebral hemispheres.

12th. No satisfactory progress in virtue or happiness can be hoped for till the present supernatural theory of existence is overthrown, and the docile study of the great Book of Nature and Life, with its invariable sequences of cause and effect, supersedes the arbitrary anarchic authority of falsely called "Divine Revelation."

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *Insanity in Ireland in 1872.*

The Irish Blue Book for 1872—the twenty-second Report of the Inspectors and Commissioners of Control of Asylums for the Insane in Ireland—did not appear in time to be reviewed in our issue for last October along with the Reports (for the same period) of the English and Scotch Commissioners. We now, however, take the first opportunity of noticing its contents, and only regret that our space is too limited to enable us to do them justice. The report is a most interesting one, and the appendices, which are very full and complete, bear evidence of the bestowal of much labour on their compilation.

We may preface our remarks by stating that the total number of persons known to be of unsound mind in the United Kingdom was 86,322 at the beginning of last year. They were distributed as follows:—

In England	60,296
In Scotland	7,849
In Ireland	18,177

England was the only division in which there was any marked change in the numbers from those at the commencement of the year. The small increase in Scotland was more than counterbalanced by the falling off in Ireland, the numbers on 1st January, 1873, having been respectively 58,810 in England, 7,729 in Scotland, and 18,327 in Ireland. The decrease in Ireland has been entirely among the “Un-registered” insane. Those under official cognizance increased in numbers during the year from 10,767 to 10,958. These latter were distributed as follows:—

In the 22 District Asylums	7,140
In Dundrum “Criminal” Asylum	175
Supported by Government in the Registered Hospital at Lucan	30
	<hr/> 7,345
In 18 Private Asylums	350
In 3 Registered Hospitals	297
	<hr/> 647
Total in the 44 Public and Private Asylums	7,922
Total in Union Workhouses	2,966
	<hr/> 10,958
Gross Total	

The population of Ireland, which was close on 5,790,000 in 1861, had fallen down to nearly 5,400,000 in 1871. In the sixteen District Asylums (which correspond to our English County Asylums) the

average numbers resident during 1862 were 4,426. In 1872 they had risen to 7,107, inhabiting twenty-two asylums. Alluding to this want of correspondence between the decreasing general population and the increasing insane population—the total number of the latter (including those in every class of asylums) amounting at the beginning of last year to 7,851 against 5,257 at the commencement of 1863—the Inspectors make the following remarks:—

Notwithstanding the continued drain of the population by emigration to the United States of America and elsewhere, so far from the numbers of insane being on the decline, as might naturally be expected, they would seem, on the contrary, to be decidedly on the increase With a numerical diminution of the active, intelligent, and energetic portion of the masses of society, the mentally affected who have been left at home appear, relatively speaking, to increase in proportion to the extent of emigration. Taking the last twenty years, our numbers have probably fallen two millions, principally out of the rural population, at the same time that the insane have remained at home. Hence, making allowance for incidental cases of lunacy which spring up in the human family from time to time, there is now quite as large, if not a larger, aggregate of insanity among a population of perhaps little more than five millions than there was in 1854, when the population was over six millions.

We are reminded by the inspectors that in estimating the value of statistics for the decision of the moot point as to the *increase of insanity*, two matters should be taken into consideration, viz., 1st,—The greater *longevity* observable now than formerly among those affected with mental diseases, due to the improved methods of treatment, and the “quietude of asylum life” as contrasted with the life too often led in former days by the wretched imbecile, “tied down and secreted in back places” in almost every village in the country. 2nd,—The greater readiness with which now-a-days people place their insane friends under treatment *instead of concealing* them as formerly. This, they say, is due to all classes of society now looking upon insanity as a disease equally curable with others to which flesh is heir, and its being a recognised fact that those who recover from mental affections “return to society with, if possible, increased faculties (*sic*) and memories altogether unimpaired.” We cannot stop to discuss here the novel doctrine propounded in this last extract (taken from p. 25 of the Report). We, therefore, pass on to another subject referred to by the Inspectors—

Separation of Incurable (or more properly Chronic) from Curable Cases.—The Inspectors have long advocated the establishment in Ireland of institutions somewhat akin to our Metropolitan District Asylums at Leavesden and Caterham. Their views remain unchanged, as will be seen by the following observations:—

The insane poor, instead of being placed with reference to two distinct classes, are at present, all alike, located in the same institutions; idiots, the hopelessly demented, the incurable, and epileptics constituting a large per-centage of inmates in establishments more properly intended for curable and acute cases. A double disadvantage arises herefrom:—(1) The asylums are overcrowded, and (2) a heavier expenditure is incurred without proportional benefits—an expenditure, too, which is progressively advancing.

Besides the 7,140 patients already referred to as tenanted district asylums, there are in union workhouses no less than 2,966 mentally affected.

The cost of maintenance of lunatics in asylums may be set down, one year with another, at £23; that of the pauper insane in unions at £11. In England, but particularly in London and the Metropolitan counties, a similar state of things existed, which, within the last few years, has been materially obviated by the erection of intermediate institutions between asylums and union workhouses, into which a large percentage of hopeless cases find admission; at the same time, however, though with a less expensive staff, and an organisation not so complex in detail, the wants and comforts, as well as the moral and physical treatment of the inmates, are peculiarly attended to in a manner which would totally disassociate them from the same category as the ordinary poor in union workhouses. Indeed, so far back as the year 1858, we, in our report for that year, advocated the establishment of a system which is now in efficient working order in the sister country, as the following extract from that report will make manifest:—"Taking a broad view of lunatic accommodation, it is obvious, for many reasons, that the most suitable place for every demented person, lunatic or idiot, harmless or otherwise, is an institution specially devoted to the care of the insane, under the superintendence and management of experienced officers and attendants, who are practically acquainted with the treatment of mental disease in every form, and directed and controlled by that department of the public service to which the supervision of all matters relating to such establishments properly belongs; and we regard the question as deserving the consideration of the executive—namely, whether the time may not have arrived for making provision for the complete separation of the insane poor of every class from the sane portion of the community, which, whilst effecting a moral duty towards the latter, would insure for the insane poor, idiotic, or imbecile, more care and comfort than they can possibly have in ordinary workhouses. We feel that objection to a change may be advanced on financial grounds, and that it may be argued, considering the extremely low position some, particularly the idiotic, occupy in the human family, both socially and mentally, that they are comfortably circumstanced and sufficiently well cared for at present. Another and most desirable object would be obtained by this measure. All the chronic and incurable cases which have been for many years accumulating and at present take up a great deal of valuable room in the several district asylums (that could otherwise be more beneficially devoted to recent and acute cases) might be removed to these auxiliary buildings, by which means a twofold advantage would be gained, viz., the provision of proper accommodation for the class in question, and the disengagement of the present houses from all but those suffering from recent and acute affections, or those whose malady afforded reasonable hope of an ultimate recovery, thus leaving them free to exercise their proper and legitimate functions of hospitals for the cure of insanity, instead of being mere receptacles for the safe keeping and maintenance of chronic cases." The advocacy of the system expressed in the preceding extracts was first undertaken in our Eighth Report, but as the question of inadequate accommodation grew to be one of more pressing importance from month to month, we adverted to it again. In view of the much enlarged accommodation and the great numerical increase in insanity, which in the intervening 16 years has been developed, we are now enabled to see the more fully that the course then suggested was the soundest and most judicious we could have recommended.

The new cases admitted during the year into the District Asylums numbered 1,787; the relapsed cases 378. Of the total number of admissions, 2,165, no less than 1,119 were sent under police escort, and thus treated as if criminals. The law unfortunately sanctions this method of procedure; but if we are to deal out even-handed "justice to Ireland," the act should be repealed at once, and the mentally

afflicted in the Sister Isle treated no worse than their brethren in misfortune on this side of the channel. We never could understand why the Relieving Officer should not have the same duties to perform in regard to the insane poor in Ireland as he has in England. We have the same complaint to make about the class of patients too often sent to public asylums in England which is made by the Irish Inspectors when they protest against magistrates ordering to be sent to District Asylums, "the bedridden, aged and infirm, nay even children when troublesome, noisy, and difficult of control, or idiotic." Humanity, however, has not been so far forgotten in England as to give ground for complaint about the manner in which our patients are (in most cases at least) handed over to our care. They are never given up to us as if culprits! The Irish nationalist M.P. has in this matter a good subject for the exercise of his energies when dilating on the "wrongs of Ireland" during the approaching session. It appears that this return to barbarism is sanctioned by the statute generally known as "Lord Mayo's Act." This is the statute to which we drew attention on a former occasion,* as the one compelling so unjustly medical men to give certificates of insanity without any fee. We would now again urge most strongly its repeal, and thus remove the disgrace to our code of having embodied in it an Act which empowers two magistrates to "commit" a person of unsound mind to a District Asylum as a "dangerous lunatic," although, to use the words in the blue book, "in a state of extreme physical exhaustion or actually dying." No wonder the Inspectors, after a five years' experience of the working of the present system, speak so strongly in its condemnation, particularly when it is known to them that these magistrates' "warrants" have frequently been actually "signed without the justices having had any personal knowledge of, or even inspected the parties committed, who thus become fixtures on the public rates, and—what is still worse—occupying room that could be so much better reserved for curable, violent, and urgent cases." The allusion to the "fixtures on the public rates" is due to the fact that, under the present system, there is no legal power of discharge, after recovery, of a patient "committed" by the magistrates. Once in a District Asylum as a "dangerous lunatic" always there, unless your friends *choose* to remove you! The Board of Guardians are under no obligation to remove such an unfortunate! No one! This has naturally resulted in the overcrowding of the district asylums in Ireland to such an extent, and so quickly, that in some of them extra provision has become necessary to meet pressing requirements. The Inspectors conclude as follows their justly severe and well-timed remarks on the "indiscriminate use" of the powers given by "Lord Mayo's Act" (30th and 31st Vict., c. 118):—

This facile method of procuring admission into district asylums has almost superseded the normal and legitimate one exercised with such deliberation and

* Vol. xiii., p. 562.

discrimination for so many years by Boards of Governors and Medical Superintendents who, under that system, were enabled to keep a watch with a view to the exclusion of unsuitable cases, while a full discretion was given them in deciding as to what might be considered cases fairly eligible for asylum relief. One thing is clear, that magistrates have not hesitated to employ the Act in disembarassing their respective localities of characters whose troublesome proclivities afforded some colour or pretext of insanity.

The Inspectors seem to overlook the fact that establishments similar to our "Registered Hospitals" form a separate class in themselves. Accordingly we cannot give the number of admissions into them during the year. We know, from the Blue-Book for 1871, that there are in Ireland four such institutions, of which St. Patrick's, commonly called "Swift's" Hospital, is the oldest and best known. It is obviously incorrect to speak of these as "Private Licensed Houses." The latter term should be confined to strictly "proprietary" establishments. We hope to find the error rectified in their next report by the separation of Appendix E into two portions, for the tables in it, as at present given, cannot be made available satisfactorily for comparison.

The recoveries in the district asylums amounted to 1,068. They compare favourably with those in English and Scotch similar establishments. The per centage on admissions was 49·3 in Ireland, 43·6 in England, and 42·6 in Scotland. The Inspectors appear anxious to check premature discharges which swell the number of admissions of "Relapsed Cases." Accordingly they publish the totals for each asylum of those re-admitted after having been discharged as "recovered." But there is an obvious error in the figures relating to this subject given at pages 103—5. Table xiv gives 378 as the total number of relapsed cases admitted, whereas the sum of the numbers given in Tables xv and xvi represents a total of 381. The former total should really be larger than the latter instead of smaller; for it is supposed to include *all* the relapsed cases, whereas the latter is only made up of those entered as "recovered" on their previous discharge. We find that in 234 of these cases discharge and re-admission both took place within a twelvemonth. The Inspectors think it would be more correct to calculate the per centage of recoveries on the total number under treatment during the year than on the admissions.

The deaths in the District Asylums numbered 638, including ten from "accident, violence, or suicide." So, at least, the numbers are given at page 109. If, however, we turn to Appendix C, table 2, we find that there were only *four* from "Accidental Causes," one having occurred in each of the following asylums, viz., Castlebar, Ennis, Letterkenny, and Omagh. In this table all the 49 deaths in the Cork Asylum are attributed to "Natural Causes," whereas at page 109 we find six of them recorded under the heading "Accident, Violence, or Suicide," the remaining 43 being ascribed as follows:—6 to "Abdominal Affections," 9 to "Cerebral and Cerebro-Spinal Affections,"

9 to "Thoracic Affections," 4 to "Diseases of Heart and Arteries," and 15 to "Debility and old Age." The Inspectors classify all causes of death under seven headings. Six of them are given above. "Fever and other Diseases" constitute the seventh group. Deaths from suicide and violence having attracted much attention in England of late, we would welcome reliable statistics on the subject from the sister isle. We, therefore, regret much the want of correspondence between the figures given at pages 89 and 109 of the Blue Book. The report of the Cork Asylum itself does not help us to decide between them; for we find one line in the "Cause of Death" table in it running thus:—"Accident, Violence, or Suicide, Voluntary Abstinence, and Nervous Decay, 3 males, 3 females—total, 6." This is certainly a novel sort of classification. The rate of mortality calculated on the average numbers resident was 8.98 per cent. This compares favourably with the rate in English public asylums, 9.6, and is but little over the Scotch rate, which was $8\frac{1}{2}$ per cent. The Inspectors calculate the percentage according to the old method, which has lately been advocated as the better one in our journal, namely, on the total number under treatment during the year. The percentages of deaths would in that case stand thus:—England, 7.53; Ireland, 6.97; Scotland, 6.35. In judging of the value for comparison of these figures, it must be borne in mind how much larger the proportion of paying patients is in Scotch public asylums than in those of either England or Ireland. How this affects the rate of mortality will be evident if we remember how glad, as a rule, the friends of private patients are to remove them when it is known they are near their end, and how difficult it often is to discover a single relative of a patient who has been supported by the rates. The following figures show how great was the disproportion referred to during the year under review:—

	Remaining 1st January, 1873.	
	Non-paying Patients.	Paying Patients.
In English County and Borough Asylums	30,094	379
In Irish District Asylums	7,140	165
In Scotch Royal and District Asylums.....	3,687	973

The "paying patients" were distributed among twenty out of the twenty-two district asylums, the numbers varying in each from 25 in the Limerick to one in the Carlow Asylum. The average contribution of each such patient towards maintenance was within a fraction of 5s. 2d. per week. The highest average charge in any asylum was 8s. 9½d, the lowest was 4s. 2½d. per week. There is no fixed rate at

which "private patients," as we call them, are received into Irish district asylums further than that any contribution may be received provided it does not exceed the average of the general cost during the preceding year in the particular asylum, nor be less than half such cost. In special cases the Inspectors have power to sanction a still lower rate, which must, however, be in no case less than one-fourth of the general cost.

Included in the expenditure of Irish district asylums is an item never charged in England to the maintenance account. We allude to the item for repairs and alterations. Deducting it and the receipts for "articles, goods, and produce sold," we are able to institute a fair comparison between the expenditure for maintenance in the public asylums of both countries. Thus we find that the weekly cost per head was 8s. 9 $\frac{1}{2}$ d. in Ireland, and 9s. 8d. in England. It was only 8s. 5 $\frac{2}{5}$ d. in Ireland the previous year. This advance in cost the Inspectors say has been due principally to "the exceptional rise in nearly all the articles of regular consumption" during 1872, "but especially to the enormous price of coal."

They advocate very strongly paying officers and attendants better than has been the case hitherto. They give, in one of their excellent appendices, a table showing the scale of wages and allowances for servants and attendants in each asylum separately. From this we learn that the highest wages given in Ireland to any head male attendant do not exceed £40, with clothing &c., and, in this case, the officer referred to performs also the duties of bandmaster. In the King and Queen's County Asylum, at Maryborough, there are eight male attendants receiving only £10 a-year, with clothing, &c. It is to be hoped the committee of the asylum referred to will see the true wisdom and common justice of the following excellent and much to be commended remarks of the Inspectors:—

It is false economy to deny a fair scale of wages to those who have to fulfil the necessary responsibility of watching over the insane at all hours, and are exposed to severe animadversion for the slightest neglect of duty . . . Subordinate officers and attendants have as a body been underpaid; so much so that many of them have resigned from time to time for the purpose of leaving the country (just, too, at the moment when they became valuable from their experience), certain of being similarly engaged, and much better remunerated, in America or elsewhere. *This constant change of domestics* in asylums proves highly unsatisfactory, but particularly so with reference to the patients themselves, who are unsettled by it, and, in a curative point of view, injuriously affected by being placed under the care of crude and uneducated warders.

The Inspectors in several parts of their report refer, in terms of the highest commendation, to the way in which their duties, varied and onerous as they are, have been performed by the Medical Superintendents. To us in England it seems strange to read of a medical superintendent being held responsible for the correctness of all the accounts and the entire fiscal department of his asylum. It appears, too, that he has not only to see that all moneys are duly received and

paid, and to account for the same monthly to his Committee of Visitors, but has also to furnish an abstract regularly to the Inspectors, to be by them submitted to the scrutiny of a public auditor sent down by Government to compare the fiscal statement with receipts, the "Want-book," &c. All this must necessarily involve a great amount of clerical labour calculated to weaken considerably energies which ought to be devoted to professional work. And yet—although so much work is thrown upon them—there are eighteen Superintendents in Ireland without an Assistant Medical Officer, as is shown by the Table at page 115 of the Report under review! One of these eighteen—Omagh—had a daily average number of patients amounting to 444. Another, Limerick, had 420 daily resident. The average of all comes to within a fraction of 270. Knowing all this, we cease to wonder at the fact brought out by Dr. Campbell, of Carlisle,* that only one solitary asylum in Ireland contributed to our medical statistics by the adoption of the Medico-Psychological Association's Tables in the annual report of the medical superintendent. There is another aspect of this question which it would be well to bring under the notice of the Boards of Governors of these eighteen asylums. They are undertaking the gravest responsibility in allowing their institutions to remain even for the shortest period without the actual presence of a medical officer. But this must frequently be the case for *many hours* at a time—as for instance when the medical superintendent is from home on his annual leave. During it the "Visiting and Consulting Physician" (an official entirely unknown to us in England, or in Scotland either), if he be very zealous and is not in large general practice, may spend perhaps two hours of each day in the asylum. During the remaining twenty-two the institution must "take its chance!" These Boards are aware, we presume, that if they do not see the necessity of putting an end themselves to such a "happy-go-lucky" system, it will probably be terminated—and the sooner the better—by the Lord Lieutenant exercising the absolute power given him by the fifth section of Lord Mayo's Act (30 and 31 Vict., c. 118)—a power which has been already exercised, we shall not say arbitrarily, but certainly very authoritatively, in the case of Chaplains, whom the Belfast Board, on principle, refused to appoint. The Inspectors themselves are not entirely free from responsibility in this matter, and we hope they will not shrink from their obvious duty as suggested by the section of the Act referred to. The scientific world looks to them (as being members of the medical profession) to take the lead in whatever may tend to the cultivation of the wide, but waste, field of psychological inquiry in Irish asylums. And here it occurs to mention that there is one very palpable deficiency in the establishments for the insane in the sister country—for which, however, the resident physicians can in no wise be held accountable—namely, with respect to

* *Vide* "Journal of Mental Science" for April, 1873, vol. xix., p. 68.

post mortem examinations. These, in the absence of an assistant, it would be both unreasonable and out of the question to expect a medical superintendent to conduct—single-handed, over-worked and over-burdened, as he already is, with such a multiplicity of responsible duties. On every account, therefore, the Inspectors should be “up and doing” in this matter of the Assistant Medical Officers, and thus aid the Irish resident physicians to remove the reproach that they “sink science in economics, and lose their characters as physicians—or healers of disease—in their functions as house stewards and account keepers.”

The Inspectors not only give their meed of praise to the medical superintendents but they also recommend an “improved modification” of the scale of salaries fixed by the Privy Council Rules of 1870. This scale we have tabulated below, giving in the last two columns the salaries, &c., to which the several medical superintendents are entitled, even though some of them may be continuing from choice under the old system:—

Class.	Accommodation.	Asylums comprised in each Class.		Medical Superintendent's	
		Names.	Total Number.	Annual Salary.	Allowances.
I.	800 and upwards	Richmond	1	£600	The same for all, namely:—Unfurnished apartments; fuel; light; washing; vegetables; bread and milk.
II.	600 and under 800	Cork	1	£550	
III.	500 „ „ 600.....	Omagh	1	£500	
IV.	350 „ „ 500...	Ballinasloe ..	5	£450	
		Limerick			
		Belfast			
		Mullingar.....			
		Clonmel			
V.	250 „ „ 350...	Monaghan ..	8	£400	
		Sligo			
		Downpatrick			
		Letterkenny			
		Enniscorthy...			
VI.	Under 250	Ennis	6	£340	
		Maryborough			
		Castlebar			
		Killarney			
		Londonderry			
		Waterford ..			
		Kilkenny			
		Carlow			
		Armagh			

It will be seen from the above that only three out of the twenty-two Medical Superintendents of district asylums get what Lord Shaftesbury says should be the minimum salary. This opinion, moreover, was given fifteen years ago when the cost of almost everything in common use was 20 per cent. less than now. The Chairman of

the English Lunacy Commissioners in his evidence before a Select Committee of the House of Commons thus expressed himself, in March, 1859 :*—

I cannot think that any superintendent ought to receive much less than from £500 to £600 a-year, besides a house and allowances. * * * * To the greater number of the medical superintendents very much larger salaries should be given, and unless you do that you cannot possibly secure the very best service. * * * * The great object must be to raise the *status* and character of the superintendents to the highest possible point.

The nineteen superintendents in Ireland who get less than Lord Shaftesbury's recommended minimum cannot even look forward to an increase in their salaries after any number of years' service. If they commence at £340 a-year, at that pittance must they remain, even though they devote fifty years to the service! If a Board of Governors desired to show their appreciation of a number of years' faithful devotion to duty, and asked the Lord Lieutenant to sanction an increase of salary, His Excellency would be obliged to refuse as having no authority to do so under the present Privy Council Regulations. With a view to the modification of these in regard to this point the Inspectors make the following suggestion:—

When an officer attached to a smaller asylum for a series of eight or more years—whose professional capabilities must be fully equal to those at the head of the most extensive institutions of a similar kind—has efficiently and sedulously discharged the various obligations imposed on him, there should be a sort of *good service increase of pay* authorised on satisfactory grounds, and by a resolution of the Board of Governors addressed to the Executive.

This excellent suggestion supports the recommendation of the Royal Commissioners, who wrote thus in 1858 :—

The salary of the resident physician should be such as will secure the services of a competent medical officer, and we think it but just that it should increase with length of service, so that those who fill the situation may not be shut out from all prospect of bettering their condition.†

The superintendents of the nineteen smaller asylums may, it is true, look forward to a chance of getting promoted when a vacancy occurs in one of the other three; but such promotion involves the loss of all previous service in reckoning time for superannuation. In Ireland this is a serious matter, for there a medical superintendent requires to have served *forty* years before he can get a pension equal to two-thirds of his salary and allowances. An English or Scotch superintendent can get the same proportion after *fifteen* years. This is certainly not "justice to Ireland." The Irish medical superintendents hold their appointments direct from the Crown. Their salaries and retiring allowances ought, therefore, to be paid directly out

* See "Report from the Select Committee on Lunatics," ordered by the House of Commons to be printed 11th April, 1859.

† See "Report of the Commissioners of Inquiry into the State of the Lunatic Asylums in Ireland," p. 11.

of the Consolidated Fund. Two good results would follow this change. 1st. The patron becoming also the paymaster, the principles of the British Constitution would be more strictly adhered to than at present. 2nd. In the case of a man whose service as a medical superintendent has been commenced in one district asylum and completed in another, there would be no difficulty about getting the first period reckoned for the purposes of the Superannuation Act. As the law stands at present all such previous service would count for nothing, the wording of the Act being—"Any officer whose whole time has been devoted to the service of *such* asylum."

We are sorry to find the Inspectors obliged to make the following remark:—

We are much below what is noticeable in English hospitals for the insane with regard to means of recreation and indoor diversions—music, games, illustrated periodicals, and the like. Conversant from experience with the great advantages, in a professional point of view, derivable from such pastimes in the treatment of mental affections, our efforts shall always be directed to their future development.

The Inspectors, alluding to the great number—no less than 7,219—of insane persons "at large" in Ireland, draw attention to the probability of their transmitting to posterity the disease they labour under, and thus contributing to the perpetuation of one of the most terrible scourges of the human race.

If space permitted, we should be glad to quote extracts from the excellent remarks the Inspectors make on "Insanity in Criminals" and "Malingering."

But we must conclude by merely recommending a perusal of them to our readers, who will find in this and every other part of the report evidence of the care with which it has been prepared and of the breadth of view of its authors.

2. *French Retrospect.*

By T. W. McDOWALL, M.D., Assistant Medical Officer, West Riding Asylum, Wakefield.

(*Annales Médico-Psychologiques* September, 1872, to January, 1873.)

Influence of the Events of 1870-71 upon the Development of Mental Disease in France.

In a very long communication, Dr. L. Lunier attempts to answer the questions; 1st: Do great political and social commotions determine the occurrence of a certain number of cases of insanity? 2nd: Do these tumults increase the number of lunatics? To obtain information for a satisfactory answer to these questions, he has not limited himself to Paris and the department of the Seine, but has made enquiry in all the Asylums of France.

To make the results the more striking, Dr. Lunier has arranged the 89 French departments into four groups, according to their geographical position, and the events which occurred in them from 1st July, 1870, up to the end of 1871.

The first group contains the departments still occupied by the Germans, and those evacuated since 1st April, 1871.

In the second group are collected the nine departments which were occupied only towards the end of 1870, and were evacuated in March, 1871.

The third group includes the 11 departments bordering upon the invaded region.

In the fourth group are the 48 departments which only indirectly and at a distance experienced the influence of the events of 1870-71.

There are 14 asylums in the first group of departments. Into these, during the year preceding the war, from 1st July, 1869, to July, 1870, 2,202 patients were admitted; but the number fell to 1,533 in 1870-71. Of 809 men admitted during the second period, 146, that is 18·05 per cent., became insane in consequence of the war. The proportion among the women was 12·77 per cent.

During 1869-70, the admissions into the asylums situate in the second group of departments were 866; in the following year they fell to 783. Of the latter number 440 were men, and of these 21 per cent. had their mental derangement attributed to the events of the war. Among the women the per centage was 15·45.

In the third group, which includes Paris, no change occurred in the number of admissions. It must be remembered that for a considerable period Paris was in a state of siege, and for four-and-half months only patients from the city and outskirts passed through the Bureau d'Admission at St. Anne. Here the admissions were 2,982 from 1st July, 1869, to 1st July, 1870; but the number fell to 2,599 during the following year.

In the fourth group of departments, 48 in number, the admissions fell from 4,141, 1869-70, to 3,862 in the following year. In about nine per cent. of the male, and 5·33 per cent. of the female admissions the mental disease could be attributed to the influence of the war.

(As this paper is of extreme length and not yet finished, we delay any further epitome until M. Lunier completes his communication.)

Jaundice and Insanity.

Dr. Fabre concludes a paper on this subject by a few observations on the influence of intercurrent icterus on the mental symptoms in cases of insanity. He says:—

The reciprocal influence which the mental disease and the intercurrent affections may have exercised upon each other, will appear from a special examination of each of the observations.

In the first case the jaundice supervened in a lunatic already enfeebled, and consequently predisposed by a subacute attack of alco-

holism, with delirium of persecution, and hallucinations of sight and hearing. Before the invasion of the intercurrent affection, slight mental improvement had occurred, and on this the icterus had no modifying influence. D. is actually in a stationary condition; he is conscious of his previous state, and his hallucinations become more and more rare; his intellectual faculties are generally enfeebled.

The second case was affected, when the icterus appeared, with monomania, with predominance of ideas of persecution and demoniacal possession. She also presented signs of general feebleness, with purpura and scorbutic symptoms. We have already remarked the singular coincidence of the physical with mental improvement in this case.

It is beyond doubt that, in this patient, the attack of mental derangement was induced by physical enfeeblement, a kind of marasmus consecutive to a dropsical affection.

Without wishing to attribute to the jaundice all the credit of the recovery from the mental disease, is it not permitted to suppose that the treatment directed against the icterus also favourably modified the general condition of the patient, and consequently caused complete amelioration of the mental state? It is well, indeed, to remark that dropsy, adynamic hæmorrhage, and jaundice are three diseases possessing a character in common, disorder of the circulation, and that the return of this important function to a normal state must have resulted in the disappearance of those affections which the disorder had occasioned, mental derangement among them.

We observed in the third patient only a temporary diminution of the excitement which she habitually exhibits. This comparative calm continued during the whole period of the icteric symptoms. Since that time A. has become excited as before, and her mental condition has not otherwise varied.

The fourth patient laboured under general paralysis. In him no itching was observed, and we may attribute the absence of this symptom to the analgesic condition of the case. Excitement, depression, and alternation of excitement and depression may be observed in general paralysis. We could give examples of these three forms of the paralytic affection, of which the first is characterised, in regard to the intellectual disorders, by predominance of ideas of grandeur; the second by prominence of hypochondriacal ideas; and the third by the alternation of these mental symptoms. It is this third form which we observed in P.

At first, and, according to him, his health had never been better, purgation produced an astonishing effect; the patient was with great difficulty kept in bed.

Some days afterwards, and when the jaundice began to disappear, P., now calmer, nevertheless complained constantly, no longer wished to rise, and said he suffered from affections of the limbs, though examination failed to discover them.

This period of depression has since given place to one of excitement.

L., who was the subject of the fifth observation, had just recovered from a long attack of excitement when jaundice appeared. The state of calm has since been complete and has not varied.

Finally, M. is a case of periodic excitement. The intervals are very short. Since his recovery from jaundice, this patient has continued calm, and has not presented any signs of that violent excitement which renders him occasionally very dangerous.

In *resumé*, we may say that jaundice had a favourable influence upon the progress of mental disease.

In one case the excitement ceased during the whole period of the icteric disorder.

In several patients it was suspended for an uncertain time.

Finally, in one patient the recovery from mental derangement coincided with that from the jaundice, and may, in our opinion, be attributed to it.

On a Case of Multiple Nervous Disorders following Fright.

We do not intend to follow Dr. Desmares in his reflections on this case, but simply to give its leading features, very much as related by him.

The patient is a girl of 11½ years of age, and with a good family history. For some time before the nervous symptoms appeared she suffered from intermittent fever and glandular abscess in the neck.

In February, 1871, she one day saw one of her school companions have an epileptic fit; this scene greatly alarmed her, and caused an impression on her mind which continued several days. She was still under this influence when the first symptoms of her disease appeared. Attention was first aroused by a singular tendency to sleep; the child, who till then had been lively and active, suddenly ceased to play and work; she remained motionless all day, plunged in a kind of hebetude, and immediately that she was left alone she fell into a profound drowsiness. During the night she was disturbed by frightful dreams, during which she saw a man who ran after her and wished to kill her. In a short time convulsive symptoms appeared; epileptiform attacks with premonitory cry and bloody foam at the mouth. These seizures occurred every day for about a month, and during this time the child's intelligence and memory became enfeebled with such rapidity that she soon forgot all she had learned. In April there was a remission until June; the attacks became less strong and frequent, and immediately a corresponding improvement appeared in her intelligence. But during June the fits returned more violently than ever; often more than twenty were observed in a single day. During the intervals the child remained almost completely deprived of the use of her limbs, particularly on the right side. She became so demented that she no longer recognised her parents; they were obliged to dress and feed her, and often the excitement produced by these movements caused the return of convulsions.

It was in this condition that Reine entered the asylum of Bailleul on 26th August. After some days' observation M. de Lamaëstre prescribed a strictly tonic regimen and bromide treatment. Immediately there was rapid improvement; the attacks became less frequent, and towards the end of September they did not occur oftener than three or four times a day. At the same time their character changed; in place of their former epileptic nature, they were rather of a hysterical type: clonic convulsions from the beginning, with violent movements of the arms and legs, of such violence that it was necessary to bind the child to prevent her injuring herself. There were also spasms of the stomach and pharynx, rapid contractions of the diaphragm and abdominal muscles, and a dry, harsh, fatiguing cough. No initial cry, foaming at the mouth, or period of coma were observed.

At this period the attacks were very variable. Sometimes Reine felt that she was about to have an attack; she said that she desired to sleep, then threw herself on her bed, and immediately her eyes closed as if she were in natural sleep. But in an instant the expression of her face changed, the features contracted, and the child pronounced some badly articulated words, which appeared to indicate intense fear. At the same time she turned sharply round, and moved her limbs as if driving away and striking some one. After a moment's calm the same recurred, perhaps three or four times. During the intervals of rest sensibility was preserved, and if one pricked the neck or the face, the child began to speak and strike. Finally, after ten minutes, she awoke, and said that she had dreamed that a boy ran after her and wished to beat her.

When the epileptic attacks became less violent the general condition improved considerably. The child's intelligence revived, and she began to speak to those who took care of her. She answered questions pretty well, fed herself, and walked with ease. Still the right side remained markedly weak; the pupils were much dilated and contracted but little to light; particularly after attacks, sight appeared dim; tactile sensibility was everywhere preserved, but there was complete analgesia of the hands, forearms, and external surface of the arms.

On 6th October the child had not had an attack for a whole week, and she stated that she would have no more, and that she was cured. When asked the reason of this belief, she answered that during the previous night she had seen a lady dressed in a white robe with a veil; this lady was the blessed Virgin, who had given her her blessing and told her that she was cured.

From 6th to 25th October no convulsive attacks occurred. Only every night, shortly after going to bed, the vision re-appeared, and the child relapsed into a state very analogous to that which we have described above, and which may be considered to occupy a position intermediate between hallucination and dreaming. But the scene had an entirely different character. Instead of being terrified, the child was

happy and smiling, she clasped her hands, made the sign of the cross, and threw kisses. From time to time there were intervals, during which she remained at rest, respiration was tranquil, and the general aspect that of a child in natural sleep; only this sleep was so profound that she might be shaken and even carried from one bed to another without awaking.

This species of vision or ecstatic dream returned every night with perfect regularity from 5th to 25th October, and during these 20 days no other symptom was observed. Under the influence of this prolonged calm, the general condition greatly improved, the analgesia disappeared, the gait became easy, and the right hemiplegia could scarcely be observed; lastly, the intelligence recovered all its activity.

Nevertheless, in spite of all these delightful changes and the firm confidence which the child expressed in the promises of the veiled lady, we could not consider her as recovered, not even as certainly convalescent; it was evident that the morbid nervous excitement, although probably diminished, continued. The very considerable difference in the symptoms was chiefly due to the fact that the excitation had changed its seat; the nerve-centres which presided over sensibility and motility had almost recovered their normal function, whilst disorder was produced in other parts of the encephalon. The influence which determined this form of metastasis was completely unknown to us, and we could not guarantee that an inverse movement of the morbid process would not bring back convulsions.

Indeed, they re-appeared on 25th October with much violence. After the attacks, we observed again various disorders of sensibility, motility, and intelligence. The child was dull, and with difficulty answered questions. From transient paralysis of the muscles of articulation, speech was embarrassed and almost unintelligible. Right hemiplegia with dilatation of the pupils returned. There were painful contractions of the flexors of the fingers, with hyperæsthesia of the skin of the neck, face, and dorsal surface of the hands. If the finger was passed lightly over these parts the child uttered cries of pain. Add to the preceding symptoms pleurodynia and epigastralgia. We never observed spinal pains.

This series of attacks, which occurred towards the end of October, only continued four or five days. During this time the child was generally tranquil, but occasionally the calm was interrupted by fresh attacks, the character and duration of which have varied much. Sometimes they consisted only of involuntary and convulsive bursts of laughter, which continued about ten minutes. Twice very curious rotatory movements were observed. The child lay upon the right side, and turned rapidly from right to left, like a dog which tries to catch his tail. During November there were convulsive attacks which were preceded by a chattering of the teeth. Was this phenomenon but a new form of expression of the nervous disorder?

or ought it rather to be considered as a return of the miasmatic fever from which the patient had suffered so long during the preceding year? We believe that the second supposition is the more probable; 1st, because the attacks which presented this character returned with a certain periodicity, at first every fourth, then every third day; and, 2nd, because they were not slow in disappearing under the influence of sulphate of quinine.

When we ceased the observation of this case (15th January, 1872), the child had been calm for several days; she had a good appetite, and natural sleep, with normal sensibility everywhere. The gait and all the movements were easy and confident, although the limbs of the right side were still relatively feeble. The pupils were slightly dilated and the right slightly larger than the other. The condition of the intelligence and memory is very satisfactory. Reine, who only knew Flemish when she entered the asylum, can now speak and read French very fairly.

On Alcoholism, &c.

At a meeting of the French Med.-Psych. Association in May, 1872, M. Auguste Voisin made some interesting observations on:—

1st.—The influence of the various alcoholic drinks upon the form of mental derangement.

In the acute state, the delirium was caused in four cases by wine alone, and it assumed the form of lypemania; in one case by brandy, mental symptoms, those of lypemania; in two cases by absinthe alone, one of these was a melancholic, the other had symptoms of pride, &c.; in two cases by brandy and wine, they were melancholics; in two cases by wine, brandy, and absinthe they were cases of mania with ideas of pride, &c.

In the chronic state the symptoms of alcoholism were caused in three cases by wine alone; one of these was amnesic and aphasic, another was demented, and the third had ideas of grandeur. In six cases it was caused by brandy alone; in two of these the symptoms were those of dementia; in three stupor was present; and in one an extraordinary mobility was observed. In eleven cases absinthe was the only cause; of these five were sad, &c.; one was melancholic; one suffered from stupor; two from "abrutissement;" one had ideas of grandeur; and one was morally insane. In the case of alcoholism produced by wine and absinthe, amnesia and aphasia were present. In two cases due to the use of wine and brandy, one suffered from dementia, and one from lypemania. Of the three patients whose illness followed the use of all kinds of drinks, one suffered from amnesia, one from irregularities of character, and one from dementia.

2nd.—On Conception during Drunkenness.—As the result of seventeen cases which were fully examined it would appear that wine, brandy, and absinthe exercise an almost identical influence upon the

products of conception. Epilepsy, convulsions in childhood, and chronic myelitis are the possible consequences of conception during drunkenness, whatever the intoxicating agent may be.

3rd.—On Conception during Chronic Alcoholism, without Drunkenness.—In the eighteen cases observed, there were born eight idiots and ten epileptics.

Of the eight idiots, four were the issue of fathers who indulged in wine, two of brandy drinkers, and two had mothers who drank brandy.

Of the ten epileptic children, five had fathers who drank brandy and wine, three who consumed only wine, and two who intoxicated themselves by absinthe.

On the diagnosis of general paralysis and alcoholism, M. Voisin makes the following remarks:—

Writers appear to me to be entirely mistaken when they recognise a general paralysis of alcoholic origin. I maintain, from what I have seen, that the lesions of alcoholism completely differ from those of general paralysis.

Autopsies of alcoholic cases, which I have made, have shown me that the characteristic cerebral lesions of these cases consist in fatty and atheromatous degenerations, in dilatation of the arteries, in sanguineous exudates in the vascular sheaths and in the nervous substance, in cerebro-meningeal congestion, in œdema, and that there does not exist hypertrophy of the connective tissue, or proliferation of nuclei; that is to say, that alcoholism leads to degenerative lesions, and not to inflammatory changes. We observe, indeed, opacities, milk-spots upon the meninges, but they are not due to adhesions to the brain; exudative lesions are observed at these spots, but none inflammatory. It will be objected that inflammatory lesions are observed in professional drunkards, in the serous membranes, and specially in the pleura. But these truly inflammatory lesions are due not to the primary action of alcohol, but to chills to which drunkards are exposed by remaining stretched for hours upon the ground to cold and to rain.

As to the neo-membranes of the parietal arachnoid found in certain cases of alcoholism, and which might be brought forward as demonstrating the possibility of lesions of a hyperplastic and inflammatory nature, nothing proves that they are the product of primary inflammation of the arachnoid, as Virchow, Vulpian, and Lancereaux wish to show.

I believe, on the contrary, that they are the consequence of hæmorrhage from the dura mater, consecutive to vascular changes; the hæmorrhages cause irritation of the membrane, and consequently secondary inflammatory lesions.

An observation by Luys is very remarkable in connection with this. In a quite recent case of arachnoidean hæmorrhage, Luys found on the surface of the clot tangled laminated fibres, patches of fibrinous ap-

pearance, stratifications in which he saw some new embryoplastic fibrils, and he noted a complete absence of vessels.

It must be added that, if sometimes the neo-membranes of the arachnoid contract adhesions to the brain, these adhesions are partial, and that the cerebral inflammation is a secondary lesion due to the irritation produced by the neo-membrane, and it is not a primary alteration due to alcoholism.

On the whole matters under discussion M. Voisin's conclusions are :—

1.—The character of the alcoholic beverage has no special influence upon the form of mental disease, and that absinthe does not lead to symptoms differing from those produced by other liqueurs or drinks.

2.—A certain beverage does not lead to the development of this or that disease, or degeneration, in the children of drunkards, whether they have been conceived or not during drunkenness of the parents.

3.—Delusions of grandeur, riches, &c., are present in acute and chronic alcoholism, and they cannot be considered as distinctive of general paralysis.

4.—General paralysis cannot be produced by alcoholic drinks, and the anatomical changes of that disease and alcoholism are essentially different.

5.—Liqueurs d'absinthe are not peculiar in producing epileptic attacks.

On Cysticercus of the Brain.

In connection with one case which came under their notice, Drs. Bécoulet and Girand have written a short paper which is specially valuable as giving numerous references to the foreign literature of this rather unusual disease.

The following are the chief facts of the case :—Nicolas V., æt. 28, was admitted into the Maréville Asylum on 11th April, 1871. He was a soldier in the Light Infantry, and made the campaign to Mexico, where he remained six years. Unfortunately, information as to his antecedents is very incomplete. It is known, however, that on 28th May, 1867, he re-engaged for seven years, but on 9th December of that year he was certified as suffering from lypemania, and as suicidal, having attempted to destroy himself by hanging. He was cut down in time, and animation restored.

He was sent to the military hospital at Metz, where he was under treatment for a month. M. Herman described his condition as follows :—V. entered the hospital to be put under treatment for an affection of the nervous centres. He labours under lypemania, characterised by a state of divergation, accompanied by weeping and habitual depression. All the other functions are normal. Various lauded remedies having been employed without any beneficial result, he was transferred to Maréville on the date already mentioned. Dr. Bonnet, who examined him at this time, gave the following certifi-

cate:—At present all the intellectual and moral faculties are obstructed, and nothing is perceived by this person, who is like an inert mass which is beyond all sensation of surrounding things.

This state of stupidité only continued to increase, and the patient wept and moaned constantly. It was necessary to urge him to take a little food; when he had been dressed in the morning he used to seek out some lonely corner, and there lament during the whole day. He uttered occasionally some words in German. If questioned, he only answered by lamentations. Nevertheless, when he received an order from the attendant he executed it, if of a very simple nature. He never presented any epileptic or paralytic symptoms. It was somewhat remarkable that his physical health continued pretty good in spite of his depressed mental condition. During the whole of his residence in the asylum his life and condition were the same as we have described. For some time it was observed that he was becoming pale and feeble. On 29th December, 1871, he was sent to bed for examination. He was very pale; the right leg was considerably œdematous, as well as the thigh up to the middle. A very large ecchymosis extended from the middle of the thigh to the middle and inner part of the leg. The whole skin was so cold that, when touched, it imparted the sensation of a dead body. The heart and lungs were normal. We prescribed vin de canelle, and warm camomile applications to the right leg and thigh. In spite of these means the patient died on 30th December, 1871.

Autopsy (1st January, 1872).—The thoracic and abdominal organs were normal.

Head.—No deformity of skull. The bones of medium thickness and density. About fifteen grammes of fluid were situate in the cavity of the arachnoid.

Brain.—There were observed, scattered upon the surface of the brain, about fifteen cysts, of the size of hazel-nuts, and containing a transparent fluid. They were situate upon the left anterior frontal lobe, upon the convolutions which bound the great cerebral fissure, upon the right hemisphere, and close to the fissure of Sylvius. They had the following relations to the brain and the membranes—most frequently, the cyst was situate between two convolutions which it depressed, and in the substance of which it was partly lodged. In stripping the brain of its membranes, the cyst was raised from the cavity in which it was partly contained, and in its place there was observed an impression of the form of the tumour, and excavated at the expense of the grey matter which was completely atrophied at this point. On opening the lateral ventricles, there was found a quantity of transparent serum in the left; and floating in the fluid was a small cyst free of all attachments. Its size was that of a small hazel-nut; it was ovoid and transparent. In its interior there was at the middle part a white spot corresponding to the depression of its envelope.

Examination of the Cysts.—The cysts discovered on the surface of

the brain had the following structure :—They were composed, 1st, of an external envelope continuous with the membranes of the brain, and apparently formed at their expense ; 2nd, of a transparent vesicle, of ovoid form, and presenting towards the small extremity a white spot, which was prolonged into the interior. On touch, this spot imparted the sensation of a solid body.

On microscopic examination, the walls of the vesicle presented a granular appearance. On a level with the spot which we tore, we found the head of the cysticercus characterised by its circlet of hooks and its four stomata.

The remarks on this case are valuable, as they give numerous references to the foreign literature of the subject.

On Non-paralytic Insanity with Exalted Delusions.

To this essay by M. H. Taguet was awarded the Esquirol Prize for 1872. In its first part it gives a pretty full *resumé* of the French literature of the subject. Under the head "Etiology," we have discussed the influence of nationality, sex, age, social position, hereditary tendency, physical constitution, hysteria, epilepsy, education, and political events in producing this form of insanity. The definition and diagnosis of the disease are then discussed.

In M. Taguet's opinion, the "délire des grandeurs" must be considered as an epiphenomenon, requiring no special therapeutic treatment, and disappearing with the affections which produced it.

Treatment, it cannot be too often repeated, ought to be individual, and addressed equally to the physical and mental condition of the patient. This manner of procedure has found adversaries who, more desirous of being facetious than useful, have, for want of arguments, attacked it with derision. Ought the derangements of the mind, they ask, to be corrected by diluting atrabillious blood and by liquifying the blood detained in the portal vein? Shall we combat mental affliction by hellebore, and derangements of thought by enemata?

The partisans of somatic treatment deny the influence of work, discipline, and seclusion ; and make pharmaceutical preparations play a considerable part, more especially opium and camphor. This latter drug is the sublime panacea for all ills, and they have exalted it to a degree to make Raspail jealous. The adversaries of this mode of treatment refuse it, in their turn, all efficacy. Lastly, there are others who reject completely all physical and all moral treatment. Doubtless experience teaches us that many mental diseases are cured by the efforts of nature alone, but does it follow that physicians must play a purely passive part? Because we have seen pneumonia cured by tepid water and rest, is it necessary to banish the therapeutic, the anti-phlogistic and opiate treatment, and to reject antimonials?

At the top of all rational treatment we place confinement in an asylum, which has the double advantage of making the patient harm-

less to himself and others, and of exciting, frequently, new impressions which lead to beneficial diversion of thought. It is in this manner that travelling is so advantageous at the beginning of the disease. It is necessary, however, to remember that confinement is not equally useful in all cases. It is true that the isolation, the change of surroundings, the discipline and regularity have brought about a rapid improvement which is evident, pretty often, from the day following admission, in a certain number of patients; whilst in others, the care which has been bestowed upon them, the constant supervision of which they have been the object, and which they have erroneously interpreted, have only strengthened their ideas of grandeur and ambition, when these have not become complicated by delusions of persecution. In these latter cases it is impossible to leave at large the unfortunate patients who are generally subject to violent impulses, which the too easy indulgence of the relatives cannot restrain.

We find in hydrotherapeutics powerful adjuvants to medical treatment, if they are employed intelligently. A bath of too short duration is, generally, without any influence upon the lunatic. The patients, according to Brierre de Boismont, should remain six hours and more in their baths. It is impossible to give any precise indication as to the duration, which should be left to the discretion of the physician. It is not unusual to find that in Germany patients remain a whole day in a bath. Great care is necessary that the temperature be constant; it should range from 28° to 32° cent. To avoid congestion, we would strongly recommend the application, to the head, of a sponge soaked in cold water, which must be frequently renewed. Vapour baths have been found more hurtful than useful, and inapplicable in cases where there is a special predisposition to congestion. It is chiefly in lypemania that good results follow the use of the shower bath. It is less useful in cases of mania.

Hallucinations, which are inseparable from "délire des grandeurs," disappear occasionally under the influence of baths, opium, chloroform, belladonna, and stramonium. For some months we have employed, with success, chloral and cannabis indica. In the treatment of insanity, these drugs should be employed in much larger doses than in other diseases. Indeed, it is not unusual to see the innocuousness of these agents upon lunatics, whilst they cause all the symptoms of poisoning in those in a state of health.

On Locomotor Ataxy. By J. M. CHARCOT, Physician to the Salpêtrière, &c., &c.

This small treatise is composed of four lectures, and forms the first part of the second series of Professor Charcot's "Lectures on Diseases of the Nervous System." It cannot be said that it contains much that is new, but the information is conveyed in a pleasant, easy style, and is up to date.

The first lecture is devoted to the consideration of the pathological anatomy of locomotor ataxy. He adheres to the usual opinion that the symptoms are due to an affection of the posterior columns of the spinal cord. It cannot be denied that, formerly, in undoubted cases of the disease, observers failed to detect any lesion of the parts mentioned; but Dr. Charcot very rightly attributes such failures to imperfect methods of observation, and he maintains that, at all periods, well marked degenerations may be detected if looked for in the right places and proper manner. Only time, care, and the application of a special method are required to yield the most convincing results. Examination of the cord by the unaided eye is of no value whatever. Besides alterations of the posterior columns, microscopic investigation has revealed atrophy of the posterior roots, posterior spinal meningitis, and atrophy and grey degeneration of various cerebral nerves.

Opinions still differ concerning the real origin of the disease. We know that it depends on sclerosis or grey induration of the posterior columns of the spinal cord. This process is accompanied by hypertrophy with fibrillation of the neuroglia, causing atrophy of the true nervous tissue. The spinal meningitis, which co-exists so frequently with sclerosis of the posterior columns, and which in such cases is entirely limited to these parts, would appear to furnish a new argument in favour of the irritative nature of the alteration. But where does this irritative lesion begin: in the neuroglia, or in the nervous element? Without pronouncing a definite opinion, M. Charcot is strongly inclined to the belief that the parenchymatous irritation is primary, and that the interstitial change is secondary.

In general locomotor ataxy, a degeneration of a special portion of the posterior columns is, as pointed out by the author and Vulpius, the characteristic and essential lesion. It is known that, in cases of this kind, there is to be observed, in addition to the sclerosis of the fillets of Goll, which is almost always present, two slender grey bundles. These, viewed on the surface of the cord, appear to occupy the posterior lateral fissures, and the most internal sensory roots appear to emerge from them. Degeneration of these bundles is, then, the special characteristic of the disease under consideration.

The second lecture is devoted to a description of the disease, special notice being given to the lancinating pains in the limbs and the *crises gastriques*. It is believed that the true significance of these gastralgic attacks has never been perceived.

The third chapter treats of the affections of the eye which occur in the course of locomotor ataxy. Although all the cranial nerves may be more or less affected during various stages of the disease, the optic nerves deserve special attention on account of the frequency with which changes occur in them. The disorders of sight may be classed in two divisions—1st, disorders of accommodation, diplopia, dependent upon lesions more or less transitory; 2nd, visual disorders due to a special degeneration of the optic nerve. M. Charcot describes the

lesion of the optic nerve under the name of progressive grey induration, and distinguishes it from sclerosis *en plaques*, on the one hand, and optic neuritis on the other. The symptoms are somewhat similar, but should never be confounded, as they are essentially distinct. Progressive grey induration of the optic nerves is indicated during life by certain ophthalmoscopic characters, which correspond to what is usually described as progressive atrophy of the papilla. He, with some others, considers these appearances almost proof of the existence or probable development of locomotor ataxy. He says that the great majority of women who are admitted into the wards of the Salpêtrière suffering from amanosis, present, sooner or later after their admission, more or less marked symptoms of locomotor ataxy.

To the naked eye, the alteration of the optic nerve appears in the form of a grey hardening. It begins, as a rule, at the peripheral extremity of the nerve, and then gradually extends towards the central parts. When examined microscopically, it is found that the degeneration which constitutes the grey induration, resembles what occurs in the spinal cord.

It is unnecessary to dwell at any length on the concluding lecture. It refers chiefly to the changes which occur in the joints of the ataxic. To convey a correct idea of M. Charcot's observations on this subject, it would be necessary to prepare a rather lengthy abstract, and we do not feel called upon to do this at present.

These lectures contain several references to the works of English writers on locomotor ataxy and other nervous diseases, and give an excellent account of all that is essential and interesting concerning this disease.

La Tempérance. No. 1. 1873.

The French appear to be now acutely alive to the evils of drunkenness. Societies have been formed for its suppression, and the publication before us is the official organ of one of them—the *Association Française contre l'abus des Boissons Alcooliques*. It must not be imagined that this society resembles in any respect, excepting their common object, those which have flourished in this country for a number of years. Although much good has been done, it cannot be denied that the temperance cause has suffered greatly at the hands of its so-called friends, who, by their fanaticism and intolerance, have prevented many able men from lending their aid. Some distinguished men of science and leading ecclesiastics have countenanced the movement; but these, as a rule, have only tended to exhibit, by their more enlightened and judicious views, the folly of their co-workers.

The subject of temperance is beyond our province, except in its relations to insanity. We are, therefore, obliged to leave unnoticed much that might greatly interest those who study the temperance

movement in its more extended relations. To show, however, that it had become absolutely necessary to check the spread of drunkenness in France, we need only give a few facts mentioned in the first page of the Journal.

The consumption of alcohol, which was only 350,000 hectolitres in 1820, rose to 585,000 in 1850, and to 978,000 in 1869, not including the quantities which escaped payment of duty.

This augmentation, which must be chiefly attributed to the considerable increase in the manufacture of spirit from beetroot and grain, has produced most disastrous consequences.

From 1849 to 1869, the annual number of accidental deaths consequent upon alcoholic excesses increased from 331 to 587. Cases of suicide, due to the same cause, rose from 240 to 664 during the same period.

Crimes against the person, committed under the influence of drunkenness, have augmented in the same proportion.

Lastly, the increase in the number of cases of insanity due to intoxication has constantly followed, during twenty years, the increased consumption of spirits, notably in those departments which use chiefly spirits manufactured from grain and beetroot. In the majority of these departments it has attained the frightful proportion of 25 to 40 per cent.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A quarterly meeting of the Medico-Psychological Association was held on the evening of Wednesday, December 3rd, at Bethlem Royal Hospital. Dr. Harrington Tuke, President, occupied the chair. The following members and visitors were present:—Dr. Harrington Tuke, President; Dr. Wilks, Dr. Maudsley, Dr. Wood, Dr. Blandford, Dr. Boyd, Dr. Langdon Down, Dr. E. S. Willett, Dr. Paul, Mr. Richards, Mr. Byas, Dr. Mickle Dr. Rayner, Dr. Savage, Dr. Sutherland, Mr. Warwick, Mr. Hall, Mr. Wagstaffe, Dr. Stocker, Dr. Sabben, Dr. Balfour, Dr. Grant Wilson, Dr. Scofield, Mr. H. Manning, Dr. Hemming, Dr. Thompson Dickson, Mr. W. Williams, and Dr. Rhys Williams.

The PRESIDENT, on taking the chair, said—The custom at the quarterly meetings has always been to take the minutes of the previous quarterly meeting, as published in the Journal, as read. They are to be found in our Journal for April last. I may express a hope that as the secretaryship has now passed out of my hands these minutes may be reported more fully than they have been. If anyone has any objection to make to the report as printed, I must ask him to make it now, otherwise I must put it to the meeting that these minutes be confirmed. I would also as President ask the Secretary to preserve the MS. minutes.

The minutes were confirmed.

The PRESIDENT—We meet this evening under circumstances of great interest, from the number of eminent scientific men present; and I must congratulate you on meeting here in Bethlem Hospital, and in this old hall of medicine. There are several very interesting papers on the list, and a most important one by Dr. Blandford "On Auditory Hallucinations." It is the usual rule to spend the first

half-hour in clinical discussion, but as the subject of Dr. Blandford's paper is of great importance, and as it is likely to be followed by an animated discussion, I think we had better proceed with it at once.

Dr. BLANDFORD then read his paper, which is to be found at page 507 of this Journal.

The PRESIDENT—I am sure you will most cordially agree with me that we should offer Dr. Blandford a vote of thanks, both for his paper and for the subject he has chosen for discussion this evening. It is not usual for the President to propose a vote of thanks, but I should be very happy to do so in this instance if the meeting will permit; and I should much like to speak myself on the subject of the paper. I beg to propose a vote of thanks, not for the purpose of stifling any discussion that might arise, but rather by way of encouraging discussion; and I should like to hear the views of the various members present upon the subject of hallucination of hearing.

The vote, "That the thanks of the meeting be given to Dr. Blandford for his able paper," was carried by acclamation.

Dr. WILKS—The subject of hallucination is, no doubt, one of great interest from a practical and clinical point of view, and therefore I should like to ask the author of the paper one or two questions respecting the diagnosis of a case where this symptom existed. Whether for example if a patient were able to correct his false impressions he would be called insane, and, therefore, whether it did not require a long and persistent belief in them to warrant a diagnosis of insanity. Herbert Spencer, I think, says that all our senses are imperfect except that of touch, and, therefore, they have to be interpreted into this before they can be relied on. This probably is so, for we find children and animals using the sense of touch to make themselves certain of the nature of an object, and the man who saw the ghost of his father sitting in his old arm chair could not get rid of the impression until he threw himself into the chair also. This is the common experience of mankind, as we find expressed by Shakespeare in *Macbeth*, when he has the vision of a dagger and says—

Come let me clutch thee,
I have thee not and yet I see thee still.
Art thou not, fatal vision, sensible
To feeling as to sight?

And then concludes that it is a dagger of the mind, a false creation, proceeding from the heat-oppressed brain, and that his eyes are made the fools of the other senses. I take it that this false impression, if remaining and not corrected by the other senses, would have gone on to madness. In the same way if a man sees a ghost, it is evident that there is no impression on his retina, and therefore his brain, for the time being, must be in a morbid state. What is the condition of people who, at a spiritualistic séance, see Mr. Home float out of a window and in again, and who are not anxious to correct their visual impressions by the sense of touch? As regards the auditory hallucinations which is the subject of the author's paper, a far greater difficulty must exist in the attempt at correction. I should have liked Dr. Blandford to have made a more marked distinction between hallucination and illusion, for to my mind they are as different as subjective is from objective. I daily feel that we ought to fix more precisely the meaning of these terms, as the distinction is one of practical importance. For example, if in an amputated leg the nerve in any part is irritated, and the patient becomes conscious of his toes being touched, I should not regard this feeling as subjective, but I should do so if the sensorium were impressed with such an idea when no irritation of the nerve had been induced. If one could draw a distinct line between the nerve which enters a grey centre and the centre itself, that line, I take it, would mark the division between the objective and subjective sensation, according as the grey centre was impressed through the nerve or independently of it. Physiologically there must be some precise distinction of this kind. Indeed the very essence of the author's paper is based on this. It is possible that both the visual and auditory centres might be impaired or in a morbid state, together with the special nerves proceeding to them, and I think I have read of cases of patients who had hallucinations of sight through one diseased eye, and hallucinations of hearing through a deaf ear.

Dr. MAUDSLEY—As no one seems disposed to speak now, I will take the opportunity of making a few remarks which have been suggested to me by the paper.

The subject is a difficult one to discuss, and I fear I may not succeed in expressing very clearly what I wish to say. No doubt, as Dr. Wilks has said, a false perception of sight is corrected directly by the sense of touch, but it would seem that a false perception of hearing cannot be corrected by touch—at any rate directly. It would be corrected first by sight, and in the ultimate event by touch. Perhaps that may be a reason why auditory hallucinations are more persistent than visual hallucinations. But the main object which I had in rising was to express my doubt of, or dissent from, Dr. Blandford's suggestion, that the morbid seat of hallucination of voices was in the medulla oblongata. From a physiological consideration of the nature of perception, as well as from a pathological consideration of the character of the hallucination, I should hold their morbid seat to be in the supreme centres of the brain. When a person hears voices which have no existence out of him, and cannot correct his false perceptions, and is insane—for, of course, he is not insane if he recognises their real nature—it seems to me that higher nerve-centres than the auditory ganglia in the medulla oblongata must be affected. There can be no doubt that there is a difference between sensation and perception—between the impression which an external object makes upon the sense, the feeling, and the perception of the object as the cause of the affection of sense; the former taking place probably in the sensory ganglia, the latter in the higher cerebral centres. Take, for example, the sense of vision. When I have a perception of this chair, the perception is not simply the impression which the chair makes upon my sense of sight, but it is a complex result to the formation of which the sense of touch has mainly contributed, an acquired perception. When I see it, I have not only the visual impression, but the impression of solidity, form, size, and position, which vision alone could never give me originally; in fact, I see, so to speak, all the impressions which my other senses have given in regard to the chair. Three parts out of four of this perception, as of any perception, are really inference, and so far imply reasoning. How is it possible then, that all this can take place in the ganglionic centre of the sense of sight? It must take place in the higher centre in which the deliverances of the particular sensory centres are co-ordinated into a complex perception—in the perceptive centres. And these are probably the supreme centres of the convolutions. The same considerations apply to the phenomena of the other intellectual sense—to the auditory perceptions of voices, and to their probable localization. I have taken for illustration the sense of vision, because the matter is more obvious in its case. When a person hears voices which have no objective cause speaking evil of him, or suggesting painful ideas to him, and cannot be persuaded that they are not real, I should certainly hold his supreme cerebral centres to be disordered. If the auditory ganglia only were disturbed, supposing that such morbid phenomena might be produced by disturbance limited to those centres, there would seem no reason why he should not correct his false perception by the sane evidence of his other senses. In illustration of the influence of the ideational centres on the production of hallucination, I may adduce the instance of children, and of grown-up persons, too, sometimes, who, on awaking suddenly from a dream, actually see the persons about whom they have been dreaming, or hear their voices for a moment. Or, again, take the instances of men who have been able to produce an hallucination at will by thinking intensely of the object. It is related of Goethe, who was the first to propound the opinion that all the parts of the flower, its sepals, petals, &c., were modified leaves, that he could, by an effort of will, produce a vision of the flower undergoing this development. One remark made by Dr. Blandford, in his paper, which is, no doubt, true, struck me as interesting in this relation—namely, that the particular hallucinations accord with the patient's particular temper or mental disposition. This would seem to indicate that the highest centres are involved in the phenomena. The case, too, which he quoted from Sir Henry Holland, is a particularly interesting one. The patient being an acute observer, capable of introspective analysis, was able, after a time, to recognise the morbid nature of his hallucinations, partly from not discovering any person in the place from which the voices seemed to proceed, and partly—and this is the point to which I would draw attention—by observing his mental states, and discovering that what he fancied the voices said were really the thoughts in his own mind. The morbid ideas he thus perceived to be present in consciousness before the hallucinations; instead of being the effect, they were really the causes of them. On pathological grounds, therefore, as well as on physiological grounds, I cannot but think it a mistake to suppose that the morbid seat of these auditory hallucinations is in the medulla oblongata.

Dr. SAVAGE—It has been said that disease of the eyeball may give rise to hallucinations; if this be true, may not disease of the nervous ganglia, or of the cerebrum connected with these nervous ganglia also give rise to hallucinations? On the whole, I think in the majority of cases that the cerebral expansion is the most common seat of the disorder. As to its appearance and the chance of recovery, I have seen hallucinations occur in many acute cases; as a rule such cases have not done well. In regard to the age of the patients, I quite agree with Dr. Blandford that it is most common in youth and from that to middle life, and that it is more frequent in women than in men. There are some good cases now in the hospital, one in particular of a man who constantly declares, "I hear the voice of God addressing me with the words 'Beware! Beware!'" I asked him "how he heard this voice?" and he answered, "I hear the voice of God vibrating through me. I hear it in my muscles." This is proof that there is more in the cause than is to be found in the auditory centre. In the female wards I have noted that two-thirds of the patients suffer from aural impressions, that is from hallucination of sound.

Dr. DOWN—Although I did not hear all of the paper, the portion I did hear was very interesting, and the subject is of considerable interest to all, and to those who do not see cases of hallucination in those who are not actually insane some observations upon cases may be useful. I have observed two or three cases in which there was hallucination of hearing, only that it was primary; in several it was associated with sexual irritability, and in two or three cases under my notice it was associated with the practice of masturbation. In two cases in the female the auditory hallucination had reference to the male sex: one case, that of a lady, who came to consult me lately, and who has since convinced herself that the sounds were unreal. But she was tormented with the idea that either the butler or the footman in her brother's house spoke to her. When she imagined that the butler spoke to her at the table and asked if he should give her wine, she would answer and become very angry. But she had entirely convinced herself that the supposed speaking to her was an illusion. If such a person can convince herself that the impression is unreal, I should like to ask if we can sign a certificate and place her in an asylum, or treat her as an insane person? For my own part, in this case I should not feel justified in signing a certificate.

Mr. WARWICK—From the cases I have collected, and the observations I have made, I would judge the impression in hallucination to be much more frequently one of vision than of hearing. In the parallel case of dreaming we have the impression much more commonly affecting sight than sound, and in dreaming the vision is to the mind a present reality. The eye is the great gateway of the mind, and it is the visual impression that makes the thing of more force, or the impressions most vivid. I was twice the subject of violence, and in both instances from patients suffering hallucinations from visual impression. In the first case, a lady made a violent attack upon me, rushing upon me and pulling my hair; and she explained to me afterwards that she was impelled to do so whilst labouring under the impression that I was wearing a large yellow wig. The other instance was that of a gentleman who knew me well enough, and who afterwards expressed deep contrition, but stated that he mistook me for a Dr. Adams, to whom he attributed his incarceration.

Dr. WILLETT—I have a patient suffering from visual hallucination, who assures me that his delusion is entirely gone, and who has often said that whilst speaking to me he has convinced himself that his beliefs were delusion, but when he is alone he is depressed; he will then go back to his past life, and although highly connected he believes from his vision of himself that he is an outcast. He is a thin and spare man, and I believe losses in business whilst in an ill-state of health were associated with the origin of this delusion. Whilst you speak to him his appearance is animated and cheerful, but he relapses into the same morbid state when left alone.

Dr. SABBEN—I have followed the remarks made by various speakers, and have noted those of Dr. Maudsley. He has stated the condition in association with hallucination, but he has not stated the result. In regard to the permanency of hallucination, I may relate the following case:—I had the honour to be an old pupil of Sir James Simpson, and he had an old servant who used to hear the service in the parish church on Sundays. Whilst she was about her work, and on one occasion when he went into the drawing-room, he saw her standing upon the hearth-rug, and putting out her hand said "Stop." He did stop, and afterwards asked her what she

had called upon him to stop for, and she said that she was listening to the service in the church. During the whole of the week she had no illusion, but it returned every Sunday.

The PRESIDENT—Could she hear the service?

Dr. SABBEN—No, for the house is some distance from the Church.

The PRESIDENT—But she thought she heard it?

Dr. SABBEN—Yes.

The PRESIDENT—Cases of this kind are most common in persons who have only one delusion.

Dr. SABBEN—I saw one case in a gentleman who stated that whilst under a tree and picking some apples he heard the voice of a woman. He was under my care for 18 months, and it then became necessary to place him under restraint. He was afterwards allowed to be at large, and has since got married, but when I saw him the other day he still had the delusion.

The PRESIDENT—What is the pathology; and what is the result of the study of the pathology of this state?

Dr. SABBEN—I have taken great interest in this subject, for this is the great class which fills the lunatic asylums and workhouses. I have discussed this subject with Professor Laycock, and he agrees with me in the belief that it occurs in morbid states of the brain, from imperfect nutrition. I have seen many cases, and found them with various pathological conditions.

The PRESIDENT—Atheroma is connected with this state, and we know that atheroma may begin before old age. Is there anything by which we can determine the presence of atheroma?

Dr. SABBEN—I believe there is. I am under the impression that patients with atheromatous vessels are subject to small vascular spots on the skin, by which the presence of atheroma may be with certainty diagnosed.

The PRESIDENT—Can anything be done for treatment of these cases? Can anything be done in the early stages? The patients often get much better.

Dr. SABBEN—You may get them better, and much is to be done with nutrition. They will improve so as not to hear the voice, and then they will be able to sleep, and this shows the cause to be dependent upon ill-nutrition, but the condition I believe to be permanent.

The PRESIDENT—As I ventured to predict, the able paper of Dr. Blandford has led to a very animated and valuable discussion. There is no more important symptom in brain disorder than hallucination, either of sight or hearing. I am not prepared to agree with Dr. Maudsley that hearing is one of the inferior senses, or to ascribe so much value as he does to the touch, as a means of correcting sensation, if by hearing is only meant that function which enables us to appreciate sound. I do not differ from him, but the subtle powers of the auditory nerves, shewn by the finest discrimination of language on intonation is one of the highest gifts to man, and this sense it is we find perverted in hallucination of hearing. I was surprised to hear from Dr. Blandford that his experience led him to believe hallucinations to be uncommon, and not often curable. My own experience is exactly the reverse, and I consider the aphorism of Dr. Mullinger, which boldly states that such hallucination is never recovered from, is entirely founded on error. Hallucination of hearing may be broadly divided into two great divisions: in the one the reason is not lost, and self-control remains; in the other, hallucination becomes absolute delusion, and leads to acts of violence or folly. Of the first of these divisions, the case of Dr. Samuel Johnson, as quoted by Dr. Wilks, is a remarkable instance; the idea that he heard his mother calling to him from Lincoln, he being in London, was a pure hallucination, but he did not answer or act upon the hallucination, and he was not therefore insane. I saw to-day, for the first time, a remarkable example of this form of hallucination: a gentleman, who gives me permission to refer to his case this evening, complains that he hears people he meets in the street distinctly say "this man is a nervous lunatic," and women say equally disagreeable things. He is quite aware that his ears deceive him, and asks for treatment to meet the difficulty. As Dr. Maudsley has already observed, such cases frequently arise from sexual excess. With regard to the chances of recovery, I have not found insanity associated with hallucinations of hearing more difficult to manage than other recent forms. I saw two cases of this affection with Dr. Boyd, during the last twelve months; one, the worst case of the kind I ever saw, imagined that his dead brother's voice told him

to commit all kinds of dangerous absurdities. This gentleman, after six months' illness, is perfectly well. In the other case the hallucination of hearing has passed away, while other delusions remain. The cause of this disorder seems to be congestion in or about the nervous centres of either sight or hearing; an overdose of quinine will produce the sounds of bells in the ears—thus arise the hallucinations of sight so common and so curable in delirium tremens. In the case to which I first referred, I found the patient had been in India, exposed to isolation, and had showed congestion of the brain by falling into heavy sleep in the midst of his judicial work.

Dr. BLANDFORD, in reply, said—Mr. President and gentlemen, I have to thank you for the honour you did me in according me a vote of thanks for my paper. The various remarks that have been made are so numerous that to reply to them fully would occupy as much time as another paper. In regard to Dr. Wilks' inquiry, many of these hallucinations may be traced to the sense of sight. I wished to confine my paper to hallucinations of sound, because I think the hallucinations of sight want to be worked out by themselves. To go into the subject would amply fill another paper. With reference to the subject of the words hallucination and illusion, I am inclined to think that they are words with certain meaning, but that in all discussions it is necessary, before using them, to define what we mean by them. Various authors regard them differently, and Dr. Pritchard, in his learned work, never uses the term hallucination at all, but uses illusion to express what I have been speaking of as hallucination. In reply to Dr. Maudsley, I would say that I by no means think myself authorised to say that the seat of hallucinations is in one part more than in another. We are far from determining the seat. I have certain reasons for making me think that they are not seated in the highest centres. I think with Dr. Maudsley that the higher centres are involved, and I think the case I have quoted, as given by Sir Henry Holland, confirms my view that the centres of the medulla are the seat of the lesion, for in this man the higher brain centres were healthy, by which he was able to correct aural impression. The higher centres may become diseased, and then the condition of hallucination will become permanent. I may give the same answers to Dr. Savage. To Dr. Down I would reply that I think the person should be detained, but much must undoubtedly depend, in the determination of such a question, upon the particular case. The two cases I have mentioned both persisted in the hallucination, and have sufficiently recovered to be at large; they are able so to restrain themselves that they can now pass their lives in ordinary society. In reply to Dr. Warwick, I must repeat that I avoided alluding to visual hallucinations for the reasons already given. Dr. Willett's case is interesting; as a rule more cases commence in early life than in advanced age. Dr. Sabben's case seems to partake more of delusion than of hallucination; and as for the pathology, I must defer to gentlemen who have more opportunity than I have of performing *post-mortem* examinations. I know that atheroma of the vessels is not unfrequently found, particularly in the middle cerebral artery, where it is sometimes to be seen solidifying the artery till it looks like a branch of coral; but more observations are wanted, and valuable service may be done by those gentlemen who have the opportunity of making the observations, if they will tell us what they find in association with these conditions. The President spoke of some cases in which the hallucination had passed away, but I think it would be interesting to know if this was a permanent case or only a temporary one. I will not detain you further.

The PRESIDENT then asked Dr. Balfour, who had given notice of a paper "On Pathological Appearances observed in the Brain of the Insane," how long his paper would take to read, as only twenty minutes remained, and there were numerous microscopical specimens to be exhibited; and suggested that Dr. Balfour's paper should be taken as read.

Dr. BALFOUR replied, however, that he could read his paper in a short time, and accordingly it was proceeded with.

(The Paper is unavoidably postponed until the next No. of this Journal.)

The PRESIDENT said—I think a vote of thanks should be accorded to Dr. Balfour for his paper, whilst we must regret that time prevents us discussing the many interesting points contained in it.

Dr. MAUDSLEY—I beg leave to second the vote of thanks to Dr. Balfour for his

valuable paper, and I regret that time will not allow us to discuss it now. In reference to the effect on character produced by disease or injury of brain, I may say that Dr. C. Skae has sent us for publication in the forthcoming Journal the interesting report of a case of mania arising from injury caused by the falling of a piece of coal on his head. The man's character underwent a remarkable change; he became morose and sullen; at first morose, surly, and irritable towards his wife and children, and afterwards violent towards them. Dr. Skae had him trephined, and he perfectly recovered.

The vote of thanks was carried unanimously.

Dr. WILLIAMS said—When Dr. Blandford gave notice of his paper, I did not know how much time would be occupied by it, or by the discussion upon it, and I endeavoured to secure some specimens, and Dr. Savage, Dr. Bage, and Dr. Thompson Dickson offered to exhibit some. At the close of the meeting this room will still be open, and, therefore, any gentlemen wishing to see these specimens will have the opportunity of doing so.

Dr. MAUDSLEY proposed a vote of thanks to Dr. Williams, which was carried by acclamation, and

Dr. WILLIAMS thanked the members, and the meeting adjourned.

The following Specimens and Drawings were exhibited:—

Dr. SAVAGE—Section of Spinal Cord; section of Diffused Sclerosis; case of Inflammation of Cord, and General Paralysis.

Mr. WAGSTAFFE—Sections through the Pons.

Dr. BOYD—Portraits in pencil of Insane Patients.

Dr. J. THOMPSON DICKSON—Sections of Brain showing Inflammation, Sclerosis; sections of Spinal Cord, showing Inflammation, Sclerosis, and the conditions associated with Paralysis Agitans, Progressive Locomotor Ataxy, and Progressive Muscular Atrophy; Litho-Photographs of the Insane, and Drawings illustrating Morbid Nerve Tissue.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A quarterly meeting of the Medico-Psychological Association was held in the hall of the Royal College of Physicians, Edinburgh, on Thursday, 27th November. Professor Laycock presided. There were present:—Professor Laycock, Drs. Smith, Fairless, Fraser, Campbell, Thomas Howden, Batty Tuke, Ireland, Grierson, Lyall, Clouston, H. Hayes Newington, Smith, Sibbald, McBean (R.N.), and Rorie.

PATHOLOGICAL SPECIMENS.

Dr. IRELAND, who acted as Secretary in the absence of Dr. Fred. Skae, exhibited the brain of a man who had died in the Stirling Asylum, and read the notes of the case* from a manuscript sent by Dr. Fred. Skae.

The CHAIRMAN said that the specimen was a very interesting one, and the notes by Dr. Skae would have been exceedingly valuable if details had been fuller.

CHARTS OF THE BRAIN.

Dr. TUKE exhibited a set of charts of the brain published by Messrs. McLachlan and Stewart, South Bridge, Edinburgh. He said that the object of the charts was to assist in pathological operations. The charts exhibited a series of representations of the brain in its various aspects. They had been suggested by Dr. Howden and himself as in their opinion very useful in the *post-mortem* room in regard to marking down the exact position on which there was a lesion, and they suggested that the diagram which shows the lesion should be cut out and pasted in the pathological book along with the verbal description. He himself, with Dr. Fraser and Dr. Howden, had been in the habit of taking the diagrams from Professor Turner's work, and they had found them very useful in denoting the particular point of a lesion. Messrs. McLachlan and Stewart had resolved to publish these charts at

* It will appear in our Clinical Notes in the April No.

sixpence a sheet, and they had arranged that they should have a larger number of those representations of the parts of the brain which were most needed. Of the superior aspect of the brain they had six; of the lateral, eight; and of the inferior, two, and so on.

The CHAIRMAN said he had no doubt the charts exhibited by Dr. Tuke would be very useful as marking more exactly the position of the lesion, and he believed the charts would be a *sine qua non* in all asylums where such inquiries were carried out.

Dr. CAMPBELL said he thought it might be better if they were to put each drawing in a separate leaf in a book.

Dr. TUKE said that the object in view was to publish the charts in the cheapest form possible. He ought to state that if credit was due to any one for the idea it was to Dr. Howden.

Dr. CLOUSTON, Morningside Asylum, said that the best way they could show their appreciation of the chart was to buy a lot of them and use them in their *post mortem* examinations.

The CHAIRMAN said that that might be put in the form of a resolution.

Dr. TUKE said he was going to ask the meeting to do so at a later part of the proceedings. He thought that a committee should be appointed in order to carry out a uniform system of examinations.

PAPER BY DR. BROWNE.

Dr. IRELAND read a paper by Dr. W. A. F. Browne on "The Perception of Time as a Feature in Mental Disease." (*See Original Articles.*)

The CHAIRMAN said—I am sure that we all felt much interested in hearing a paper on so important a subject. As Dr. Browne has done me the honour of referring to my book on "The Nervous Diseases of Women," with reference to the cases of rhythmical chorea, I may be permitted to make a few observations. The subject may be divided into two:—First, the perception of time as an act of thought, and secondly, the perception of time in reference to movements. As to perception of time in thought, it is necessary for us to consider the question in relation to the brain and its functions, and as to both forms of brain action in relation to it, the reflex function of the brain would lead us to a conclusion. Memory is requisite to the perception of time as an act of thought; and for memory a record must be made. What are the physical changes on which that record depends cannot be known; but we know that a re-excitation of the record under certain physical conditions induces reminiscence, and it is a comparison of that reminiscence with the present perception which is at the foundation of perception of time past. If there be no perception that there is time past, then a re-excitation of the record is presented to the mind as being the present. No doubt changes occur, as Dr. Browne points out, which sweep away the record, and the record may be within a limited or restricted portion of the brain, as proved by the fact that the record belonging to a limited portion of time—a certain number of years—may be swept away. As to the connection of time with movements, I many years ago studied the question with reference to the reflex function of the brain; and in my paper, communicated to the British Association for the Advancement of Science in 1844 at York, and afterwards published in the "British and Foreign Medical Review," of January, 1845, I mentioned facts of automatic or reflex rhythmical movements which must be familiar to many present as occurring in the insane. In that paper I mentioned the following case:—"A male patient in the York County Asylum, aged 44, and fatuous for thirty-seven years, cannot pronounce any word distinctly, nor understand what is said to him. He constantly holds a stone or other substance in the palm of one hand, and moves continually, as if slowly waltzing. Mr. Alderson, the resident medical officer, kindly assisted me to time his movements, and we found that he performed twenty steps in fourteen and a half or fifteen seconds, with the greatest regularity, and we measured his steps repeatedly. Another man, aged 34, in a state of dementia, stands for hours together, moving his hands and feet synchronously, in a way not easily to be described. He was found, when timed, to make twenty steps in ten and a half, or eleven seconds, with unvarying regularity. In these examples, as in the case of chorea, the source of the movements was centric, and, as the latter were connected with an idea of time, its seat was undoubtedly cerebral." Those connected with a tune are called automatic, but are, undoubtedly, excited as reminiscences by external impressions received through the sense of touch or other sense, and transmitted to the brain. The *Tarantuli* referred to by Dr. Browne, seem to belong to a different category. There does not appear to be any solid proof that the

poison of the tarantula, a species of spider, is the exciting cause of the rhythmical chorea, but that the imagination, or suggestion and imitation are really the conditions under which the dance arises. The tune to which they dance, named the Tarantella, is a popular air; and in cases of rhythmical chorea in this country, it has been found that the patients danced to a popular air. In these cases the dancing movements depended on the re-excitation of the record of the air. Such a case is mentioned in that paper already referred to, in which it was discovered that the patient danced to a popular air, and that she had the tune dwelling in her mind. Imitation is, no doubt, an exciting cause of numerous movements, as in the epidemic chorea, referred to by Dr. Browne, of the middle ages. This source of movement must be very familiar to physicians in charge of the insane, morbid imitation being exceedingly common. Imitation is not uncommon as a simple nervous affection. Not long ago, when in Dublin, I heard of the case of a gentleman who had an irresistible impulse to imitate the style of speaking of those whom he addressed; so that when a Frenchman spoke to him in broken English he also conversed with him in broken English. There is a case on record of a man who could not avoid imitating every gesture, however ridiculous, of any person whom he met, so that, however absurd the motion, he was compelled to do it. The only method that can be followed satisfactorily in solving these difficult questions is that which constantly bears in mind that the phenomena to be investigated depend upon changes in the function of the brain. And the laws of reflex action help to elucidate that function.

Professor Laycock then vacated the chair, as he had to leave the meeting. Dr Sibbald was called upon to preside.

UNIFORM SYSTEM OF RECORDING POST-MORTEM EXAMINATIONS.

Dr. TUKE said they would all recollect that some four years ago a committee was appointed at one of their northern meetings to take into consideration the subject of a uniform system of case-taking. The system prepared was laid before the Society, and printed in the "Journal," and he trusted that it had been universally adopted. Speaking from his own experience, he found a great benefit from it, as enabling him to put down successively the salient points of each case. He thought the time was come when they should supplement this system of case-taking with a system of pathological notation. That would go a long way in removing the stigma that the profession had not done so much as it ought to have done in elucidating the subject of nervous diseases. He thought there was no doubt that physicians of general hospitals had done more to elucidate the subject in regard to cerebral disease than had been done in the asylums. The cause of this might be that the physicians of the general hospitals had no house stewards' work to do, and had to take part in the teaching of students. In consequence of that they were bound to condense their statements, and to make them as accurate as possible. In the face of the great advance of cerebral physiology, they must be aware of the fact that there was nothing too small that should not be noted; and though they might not be able to note any very great results, still as a body, by making these researches they would be preparing a store-house of facts for other observers. To this end, of having a uniform system, he held in his hand a paper containing various suggestions for the uniform system of notation of pathological appearances. It consisted of two parts—the first was simply devoted to the arrangements in regard to the appearances as seen in *post mortem* examinations; the second was to carry out a microscopic examination, both in the recent and in the prepared state. It might be said that it was impossible for anyone to carry out these processes in every individual case. That might be true to a certain extent, but he thought it was evident that it would be important if it were carried out as far as possible, and particularly if the condition of the brain in the recent state were observed. As to the microscopic sections, he might state that he had been applied to so very often to give details of the processes that, selfishly speaking, he thought it might be of great good to get them put on record. He believed that this scheme would have much greater weight if it was adopted generally by the association. He begged to suggest that a small committee be appointed to reform the scheme, and that it be an instruction to the committee to forward the results of their labours to the quarterly meeting in London, asking them also to take up the subject and arrange that it should receive the *imprimatur*

of the general meeting. He had prepared notes of the scheme, but would not detain the meeting by reading them. He left the matter entirely in their hands, suggesting that they should appoint a small committee for the purpose to which he had referred. He begged to propose that the committee consist of the Chairman, Dr. Clouston, Dr. Howden, and himself.

Dr. IRELAND said that for his part he was willing to listen to the details, and thought that the meeting should know what the scheme was before they sent it to a committee for consideration. The adoption of such a scheme evidently depended upon its being favourably received by a large number of individual members. He, therefore, thought that if a committee were appointed it should not be such a small one as proposed. It might very well happen, even after Dr. Tuke's scheme had filtered through his committee and sub-committee, and gained the *imprimatur* of the central meeting at London, that little would be gained, for they had no power to enforce it upon individual members. It reminded him of a story of someone who asked a king of Scotland to get a law passed that every man should give him a shilling. The king graciously consented to the petition, but added the proviso that they only should give the shilling who wished to do so.

Dr. CAMPBELL seconded Dr. Tuke's motion.

Dr. SIBBALD was inclined to think that they had not time to hear the details of the scheme at present. In his experience he had found big committees to be unmanageable.

Dr. IRELAND explained that he thought all the members present at the meeting should be allowed to come to the committee, if they desired to do so, or had any suggestion to make. He did not think it likely that those far from Edinburgh would come, and believed that not more than one half the meeting would appear, which would not make a large committee.

After some conversation, it was agreed that the committee should be composed of the following members:—Dr J. B. Tuke, Dr. Howden (Montrose), Dr. Sibbald, Dr. Campbell, Dr. Clouston, Dr. Howden (Haddington), and Dr. Fraser.

PAPER BY DR. CHARLES SKAE.

Dr. CLOUSTON then read a paper by Dr. Charles Skae, on a "Case of Traumatic Mania cured by Trephining the Skull." (*See Clinical Notes and Cases.*)

The CHAIRMAN said that this paper related to one of those facts which were most valuable, and well deserved to be recorded in their journal.

PAPER BY MR. H. HAYES NEWINGTON.

Mr. H. HAYES NEWINGTON then read the notes of a "Case of Insanity Dependent on Syphilis." (*See Clinical Notes and Cases.*)

Dr. TUKE said they were under great obligation to Mr. Newington for bringing before them such an interesting subject. Within the last two months he had had two cases of insanity connected with syphilis, and if it would not take up too much of the time of the meeting, he would read two papers in regard to them. He then read the notes of his two cases. (*See Clinical Notes and Cases.*)

Dr. CAMPBELL said he had received from Mr. Newington an impression that there was a tumour in connection with the membranes, but under the skull cap. He wished to know from Dr. Tuke, in regard to his cases, whether there was any tumour.

Dr. TUKE said it was a somewhat difficult question to answer, but he thought it was probable.

Mr. NEWINGTON said that people talked about one side of the body being alone affected by epilepsy, while the other side was perfectly quiet. Was it the case that the side was quiet simply because it was paralysed? He then described the condition of a paralytic patient, stating that the left side became paralysed after an interval of five days after the right side had been attacked.

Dr. IRELAND said he had listened with great interest to the paper of Mr. Newington, and he thought they were all very much obliged to that gentleman for the very lucid manner in which he stated the symptoms of the case to which he referred.

After a few remarks, in reply, by Mr. NEWINGTON,

The CHAIRMAN said he thought there could be no doubt as to the extreme value of the three cases to which reference had been made. The question seemed to turn on whether in describing these cases a special form of insanity had been described.

He thought that they had scarcely sufficient data in these cases to enable them to say that any one of them was a case of syphilitic insanity.

Dr. TUKE said that there was just this possible element, that not one of these cases might be syphilitic cases at all.

The CHAIRMAN said that Mr. Newington referred to some asylum reports, and seemed to think that where a physician did not refer in his report to syphilis cases he had none in his asylum.

THE NEXT MEETING.

It was agreed that Glasgow should be the next place of meeting.

On the motion of Dr. TUKE, a vote of thanks was given to the Chairman, and to the College of Physicians for the use of their room, and the proceedings then terminated.

THE ARGYLE DISTRICT ASYLUM.

Among the Reports that were published too late for notice in the last number of the Journal, that of the Argyle and Bute Asylum deserves notice for the views expressed by Dr. Rutherford in regard to farm work and its effect on the patients. The Asylum is well situated for the success of the experiment of having a very large farm attached to it, and of letting the patients work or wander about over it. There were 196 patients in the end of 1872, and the farm extends to about 400 acres, the greater part of which is rented by the Institution, and which is, therefore, in the position of an ordinary tenant farmer. Dr. Rutherford says:—

“The practice in treatment, adverted to in former Reports, has been still further developed during the year. No form of mechanical restraint, seclusion, or confinement in airing courts has been resorted to. The administration of drugs has been restricted to cases in which a recognised bodily disease or disorder was actually discovered. No sedative or stimulant medicines have been given to subdue excitement or depression. Comfortable apartments and clothing, a liberal dietary, and abundance of out-door exercise in the form of employment or recreation have been the means used to subdue the manifestations of mental disease. The use of opiates has been restricted to an occasional draught at bed time, generally in cases of illness, where it would have been required independently of the mental condition of the patient. Alcoholic stimulants have—doubtless owing to the healthy stimulus imparted by useful out-door exercise—also been little required during the year. The actually sick, and the weakly old people, have been the principal recipients of this kind of medicine. The use of single rooms for patients inclined to be noisy and restless, continues to be restricted as much as possible.

“An aversion to regular well-directed industry is a characteristic of chronic insanity; and in this Institution, to combat the tendency of idleness or to do only such things as are in accordance with the disordered fancy, is a leading principle of treatment. To see chronic lunatics, strong and in the prime of life, strolling about all day in pleasure grounds, each indulging in his own morbid thoughts, is, as may be imagined, a painful and depressing spectacle. Mere walking exercise, be it ever so regularly taken, has very little influence in counteracting these morbid manifestations. Indeed, walking exercise, daily and regularly taken within an Asylum grounds, possesses, in my opinion, very little value as a means of treatment of chronic able-bodied lunatics. In recent and acute cases, it may be of value as a means of restoring the bodily health, on which the mental condition so often depends. Useful employment in the open air is, of all kinds of exercise, the best. It requires no argument to prove that what is necessary to maintain the bodily and mental health of the sane, is the best means of improving that of the insane, and of bringing them more nearly into the condition of healthy persons. In this way can even incurable lunatics be brought into that state in which Asylum treatment is no longer necessary, and boarding out is found so beneficial both for the patient and the ratepayer. The facilities for this mode of treatment have, during the past year, been increased by the taking of the farm of Fernoch. Full advantage has been taken of this and other facilities granted by

the District Board, and the result is now beginning to be apparent in the state and habits especially of the male patients. Three years ago, only about 40 per cent. of the men were employed, the remainder were treated as idle and incapable, and were walked about the grounds and the fields—the use of airing courts having been for some time previously abandoned. About two years ago it was seen that this aimless walking, although an improvement on confinement in airing courts, had not the improving effect on the idle patients that the farm and garden work had on the workers. Walking parties were therefore discontinued, and the practice of sending all to the fields was tried with the most beneficial results. With each working party two attendants were sent—one to direct the work, the other to look after the non-workers. It was now found practicable to send only one attendant with each party, which generally consists of from 6 to 15 men; the number of idle patients being so few that it may be said that every able-bodied patient engages in the work. This has been brought about by the influence of example and habit, than which nothing has greater influence on the insane and weak-minded. No difficulty is experienced with new cases coming into the Asylum. They fall at once into the system already in force. More difficulty is experienced with those transferred from Asylums where they have already acquired other habits, and with those of the present population who have been for many years the idle inmates of Asylums, and are disposed to look upon exertion as a hardship, and work as a thing to be avoided. There are at present 6, and occasionally 7, parties of men, and 2 of women, constantly employed on the farm and grounds. The proportion of men engaged in real work is 85 per cent."

The results of the system thus described is reported on in an extraordinarily favourable manner by the Scotch Commissioners in Lunacy, who evidently consider this as the *beau idéal* of an Asylum.

PROFESSOR GAIRDNER ON THE "LEGAL AND MEDICAL ASPECTS OF INSANITY CONTRASTED."

In his concluding "Lecture on Insanity," Dr. Gairdner took occasion to point out certain diversities between the medical and the legal views of unsound mind. Medicine looks upon insanity as a condition to be, if possible, cured. Law looks on it as a condition regulating the legality of certain procedures, the validity of certain documents, and the responsibility for certain acts. No legal or medical classification can be satisfactory which divides the population into two categories—the one sane and wholly responsible; the other insane and wholly too irresponsible. Nature does not draw the line after this fashion, and if language or law does so, it must be at the sacrifice of truth, and, in the end, of justice. Even among the confessedly insane there are some who are at one time irresponsible, and at another responsible in whole or in part, and the law admits this principle. Again, in ordinary criminal responsibility, the law admits a question of degrees of guilt, and, therefore, of punishment. The practical issue out of the requirements of the law, as it stands at present, has been that in such cases some juries, contrary to the ruling of the judge, have acquitted persons who were obviously criminals; while other juries have followed the ruling of the judge, and have returned a verdict against the prisoner in like circumstances, leaving it to the public to influence the Home Secretary, so as to secure an alteration of the sentence. Public opinion vibrates, in an almost incoherent manner, from one extreme to the other; but few authorities have maintained that it is *just*, no less than expedient, to consider even unsound minds as amenable to the law up to the degree of their actual or ascertainable moral responsibility. A full recognition of this is necessary to preserve the moral sense of the community from being shocked by the spectacle, on the one hand, of the execution of a lunatic by mistake, or, on the other hand, of a criminal escaping punishment by some shadowy plea of insanity. Let evidence be led in every case as to the real nature of the criminal act, and let the jury form their opinion. If they are satisfied that the crime was the act of a maniac, let them, as at present, acquit on the ground of insanity, giving in a verdict of "Not Guilty by reason of insanity." But let them have power also to return a verdict of "Guilty,

but of unsound mind"—such a finding being understood to carry with it a mitigation at least, in all cases, of the extreme penalty of the law. After this, let a subsequent decision be come to by the judge, or by some other tribunal, as to the modified punishment proper to the degree of guilt, so far as it can be ascertained under the peculiar circumstances of the case; and, if necessary, let the decision be open to further appeal if, after a period of confinement in expiation of sentence, further evidence arises tending to bring into question the essential justice of any part of the punishment. In this way, and in no other, Professor Gairdner believes, will the real and most important services to criminal administration be secured, without the manifold extravagances and contradictions which at present seem to render them a mockery and a delusion.

OBITUARY.

THE LATE DR. THURNAM.

By the sudden death of this able and highly respected physician, on September 24th last, the Wilts County Asylum sustained a loss which will not be easily replaced.

Dr. Thurnam was born at Lingerroft, near York, on December 28th, 1810. As his parents belonged to the Society of Friends, his education was of a private character; but to the excellency of it, it may in justice be said, the pupil was a living testimony.

After passing through the required course of medical study, he became a Member of the Royal College of Surgeons of England in 1834. In the same year he was appointed the Resident Medical Officer of the Westminster Hospital, which office he held till 1838, when he was chosen as the Superintendent of the Retreat near York. In 1843 he became an L.R.C.P., and in 1846 M.D. of King's College, Aberdeen. That during the above periods he distinguished himself by the zeal and ability with which he cultivated various branches of medical science, there is ample proof. Amongst others may be cited the various published memoirs which he contributed on different pathological subjects, more especially those on partial and spontaneous aneurism of the heart, to the great merits of which all writers on cardiac diseases of that period, whether in this country or on the Continent, have borne testimony.

During his residence at the Retreat, he published in 1841 the "Statistics of the Retreat," and in 1843, "Observations on the Statistics and Treatment of Insanity." Of this latter work it was stated, at the time of its publication, that in its application of the numerical method to the subject of insanity, "we may appeal to Dr. Thurnam's work as an example of the interesting and novel results which may thus be deduced, and which, though they might be suggested by ordinary individual experience, are only capable of being established as facts by calculations founded on a large number of observations. Those only who, like ourselves, have been somewhat extensively engaged in statistical researches, will be able fully to appreciate the amount of labour and care which is required to insure the accuracy which throughout characterises Dr. Thurnam's work." Before referring further to the chief scene of his labours, we think it will not be out of place here to remark that, though he evinced so much assiduity in the pursuit of strictly medical subjects, it was by no means to the exclusion of other branches of scientific research. As a Fellow of the Society of Antiquaries, Dr. Thurnam, by his joint editorship of "Crania Britannica," his "Observations on British and Gaulish Skulls," and by various contributions to the different journals on allied subjects—by all these he had earned for himself no mean degree in the domain of archæology and antiquarian lore. In the Wilts Archæological Society, as a member of the council, he had in different ways rendered valuable service. In the annual excursions of the Society he was not unfrequently looked to as an expositor of the objects of interest which were being visited.

In 1849 he was selected by the magistrates of the County of Wilts as a suitable and proper person to whom to entrust the management of first establishing and afterwards superintending their asylum, which was opened for the reception of

patients in 1851. The ability manifested and the success which attended his labours in this important undertaking may be considered as having fully justified their choice. What evidence of painstaking diligence and high conscientiousness he had shown in the pursuit of medical science were the more manifestly developed in the discharge of the duties which he had thus undertaken. It is hardly doubtful whether in this aspect of his varied labours he did not belong to the "countless numbers" referred to by the Premier at the last meeting of the Medical Association, who "are true martyrs of humanity, exhausting themselves in a ceaseless unnoticed anxiety for those whose sufferings they seek to alleviate." It is well known to the writer that not only was Dr. Thurnam much respected as well as beloved by the poor patients in the midst of whom he spent so large a portion of his life, but in the difficult duty of governance his patience and tact in settling disputes which from time to time might occur won for him the title of the "peace-maker," or, as one of his employes recently expressed himself on the same subject, "he ought to have been a judge." His practice on such occasions was such as might well be followed by others under similar circumstances. He would allow each to state his case, and then appoint a time a few hours later, on that or the following day, when he would hear them more fully, and decide the point in hand, thus allowing time for the passions of each to subside. By these means, we have understood, he uniformly succeeded.

For some time previous to his death he had complained of headache and drowsiness, but which he hoped that change and rest would prove adequate to remove. Not having been able to effect his purpose, but expecting to do so shortly, he remained at his post to the last; and even on the morning on which he died he had been into the Asylum to attend to some sudden call of duty. Even his last words evinced the perfect possession of his faculties immediately previous to an apoplectic seizure which soon terminated his existence.

Dr. Thurnam has left a widow and three sons, with whom we know a large number of friends, both lay and professional, deeply sympathise. Of him it might be truly said that he died beloved and lamented. All those who worked with him and the patients (*i.e.*, those of the latter who were in a condition to comprehend what had occurred) evinced most sincere grief at their unexpected loss.—*Medical Times and Gazette*.

We have only to add to this brief memoir that Dr. Thurnam was twice President of the Medico-Psychological Association—once in 1841, and again in 1855; that he always took an active interest in its proceedings; and that to him, as a member of the Committee on Asylum Statistics, we are mainly indebted for the statistical tables which are now adopted in nearly every county asylum. In the *Journal of Mental Science* for April, 1866, will be found an important paper by him on "The Weight of the Human Brain, and on the Circumstances affecting it."

Appointments.

BURMAN, J. WILKIE, M.D., Deputy Medical Director, West Riding Asylum, Wakefield, has been appointed Medical Superintendent of the Wilts County Asylum, Devizes, *vice* Dr. Thurnam, deceased.

DODSWORTH, G. H., M.R.C.S.E., has been appointed Assistant Medical Officer at the Bucks County Lunatic Asylum, Stoke, near Aylesbury.

HAGGART, J., M.B., C.M., has been appointed Assistant Medical Officer to the Inverness District Lunatic Asylum, *vice* Pearson, resigned.

LEVINGE, E. G., A.B., M.B., L.R.C.S.I., has been appointed Assistant Medical Officer to the Borough Lunatic Asylum, Newcastle-upon-Tyne, *vice* Butler, resigned.

MACKENZIE, G. H., M.B., C.M., has been appointed Assistant-Physician to the Fife and Kinross District Lunatic Asylum Cupar, N.B.

MERRICK, A. S., M.D., L.R.C.S.Ed., has been appointed Resident Medical Superintendent of the Donegal Lunatic Asylum, Letterkenny, *vice* Eames, appointed to the Cork District Lunatic Asylum.

STEWART, JAMES, B.A., L.R.C.P.Ed., L.R.C.S.I., ex-Surgeon, R.N., and late Deputy Medical Superintendent of the Cambridge County Asylum, has been appointed Second Assistant Medical Officer of the Kent County Asylum, Maidstone, *vice* Hughes, resigned.

TUKE, J. B., M.D., has been appointed Morisonian Lecturer on Insanity at the College of Physicians, Edinburgh.

WRIGHT, F., M.R.C.S.E., has been appointed Clinical Assistant at the West Riding Lunatic Asylum, Wakefield, *vice* Levinge, appointed Assistant Medical Officer to the Newcastle Borough Lunatic Asylum.

WOOD, THOMAS, M.R.C.S., has been appointed Third Assistant Medical Officer of the Kent County Asylum, Maidstone.

CORRESPONDENCE.

MATRONS IN LUNATIC ASYLUMS.

To the Editor of the Journal of Mental Science.

SIR,—On reading the review of the Asylum reports in the October number of the "Journal of Mental Science," I was somewhat surprised at the captious tone of the remarks on the report of the Matron of Hanwell Asylum as dealing with matters beyond her supposed sphere of duty, but it may be easily understood that a writer whose experience may have been limited to a Licensed House or a small Provincial Asylum with Matrons of the "Cook and Housekeeper" class cannot properly estimate the responsibilities devolving on the Matron of an Institution containing above 1100 female patients, and employing about 120 female officers and nurses, or the importance of the services of an educated and experienced lady; and I know that by none are the valuable services of the matron of Hanwell Asylum more highly appreciated than by the Medical Superintendents and staff of that Asylum.

In County Asylums the majority of the patients are females. Lunatics are increasing in number, and asylums are being continuously enlarged, and the growing importance of a higher order of female superintendents is obvious. Nowhere are the ministrations of a gentlewoman with tact and intelligence more valuable than in a Lunatic Asylum, and nowhere is male meddling more misplaced than when interfering with the employments and amusements of female patients, while the inconveniences resulting from the natural reluctance of females to confide their bodily ailments as well as their mental grief to a man are often very serious, whereas a matron possessing such qualifications as are indicated becomes the trusted friend of the patient and understands and soothes their waywardness. As regards the control and regulation of so large a staff of female officers and servants, the medical officers of Hanwell Asylum have too proper a sense of their professional status and authority to desire to intervene in the unavoidable jealousies and squabbles of the servants' hall.

All this may perhaps be admitted, but the grievous fact remains of a matron in-diting a report of her department, and thereby assuming an official status and so approaching the awful supremacy of a medical superintendent. "As for her reading and writing, let that appear when there is no need of such vanity." Medical jealousy of female employment is well known, and redounds but little to the credit of a noble profession, which can well afford to give a fair field of peculiarly appropriate employment to women.

A VISITING JUSTICE OF HANWELL ASYLUM.

We willingly give insertion to this well-put plea for the nearly extinct species of lady asylum matrons. Theoretically the services of a lady matron may have all the value our correspondent attributes to them. If, however, he wishes to see a sketch

from life of the influence of the lady matron on the fortunes of the Hanwell Asylum, we would refer him to the last of Dr. Conolly's "Lectures on Lunatic Asylums" (p. 136), or to the concluding chapter of his later work "On the Treatment of the Insane." We extract from the later work, for the benefit of our correspondent, a sketch from life of the Hanwell Board Room, where to this day the vulgar jealousy of medical authority (as our correspondent unwittingly evinces in his letter) seems the predominant sentiment. "At the ordinary meetings of the committee (writes Dr. Conolly) the reports made by the medical officers scarcely receive the attention which their general importance should command, and they are sometimes treated as superfluous. A system, essentially vicious, by which reports are required from all the officers encourages counter-reports and contradictions which are mischievous. Not only is information sought for by the committee from the Chaplain, the steward, and farm bailiff, which may be necessary, but the assistant medical officers and the dispenser or apothecary, and the matron all make reports, and generally all make medical reports in which they are permitted to comment on the chief physician's report book, if there is a chief physician. Thus arise divisions and dissensions, which usually weaken the credit and disturb the peace of mind of them all. According to a well-ordered plan of government all the officers should report to a chief physician, and he alone in ordinary circumstances to the committee. One effect of these multiplied report-books is the introduction of unnecessary matter, and sometimes of trivial and of foolish details, leading to the loss of much time in mere desultory conversation unproductive of any good consequences whatever. A worse result is that sometimes, under sudden impulse, produced by a rash observation in some one or other of the minor reports, sudden determinations are arrived at by the committee without reference to the physician even when affecting some question which ought to be referred to him. He receives an official notification of these decrees with astonishment and mortification; but, fortunately, the resolutions passed so unreflecting'y are often forgotten as soon as the impulse which occasioned them passes away, and are never acted upon."

We fear that the vicious system which has done so much harm to the Hanwell Asylum is still pleasing to the peculiar feelings which mark Middlesex magistrates alone among English magistrates.

To the Editors of the Journal of Mental Science.

GENTLEMEN,—At page 453 of the last number of the "Journal of Mental Science" the following sentence appears:—

"We are surprised to find it stated by one of the writers of these notes that the Sussex County Asylum was the first asylum in Great Britain in which chloral was used in the treatment of insanity. We always understood that any credit which might belong to the introducers of chloral into asylum practice was due to the Superintendent of the Devon Asylum."

If I am incorrect in believing that chloral was first used in this asylum, I hasten to declare my regret for the mis-statement. The matter can be very easily decided, as I can give the very day and hour on which the first dose was administered here. In our Case Book, vol. vi., occurs the following entry in the case of E. E.:—

"1869, November 21st.—She is extremely restless and troublesome to-day, and was so all night, beating her head about, trying to choke herself with her fist, &c. To have fifteen grains of chloral. 22nd.—She went to sleep almost immediately after taking the chloral at 10 30 a.m., and slept almost without intermission until 5 p.m., when she awoke quite calm, and remained so." That was the first time chloral was used in this Asylum.

At page 630 of the "Journal of Mental Science," for 1869, there is an account of a "Clinical Discussion on Chloral." Dr. Blandford asks if any member had yet used it in Insanity. No one states that he has. But Dr. Lockhart Robertson, who was in the chair, and was then Medical Superintendent of this Asylum, says that he had received a pamphlet from Professor W. Westphal, strongly recommending its use. This led us to believe that chloral had not yet been used in an English

asylum; and I am still in ignorance of the date of Dr. Saunders' first trial of it. Certainly at that time I knew nothing of his experiments. After the meeting, Dr. Robertson brought some of the drug from Messrs. Bell down with him, giving, I believe, 16s. an ounce for it; and passed it over to me to try on the first favourable case, which I did, with the result detailed above.

If Dr. Saunders used it before this date, I regret much that the statement, inadvertently on by your reviewer, was made, and I desire to apologise to him.

II.—Your reviewer who with most praiseworthy impartiality finds something to adversely criticise in the report of nearly every English Superintendent, also takes me to task on another point, and is pleased to express his opinion that I treat the principle of non-restraint as a "sentiment," and in a way that should be avoided by "impartial men." Though the review is not signed, this sentiment is so alien to the traditions of the Journal, that I cannot believe it to be the judgment of the Editors. At any rate, I venture with all due deference, to express my extreme regret at such an opinion having been allowed to appear in its pages. Had the reviewer been confined in Old Bedlam or even at Hanwell before the appointment of Dr. Conolly, he would probably have found restraint something more than "a sentiment."

I am, Gentlemen,
Yours faithfully.

S. W. D. WILLIAMS.

County Asylum, Haywards Heath,
12th November, 1873.

I.—*Dr. Williams is right, so far as documents testify, in claiming for the Sussex Asylum the first use of chloral in an English Asylum. The first entries in the prescription book of the Devon Asylum are on the 8th December, although it is believed there that experiments were made before that date. At the meeting to which Dr. Williams refers, two members of the Association—Dr. L. Williams and Mr. Kesteven—gave the results of their experience of its use in delirium tremens. After reading the extract from the report of the Argyle Asylum, which will be found on a preceding page, we almost feel disposed to hope that someone will soon claim the credit of its disuse in asylums.*

II.—*The passage regarding restraint to which Dr. Williams refers is as follows:— "If packing in a wet sheet is a beneficial plan of treatment, what does it really matter whether it is called restraint or not. Sentiment in such questions should be avoided by impartial men." We fail to see that our reviewer has therein charged Dr. Williams with treating the principle of non-restraint as a sentiment. When Dr. Williams abandoned for a time a useful and efficacious means of treatment simply because the Commissioners insisted on calling it restraint, though he was sure it was not, he allowed a sentiment to stand between him and the good of his patients. And after a time he discovered that he had done so, for, as he says (p. 27), "Eventually . . . we abandoned our sentiments and returned to the packing." Does Dr. Williams think that he has abandoned the principle of non-restraint, now that he has returned to the packing?*

Dr. WILKINS, Special Commissioner in Lunacy from California, who visited a large number of asylums in this country two years ago, writes to a member of the Association to say that copies of his report were sent to the Superintendents of all the asylums he visited. We fear these reports have in the majority of instances not reached their destinations.

THE
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- Bacon, G. Mackenzie, M.D. St. And., M.R.C.S. Eng., Medical Superintendent, County Asylum, Fulbourn, Cambridge.
- Baillarger, M., M.D., Member of the Academy of Medicine, Visiting Physician to the Asylum La Salpêtrière; 7, Rue de l'Université, Paris. (*Hon. Mem.*)
- Balfour, G. W., M.D., St. And., F.R.C.P. Edin., 21, Alva Street, Edinburgh.
- Balfour, W. G., L.R.C.P. Edin., Medical Superintendent, Metropolitan Asylum, Haverstock Hill, London.
- Banks, ex. King's Professor John T., A.B., M.D. Trin. Coll., Dub., F.K. and Q.P.C., Ireland, Visiting Physician, Richmond District Asylum, 10, Merrion Square, East Dublin.
- Bailey, J., M.R.C.S., Medical Superintendent, Lunatic Hospital, Northampton.
- Begbie, Jas. Warburton, M.D., Edin., 16, Great Stuart Street, Edinburgh.
- Belgrave, T. B., M.D. Edin., Hendon, London, N.W.
- Bell, Oswald H., M.D., Edin., Professor of Medicine, Univ. St. Andrew's, The Scores, St. Andrew's.
- Benbow, Edward, M.R.C.S. Eng., Hayes Park, Uxbridge, Middlesex.
- Benham, William T., M.D., C.M. Abdn., M.R.C.S. Eng., L.A.S. Lond., Assistant Medical Superintendent, City and County Asylum, Stapleton, near Bristol.
- Biffi, M., M.D., Editor of the Italian "Journal of Mental Science," 16, Borgo di San Celso, Milan. (*Honorary Member.*)
- Bigland, Thomas, M.R.C.S. Eng., L.S.A. Lond., Bigland Hall, Lancashire, and Medical Superintendent, The Priory, Rochampton.

- Finch, W. Corbin, M.R.C.S. Eng., Fisherton House, Salisbury.
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- Sankey, W. H. Octavius, M.D., F.R.C.P. Lond.; late Medical Superintendent, Hanwell, Middlesex; Sandywell Park, Cheltenham, and Almond's Hotel, Clifford Street, Bond Street. PRESIDENT, 1863.
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- Walsh, Francis Delaval, M.R.C.S. Edin., Medical Superintendent, Lunatic Hospital, Lincoln.
- Ward, Frederic H., M.R.C.S., Eng., L.S.A., Assistant Medical Officer, County Asylum, Tooting, Surrey.

- Ward, J. Bywater, B.A., M.B. Cant., M.R.C.S. Eng., Medical Superintendent, Warneford Asylum, Oxford.
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- Wilkinson, Matthew Eason, M.D. Edin., F.R.C.P., Physician to the Manchester Royal Infirmary and Lunatic Hospital, 25, Gore St., Greenheys, Manchester.
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