attention is the occasional—in his opinion the frequent—occurrence of cases where acts which appear to be definitely suicidal are really due to thoughtlessness, and inability to realise the consequences of conduct, as, for instance, when a boy, whose hat has blown off, throws himself into the river to recover it. The paper includes summarised notes of twenty-four cases of suicidal attempts in children. W. C. SULLIVAN.

5. Asylum Reports.

Some English County and Borough Asylums.

Brighton Borough.—The Committee report the retirement of Miss Buckle, after fifty-two years of work as Matron of the Institution. We should imagine that this is a record in respect of service in one office. Miss Buckle's quiet efficiency and pleasant personality are well known to many interested in asylum matters outside Haywards Heath. The Committee is in the happy position of possessing accommodation considerably in excess of its own requirements. It is able to pay out of the profits arising thereby for all repairs and alterations, insurance, and superannuation falling on the building and repairs account, and have a balance in hand of £6,368 8*s.* 11*d.*

Buckingham County.—The admissions during last year were approximately only two-thirds of those of the previous year, while the recovery-rate showed a substantial improvement. Notwithstanding these favourable facts, a decrease, to the extent of one-third, in the death-rate brought about that the population on December 31st was practically the same as at the same day in the preceding year. Still, the fact remains that occurring insanity shows a large decrease. These figures are a good example of the need to take into consideration more than mere population when estimating alleged increase of insanity in an area.

Cardiff.—Some extensions have been projected here. The plans sent up received some criticism, resulting in delay. That delay has caused the original estimate to be increased by 10 *per cent.*, to meet advance in labour and material during the time consumed. It may be wondered whether the extra cost is met by improvement in the usefulness of plans submitted by those who are fairly expert in asylum requirements.

Dr. Goodall gives an interesting analysis of the heredity found among the direct admissions, in which a reliable history could be obtained. It occurred in 46, or 46 *per cent.*, of such cases. Summarising these, we find that single heredity, *i.e.*, heredity of one factor, occurred in 31; of these inheritance of insanity claimed 11, of alcohol 6, of allied neurosis or phthisis 14. In the other 15 the heredity was dual, inheritance of insanity and alcohol 5, of insanity and neurosis or phthisis 5, of alcohol with neurosis or phthisis 5. The effects of duality in heredity are commented on later, when we deal with Dr. Mott's inquiries.

With regard to increased laboratory facilities Dr. Goodall writes:

In my last report I expressed the hope that the extension of the pathological laboratory would be completed by April, 1913. I am glad to be able to state that this work has now been completed. The additions comprise (*a*) a slight increase in the size of the existing laboratory; (*b*) a separate working room for the pathologist (Dr. Scholberg); (*c*) a laboratory for physiological research; (*d*) a separate room for sterilizing apparatus. An excellent fume-chamber, common to the two laboratories, and a commodious ice-box have been erected. A stout-walled brick chamber has still to be built for accommodating a powerful centrifuge. The physiological laboratory is intended, like the chemical one, for a single worker. In the pathological room we have now separate working tables for three workers, apart from the special accommodation for the pathologist. All necessary fittings in the way of tables, sinks, cupboards and shafting have been provided out of the available funds. These are also sufficient to enable us to purchase a suitable autoclave and two centrifuges. The accommodation for experimental animals has proved quite satisfactory. Up to the present only rodents have been used for research work.

Dr. Goodall prefaces his report on the research work done as follows:

Before proceeding to give an account of the research work carried on during the year, I would wish to emphasise strongly the importance of collaboration between workers in different (allied) branches of scientific research: this has been brought out notably during the past year in our work here. The advantage of guidance in chemistry and physics to those engaged in pathology and clinical medicine, and *vice versâ*, has been great: and I cannot conceive how we now should manage without such collaboration. This is merely a realisation of the best continental practice. Our experience is a further and strong argument for realising at as early a date as possible the appointment of our third research-worker, namely, the physiologist, of whose help in the problems of metabolism we have felt the need. I do not disguise from myself that it will probably be difficult to obtain a suitable man, but I have every confidence in ultimately finding him.

I submit the following account of research work which has been in progress during 1912:

He and Dr. Scholberg have for some months made systematic weekly examinations by the Wassermann method of the blood and cerebro-spinal fluid from cases illustrative of all kinds of mental disorders, in pursuance of similar work reported by them in the *Journal of Mental Science*, April, 1911. These examinations are still conducted week by week. They propose to report at the International Congress of Medicine, London, 1913, their further observations. The observations upon mental cases have been systematically checked by parallel observations upon cases of syphilis in different stages from the Cardiff Infirmary and others from private practice, and on this account it is believed that the results have an exceptional interest and value. They go to show that a higher proportion of positive reactions in the blood-serum is obtained in cases of florid syphilis (including cases in the second stage) than in those of general paralysis. In cases of tertiary syphilis the results are more in harmony with those of general paralysis. By systematically working with three strengths of amboceptor (the fluid to be tested), it is shown that in some cases of general paralysis a positive reaction can be obtained with higher concentrations of amboceptor when such is not obtainable with the usual one (a procedure recommended by Nonne, Holzmann and Eichelberg). This applies to the serum as well as to the cerebro-spinal fluid, but more especially to the latter, the reason probably being that amboceptor is present in lesser quantity in the latter. Different strengths of amboceptor were in like manner used in cases of insanity other than general paralysis, with the result that a negative reaction sometimes became positive in the serum and the cerebro-spinal fluid with increased amounts, though not so frequently as in general paralysis as far as the latter fluid is concerned. Nevertheless, it is evident that the delicacy of the reaction is diminished when amounts of amboceptor above two-tenths c.cm. of a solution of 1 in 10 are employed. These observations bear out the reliability of the Nonne-Apelt protein test, and show, on the whole, that pleocytosis (*i.e.*, increase of cells in the cerebro-spinal fluid) is less constant in general paralysis than increase of protein.

The Wassermann test has proved useful in the diagnosis of certain difficult cases of organic disease of the nervous system.

Further work has consisted in the continuation of observations upon the agglutinating and opsonic properties of the blood-serum of cases of acute mania and melancholia upon the intestinal anaërobes, *B. putrificus* and *B. enteritidis sporogenes* (Klein). The work shows that no agglutinin is formed in respect of these organisms, and that such cases exhibit a lower opsonic index than do control cases. This latter fact may be merely a special illustration of a general tendency to reduction of opsonic power of the blood-serum in these cases, not by virtue of any special pathological condition associated with insanity, but on account of mere reduction of vitality. There is not sufficient experience yet available as to the opsonic index in respect to the more common pathogenic organisms, in cases of insanity, to allow of a definite statement on this point. Incidentally, this work has brought out an interesting fact as to the relative powers of ingestion of organisms by homologous and heterologous (*i.e.*, in respect of the serum employed) leucocytes, which will be reported in full elsewhere, and which is certainly of much therapeutic interest theoretically.

Dr. Stanford, the research chemist, reports:

The chief lines of investigation which have been pursued during the past year comprise the further study of the phenomenon of the appearance of indigo-producing substances in the urine of the insane, the perfecting and testing of the new dilution colorimeter referred to in last year's report, and, in particular, a series of researches on the cerebro-spinal fluid of the insane.

In regard to urinary indigo, attention was principally directed to the isolation of the indigo-producing substances, which, as was mentioned in last year's Report, is interesting from many points of view, and is absolutely necessary for the establishment on a sure basis of the quantitative methods which I have devised, and which I hope eventually to apply to the systematic analysis of the urine of the insane. Unfortunately, the isolation of these substances by the methods which, in the past, have proved equal to the task of isolating similar compounds from the urine of animals in which the amount of indigo had been artificially increased, is impossible in human urine, both by reason of the much smaller concentration of the indigo-forming substances and because of their much greater instability, which has already been described in former reports. This instability has, in fact, prevented so far the isolation of these compounds, and the result of much laborious investigation has only been the devising of a new and convenient method for their extraction from urine—an advance which is nullified by the spontaneous decomposition of the extracted substances in the course of a few hours. This problem is, therefore, still under investigation.

In collaboration with Dr. E. Barton White the action of several common intestinal bacteria on media containing indole has also been studied. In no case was the production of any indigo-forming substance observed, and this is an additional argument against the common assumption that "indicanuria" is necessarily connected with excessive intestinal putrefaction.

Exhaustive tests of the new dilution colorimeter have shown it to possess the advantages claimed for it in last year's report.

The principal occupation of the year has been the study of the cerebro-spinal fluid in cases of mental disease. The original object of the work was a re-examination of the disputed question as to the occurrence of choline in the cerebro-spinal fluid in general paralysis. This has been affirmed by Donath, Mott and Halliburton and others, and denied by Kauffmann and others. With the aid of fluid collected *post-mortem* for some two years previously, a repetition of the experiments of previous workers was undertaken, and the result of these and other experiments proved that choline is not found in the cerebro-spinal fluid of general paralytics or other individuals. The statements as to its occurrence were shown to be due partly to confusion with ammonium chloride, and partly to the production in the fluid, after removal from the body, of a substance which gives many of the alkaloid reactions shown by choline.

The application of new methods to the analysis of cerebro-spinal fluids obtained during life has enabled me, however, to differentiate between the cerebro-spinal

fluids of general paralytics and those of other patients, and the regularities observed promise to afford means of diagnosing that disease in doubtful cases. Although a considerable number of cases has been examined, no incongruous results have yet been obtained. These and other researches (which are now in progress) may throw light on the progress of mental disease also in cases other than those of general paralysis.

Dr. Scholberg, the pathologist, strongly supports Dr. Goodall in the statement that for the most perfect inquiry an experimental physiologist should be added to the staff, so as "to record the standard chemical, physiological and pathological data to be found in any given type of insanity." When we add to that accurate clinical observation and the record of results following treatment dictated by research, it may be confidently expected that success will attend a concerted and well-devised attack on the mysteries of psychoses, and we will venture to add that the Committee of Cardiff Mental Hospital has already, by its liberality of view, placed psychiatry under such deep obligations that it will feel impelled to do its best to complete that which it has begun. Speaking, perhaps, *ultra vires*, we would point out that at Cardiff there is a most fortunate conjunction of earnestness and liberal view on the one hand with earnestness, indefatigability and skill on the other hand. It is just in times of such conjunction that enormous steps forward are made, and no one can deny that a great advance in knowledge already has been made under these circumstances.

Dr. Barton White has done much bacteriological work on the cerebro-spinal fluid, and, with Dr. Stanford, has carried on an inquiry into the question whether the indigo-forming substances of urine can be produced by intestinal bacteria. The work is not far enough advanced to afford material for conclusions.

We need make no apology for producing such long extracts as we have made from the report. Many of the facts related have found publicity in other directions, but they should be also chronicled in this the natural home of psychiatric science. The importance of the facts being acknowledged, it is proper that they should be clothed in the *ipsissima verba* of the reporters.

Derby Borough.—Of the ninety-eight admissions eight only had been resident in the asylum at some previous time, and had been discharged as recovered. The average interval between discharge and readmission was three years and nine months. In 50 *per cent.* of the direct admissions suicide had been attempted or threatened, and in 30 *per cent.* homicide had been threatened or actually attempted in the shape of violent assaults. As these cases formed about one-sixth of the population, it is evident that Dr. Macphail had no light responsibility.

Derby County.—We note that, in referring to the occurrence of dysentery and severe diarrhœa at this asylum, the Visiting Commissioners say that it seems to show a not quite sanitary condition of the asylum. This opinion cannot be received without considerable qualification. There may be some asylums where the sanitary condition is so poor that anything may occur, but without any doubt whatever these maladies may suddenly appear in the newest asylums, where sanitation

is of the best and most recent type. We know too much nowadays about "carriers" to throw any suspicion on the sanitary reputation of any place.

The Committee state that, owing to excess of patients over and above their accommodation, they have 135 patients boarded out in other asylums. They now cannot find room for their males, after applying to practically every asylum in England for it. It seems but the other day that the country had almost overbuilt itself. London has over 400 male patients accommodated in outside institutions, a condition which will be relieved, for a time at any rate, when it has built its new asylum. The Derbyshire Committee has commenced arrangements for building an additional asylum.

Dorset County.—Dr. MacDonald makes a strong appeal for a convalescent home. He thinks that so much is now done for acute cases that the time has come for the claims of the convalescents to be considered. He points out that such a building need not be expensive, as simplicity, quietude and liberty only is called for. We entirely support his idea. Authorities talk much and largely of classification, but it stops short just when it is most wanted, and when it is likely to be remunerative. In many institutions other than rate-paid asylums this same procedure is adopted with the best effect. In instancing the errors that creep into census returns dealing with mental deficiency, he makes the point that information wants editing, friends not caring to disclose the truth. He visited a cottage where there were seven children in family. Of these he was able to mark four as definitely deficient, yet the mother told him that none were so recorded in the census. The notable increase in general paralysis he attributes to increasing population at Weymouth and Poole, the other parts of the county remaining free.

Hants County.—A Local Government auditor's report often contains interesting little points, these sometimes being rather niggardly, though probably correct. In this report there occur the following: The auditor takes exception to a payment made for carriage of the gardener's furniture on his taking up the service, on the ground that the rules do not provide for it, and the contract of service does not mention such a provision. No National Health Insurance deductions have been made in respect of those officers who have contracted out of the Superannuation Act. These cases are not covered by the Insurance Commissioners' certificate of exemption. The knotty point has been referred to the Commissioners, who had not announced their opinion at the time of report. He will disallow in future any sum paid for stamps used for receipts for salaries. An auditor might sometimes, without great shock to conscious probity, follow Nelson at Copenhagen, and put his telescope to the blind eye.

Kent County, Barming Heath.—In adverting to the increasing shortness of accommodation, Dr. Wolseley-Lewis tells his committee that before they think of providing more it will be worth while to study the possible effects of the Mental Deficiency legislation, which at that time

was in the making only. We shall discuss this question when dealing with what Dr. Fitzgerald has to say at Chartham on the same subject.

Dr. Wolseley-Lewis reproduces in his report much of what he said at the Darenth meeting of last year on the question of criminal lunatics. The grievance to which he gives utterance acquired the more point by his house being burgled by a criminal and ungrateful patient. But apart from this he has done good service in bringing forward in precise and reasoning form the hardships attaching to the continued dumping of undesirables on local authorities by the Home Secretary. As will be seen in our remarks on the London report, the Home Secretary has been moved to emit a declaration, which, however, is not satisfactory in all respects. The only method of producing a proper resolution on his part is to keep on worrying at him by deputations and remonstrances. The present practice is indefensible in that, as Dr. Wolseley-Lewis shows, it is wrong to the other patients; it is wrong to the patients themselves, who get much extra and inconvenient attention; it is wrong to the public in that there is more chance of a dangerous criminal effecting his escape from Barming Heath than there is from Broadmoor; finally, it is unfair to the staff to have the responsibility thrown on them, when there are such places as Broadmoor specially built for efficient control. It is not only indefensible, but very mean, that the central authority should force the local authorities to find accommodation instead of building itself. We think that it is very unlikely that the Home Office would for long continue to be obstinate if the question were constantly kept before it in Parliament and by remonstrance on the part of all county and borough councils.

Dr. Wolseley-Lewis feels very satisfied by phthisis taking quite a humble position in the list of death causes, instead of being at the top as formerly. He attributes the happy fact to the increased ventilation and more open windows.

Kent County, Chartham.—Dr. Fitzgerald notes that since the passing of the Superannuation Act there has been a remarkable decrease in the voluntary resignations among the staff, with the accompaniment of slow promotion, which he thinks to be not altogether an advantage. The fact of longer service, however, proves the truth of one of the contentions pressed by the Pensions Committee when they foretold that it would be brought about by an Act. The drawback was not then a subject for prophecy. He presses for provision being made for the senior A.M.O. to be a married man. Commenting on the Mental Deficiency legislation, which was then only in the Bill stage, he does not look for as much assistance in the matter of accommodation as Dr. Wolseley-Lewis does, and he thinks that the legislation must not stand in the way of building. He points out truly that the asylum candidates for treatment under the Act, when passed, would be the last to be accepted. And we may say with certainty that the last to be taken over will have to wait a very long time. The amount of money that can be spent is trifling in comparison with what will be called for in order to carry out the Act in full. The amount of money will stand thus—every sixpence that comes from the Parliamentary grant will have to be covered with another sixpence by the local authority; in addition, local authorities can call up a rate not exceeding

one halfpenny in the pound. As is known, the grant is only £150,000 for all England and Wales. It may be distributed rateably, but probably it will be given by "pick and choose," as is the case with the Road Board Grant. If the latter happens, the more needy localities will be served before the richer, and in that case Kent is not likely to get much at present. The available money being therefore strictly limited in amount, the first claim will be in respect of those classes for whom there is absolutely no provision at present, and will be exhausted long before the claims of those now provided for can come up for consideration. In time, no doubt, the provision both by grant and by rate will be extended, but that will not be till the Act is in full working, and till it can be seen how far the powers conferred by it can be carried out with safety and advantage. If, however, the Guardians care to take the matter into their own hands, as there is power for them to do to some extent, and as there seems to be some disposition to do, there may be some relief in the future. There is another important factor to consider: When both the doctors made their reports the Bill included, among the defectives subject to be dealt with under the Act, the "mentally infirm, through old age, drink, etc.," that is to say a form of acquired deficiency. Since then, however, better counsels have prevailed and these old people have been left out, and the operations of the Act will relate to deficiency from birth or early age solely. We should imagine that this limitation would considerably affect Dr. Wolseley-Lewis's estimate of 300, which at the time of his report he could find at Barming Heath as suitable for treatment under the Act. There may be, of course, a few old cases which are mere protractions of early deficiency, but they are probably insignificant in number. Thus it will be well not to indulge in too great hope of relief to asylum accommodation from this Act.

We note that a table has been inserted for the first time, showing the areas from which the patients are drawn for each of the two asylums. We trust that this will be followed in time in all cases where there are two or more asylums under one local authority. It is useful to know whether patients come from ordinary country parishes or unions, or from those of an urban nature, with all the variety and dangers of trades. It would be a little more useful still if the information which is given by unions could be amplified by annexing the names of large towns, which are often lost sight of under the name of their union. Chartham, a town of much lunacy potentiality, is difficult to place in this list.

London City.—Dr. Steen writes enthusiastically of the service of verandahs, and wonders how they ever got on without them. They are used night and day. The best case for them in his view is the acutely maniacal case. He has often seen one that was noisy, excited and troublesome in a padded room become quiet and go off to sleep when removed to the verandah.

In general paralysis of the insane we employ urotropine as a routine measure, and the general impression is that it is of distinct value in the treatment of this disease. It is, of course, possible that the type of the disease is changing, but it is remarked that congestive attacks are less frequent, that remissions occur more often and are more prolonged, and that the general condition of the patients is less degraded than formerly.

This supports the opinion expressed by Dr. Harvey Baird in a paper published in the January number of the *Journal of Mental Science* of last year.

London County.—The present volume bears testimony to the ever-increasing responsibility attaching to the work of the Asylum Committee, and, we think, also to the success which attaches itself to its administrations. To the student of psychiatry and of its ministerial details the volume is increasingly serviceable from its thoroughness and completeness. No detail which can afford any information is missed, and the quantity of material handled affords a really valuable guide to deducible facts. The only drawback in taking those facts as representative of general truth is that the report deals only with urban results. But the *Annual Report of the Commissioners in Lunacy* supplements the London County's returns, both being now based, for statistical purposes, on five-year averages for the most important purposes, for which Mr. Keene has to be thanked in respect of this Committee's share. The main report shows that, while the accommodation has undergone some slight increase, this is considerably outset by the increase in population, which is greater than it has been for some years past. But this increase is not entirely due to the operations in the asylums only, but is carried by the fact that the increase of all London lunacy has been absorbed by the asylums alone, the Metropolitan Asylums Board and the workhouses not having taken up their usual share. The Committee draws attention to the absurd duplication of authorities in lunacy matters. This allows justices the power of exercising a discretion as to where the patients shall be put. It points out in this connection that, while one parish has 83 *per cent.* of its lunacy housed in asylums, another has only 57 *per cent.*, the mean *ratio* of all parishes being 74 in County and 26 in Metropolitan Board asylums. The only reason for this disparity that can be assigned is the failure of justices to recognise properly the differing purposes for which the two sets of institutions are designed. The Committee is a little sore that the recommendation made by the Royal Commission in favour of there being only one authority for London has not met with enactment. As said, the total lunacy of London has increased during 1912 in point of number of those under care, but it does not, in the opinion of the Committee, prove a real increase of occurring insanity. But whether this be so or not, the want of asylum accommodation is pressing, and it is recognised that, when the eleventh asylum is opened five years hence, it will indeed be required. The great trouble in accommodating the excess is the difficulty in finding room elsewhere. We find much the same complaint in the reports of other asylums which have patients to place out. The task of selection, when accommodation is found, is enhanced by the increasing stringency of conditions as to the nature of the cases to be thus dealt with, and by the very proper insistence of the Commissioners that only those patients should be sent out who have no friends who can or do show interest by visitation. The cost of maintenance is likewise creeping up, but we suppose that this is less on account of the law of supply and demand than on account of the advanced price of food and necessaries. It is a fact that the population of the London

area is decreasing, but the Committee derive but little encouragement from this, for it is pointed out that the wage-earners, taking advantage of increased transit facilities, settle outside the boundaries, while the feeble-minded and the recidivists are perforce left behind, keeping the lunacy ratio up to a high level.

We are glad to see that a point, to which we have frequently drawn attention as a possible source of knowledge as to the effect of environment, is now being discussed. It is the wide variance in the parochial proportions of declared lunacy. The Strand still maintains its position of having the highest proportion of lunacy to population, while a very low proportion is found at Bethnal Green, where one would suppose that the grinding strenuousness of life would have the direst effect. Dr. Mott, as will be shown later on, is making most effective and scientific use of such opportunities of inquiry.

The Committee is at last able to report substantial advance with the Maudsley Hospital. The levels of the site have been taken, and the plans have passed the authorities. Tenders were to be at once invited at the time of the report.

The evergreen question of the admission of criminal lunatics into county asylums engaged the attention of the Committee. Correspondence with the Home Office procured the following explicit statement:

> The Secretary of State has expressed his opinion that it will always be desirable to send to county asylums those prisoners who become insane while undergoing short sentences, and who, therefore, will soon cease to be "criminal" lunatics, in the technical sense that they will no longer be chargeable to the Prison Commissioners. He expresses the hope, however, that with the opening of new State asylum accommodation it will not be necessary, save in exceptional cases, to call upon local asylums to receive criminal lunatics who are certified while undergoing a sentence of penal servitude, or persons who are found insane by the verdict of the jury, and are likely to be detained indefinitely as King's pleasure lunatics.

On principle this pronouncement must be taken to be satisfactory. But in operation it might prove to be too precise, since there are many undesirable lunatic rogues happy in not getting heavy sentences, who should be kept away from more honest invalids, while, on the other hand, there are many unfortunate baby-killers whose proper place would be under the less strict *régime* of a county asylum.

The Committee acknowledges the assistance received from the Education Committee in the inquiry into family history which is being so strenuously made under Dr. Mott's supervision. The connection of asylum and educational committees will assume very great importance under the Mental Deficiency Act. If the Act has in time the hoped-for effect of abolishing the adult deficient at large, by catching him early and keeping him indefinitely, the Education Committee will be the prime detectors and suppliers of patients. It is much to be hoped that everywhere the best will be extracted from the Act by harmonious and sympathetic interaction of all the authorities concerned.

The Bill (Mental Deficiency) received considerable consideration at the hands of the Committee, which reports several amendments to be proposed, but as the Bill has become an Act there is but little need to consider such proposals. Some, indeed, did not survive passage through the Council.

The deportation of alien lunatics goes on steadily, but the Home Secretary gives notice that instead of the State, as hitherto, bearing the total expense, he will ask for a contribution of one-half from the local authority when the cost exceeds £15. The Committee fears that, as such a contribution must be sanctioned by the Local Government Department, the demand may hinder or prevent the removal of alien lunatics.

The Home Secretary is not always "difficult." He has permitted the continued use of some temporary buildings at Hanwell which were originally allowed on the understanding that the use should cease at the end of fifteen years. It is dreadful to think what would have happened if he had refused the permission. With the present difficulty of placing patients, to find room for 400 would have been a heart-breaking business.

Some substantial additions have been made to the remuneration of the staff. For male attendants it is provided that after five years of good and efficient service he shall receive a stripe, which will carry with it an extra annual payment of £2 10*s*., while at the end of another five years he will have another stripe, bearing an equal increment of wages. If either the conduct or efficiency deteriorates the asylum sub-committee can deprive him of one or both stripes and the attached pay. This seems to be an excellent plan. Good-conduct money affords a very satisfactory point of attack for punishing a servant when an offence, not quite sufficient to warrant dismissal, yet requires the infliction of something that will be felt.

The Committee, recognising that food is part of the remuneration which they undertook to give on engagement, now provide that it shall be paid for on single days of leave when absent.

Henceforth not only first assistant medical officers may marry, but the Committee is providing that the same facility shall be extended to the second also. This forms a valuable precedent, which doubtless will be made use of by the Status Committee.

The reports of the medical superintendents, taken generally, chronicle even and satisfactory history, and the same may be said of the reports by the Visiting Commissioners. We are much struck in reading the latter with the increased tone of sympathy with men who have difficult and serious work to do. We feel sure that this must be right, as it not only is a fitting recognition of good work, but has the great advantage of setting off, by contrast, any reference to matters requiring more or better attention, thus increasing readiness of spirit to execute any improvement called for. We note particularly the frequent reference made to the excellent sick-nursing which obtains throughout the Committee's asylums. This reflects credit not only on the head that devises, but also on the hands that do.

We take the following from the various medical reports.

Bexley.—Dr. Stansfield writes:

> During the past year I have been carrying out an investigation into the relationship of blood-pressure to sleep and the effects of certain hypnotics upon the blood-pressure. My inquiry is not yet completed, but my observations so far tend to justify certain general conclusions. First, that sleep is invariably associated with a lowering of the individual blood-pressure, varying in different individuals. Second, that

lowering of the blood-pressure by any means tends to produce sleep, and its converse holds true, that anything which causes a rise in the blood-pressure renders sleep impossible. Third, that the principal hypnotics in general use, such as amylene hydr., paraldehyde, chloral hydr., pot. brom., all reduce blood-pressure when given in medicinal doses. Fourth, that the recumbent position in twenty-minutes' time produces a lowering of the blood-pressure, varying in four individuals observed from 4·8 *per cent.* to as much as 15·2 *per cent.*

The necessity for a sufficiency of sleep to maintain a normal mental balance is generally not appreciated, and it is commonly thought that, within limits, time taken from sleep is so much gained; but this is a great fallacy and leads to mental reduction, retarded mental reaction, volitional defects, and often absolute dementia. Systematic insufficiency of sleep as a cause of insanity does not receive that recognition which it should. I could cite numerous cases which have come under my care from this cause alone. The race for pleasure, the curse of the age, from which all ranks in life suffer, produces its pernicious effects upon the mental and moral life of its votaries in a large measure owing to insufficiency of sleep. Particularly does this apply to the period of life during which mental and physical development chiefly takes place, *i.e.*, from infancy to adolescence, and I am fully persuaded that a large number of the feeble-minded cases which come under my care have never had the chance to develop into normal individuals, owing to systematic insufficiency of sleep, and particularly so when a child has started life with a neurotic, insane, or feeble-minded heredity. The importance of a sufficiency of sleep ought to be taught in all our schools, and insisted upon when there is a faulty heredity.

Dr. Stansfield laments the late arrival of many of his cases, only 36 *per cent.* coming within three months, while 34 *per cent.* came after twelve months elapsing from commencement of the attack. These facts read queerly with a definition of 345 of 372 admissions as "recent" in the opening of the report. This is an obvious slip for "direct." Noguchi's and Nonne-Apelt's tests are used as a matter of routine here as in some other London asylums in all cases suggestive of syphilis or general paralysis, while the Wassermann test for Bexley cases is applied at Claybury. The results of tests on cerebro-spinal fluid closely resemble those on serum, but with occasional puzzling contrarieties. Searching for the causes for these differences may, one would think, lead to further valuable information.

Claybury.—Dr. Robert Jones writes:

The discovery in the scientific laboratories of America of the *Spirochæta pallida* in the layers of the cortex of the brain has been the most important event of the year in regard to general paralysis, but the present belief that salvarsan injected subcutaneously or intra-venously does not pass into the cerebro-spinal fluid is not encouraging as to treatment. I have used salvarsan for the relief of general paralysis within a few weeks of the first known onset of symptoms, but without any actual benefit, and it is possible in view of the discovery mentioned that we may have to reconstruct our ideas and terminology as to what may be syphilitic and what may be para-syphilitic lesions. It is not unlikely that para-syphilitic ailments may have to be abandoned as such, although at present we know that there are serological differences between symptoms which are described as syphilitic and those which are para-syphilitic, of which general paralysis and tabes are examples.

Dr. Candler trephined a male patient for traumatic epilepsy, at the site of an old scar over the left frontal region. A small cyst was found and its contents evacuated. The patient made an uninterrupted recovery, but the fits still continued. Several other heavy operations were undertaken, with varying success. Dr. Jones has a real "neigh-

bour," Mrs. Johnston, who, in addition to frequent visits to the wards, invites the patients to have tea on her lawn. How much good this sort of kindness must do!

Colney Hatch.—Dr. Gilfillan notes: The proportion of general paralytics among the admissions was 8·84, a decrease of 1·90 on the preceding year; among the 59 male Jews admitted the proportion was 10·16 as against 25·5 last year. A history of syphilis was found in 15·38 of the total male admissions. Farm work continues to be a source of profit and mental benefit.

Horton.—Dr. Lord contributes some forcible remarks on the question whether dementia præcox shall be written down as an incurable disease, plumping his vote against incurability. We must confess to having the same predilections. Of course, the trouble commences with the inclusion of the word "dementia" in the term. There are really two questions at issue—is dementia incurable? and is that class of patient denominated by the compound term, "a being without hope," independently of terminology? As to the first, we beg to point out that there is not a particle of science involved; it is pure naked conventionalism. Our fathers and forefathers, with a limited insight into the principles of scientific classification, for convenience used dementia as a sort of ditch into which the incurable might be thrown and buried. They assumed that the mind, having once apparently taken its departure, could not return, and in those cases that obviously presented some chance of return they used one of the other broad terms. But as mental analysis became more and more stringent, it became evident that the conventional asylum picture of dementia is unsatisfactory. It has been seen that it is wrong to deduce the mental phenomena from the type of the disease, but right to build up the type from the observation of the phenomena. Let us start in this latter way and take the main mental affections which denote dementia, and regard them in all phases from the slightest up to the fully developed. Which of us does not at times feel and show those affections to a greater or lesser degree, after exhaustion from excessive mental labour, or shock, or from diet toxæmia and so on? If these phenomena were continued too far we should, as time went on, show just the same physical signs which are the result of abolition, or serious loss, of the great attributes of mind. In fact there are possibilities of all shades of dementia in every one of us, sane or insane, and so some of us recover quickly and thoroughly. When we get to the asylum we see just the same affections, to greater or lesser degree, as the result of various mental stresses. With those whom we call cases of dementia præcox there is generally a structural weakness, from heredity, which the more readily permits exhaustion, leading to the manifestations of incomplete dementia. Often these manifestations increase, so as to be the leading clinical symptoms, and then the term "dementia" asserts itself. Just as with us, so with such cases, the remedy of the underlying stresses leads to return of more forcible mentalisation, and with good luck the latter becomes whole and sound again. In this view there is no essential reason, apart from other clinical data, why any case should not acquire, even completely acquire, strength. Certainly such

cases as we are discussing do get perfectly well for the time, unless, of course, recoveries are held to establish wrong diagnosis. This latter possibility leads up to the question of classification, and there we get pounded at once. Every man knows what we mean by "dementia præcox," but when we compare notes no man knows what his neighbour really means by it. It is all very well to have broad clinical pictures, but when we come to judge the possibility of recovery by terms, we should have those terms set out most precisely. In the absence, as said, of all scientific guidance, we cannot be satisfied by pure conventionalism. Nothing short of an Act of Parliament would begin to procure precise definition, and then we should at once commence to drive coaches and six through the Act. In the meantime for ourselves we must continue to think that such cases can and do get well, at all events for practical purposes, in spite of the ticket attached to them. That we are not singular in holding this idea about dementia as a term is shown by the fact that among the recoveries recorded at the various asylums of the London area, there appear 27, 4 and 8 from dementia, primary, secondary and senile respectively.

The following extract from Dr. Lord's report brings before the Committee with convincing force the dangerous facts relating to general paralysis. It is a pity that these facts are not placed before all authorities who have in any way to care for the public health.

In connection with the prevention of insanity, I should like to offer some observations on the cause and prevalence of general paralysis. I hardly think that the Committee thoroughly grasp the seriousness of the following facts:

(*a*) During 1911, of the 1,632 male direct admissions to the London County Asylums, 264 suffered from general paralysis.

(*b*) During 1911, of the 603 males who died in the London County Asylums, 273 suffered from general paralysis.

(*c*) The yearly average during 1907–10 of the male admissions (first attack) throughout England and Wales was 7,089, of whom 1,172 were general paralytics.

(*d*) Of the total male admissions throughout the country, 1,264 were general paralytics, and that 1,092 of these were aged between 25 and 55, and 519 between 35 and 45, in other words "bread-winners."

(*e*) At Horton Asylum during 1912, out of the 182 males admitted (excluding imbeciles and transfers), 51 were general paralytics, of whom 43 were between 25 and 55 years of age, and 24 between 35 and 45.

Ever since Esquirol and Bayle, in the early part of the nineteenth century, first described general paralysis, its relationship to syphilis has been a subject of much discussion. As far back as 1857 a definite opinion, "no syphilis, no general paralysis," was expressed. All doubts have now to be put at rest by the discovery this year by Noguchi and Moore of the syphilitic organism in the brains of general paralytics. (*Vide* Dr. G. M. Robertson, *Journal of Mental Science*, April, 1913.)

It follows from this that *in this country, over twelve hundred men, in the prime of life, most of them strong, useful, vigorous, and unhampered by neuropathic heredity, or other unavoidable factors, fall victims to a rapidly fatal illness, general paralysis, due to a preventable cause, syphilis.* This does not include women, in whom general paralysis is less frequent, or those cases which die in hospitals and at home. It seems extraordinary that in England, where social and hygienic advancement is so vigorously advocated, no steps are taken to combat the spread of venereal disease. General paralysis is only one of the many disasters that may be the outcome.

The Epileptic Colony.—Dr. Collins notes:

Treatment.—A more extended trial has been given to salt-free diet. In Walnut Villa no salt has been used in the cooking at all, and a few selected cases

have been given sodium bromide for salt. Benefit was only obtained in three cases, but the effect of the change is now wearing off in all the cases. It is worthy of note that the total number of fits in this Villa from 1st February, 1912, to 31st January, 1913, was only 4,896, as compared with 6,187 for the previous year. There have been, however, several changes in the Villa patients, and the two patients who showed temporary improvement would account for a large part of the reduction, as both had large numbers of attacks—the treatment has not averted the onset of *status epilepticus* in these cases.

No other form of treatment has met with any measure of success, though 64, or 15 *per cent.*, had no fit during the year 1912 (17·5 *per cent.* males, 7 *per cent.* females). Left-handedness and epilepsy are said to go together, and I find that 22 male colonists out of 316 are left-handed.

Analysis of the hours of occurrence of fits shows that out of 44,000 fits, over 24,000, or 55 *per cent.* were nocturnal, and that the largest number in any hour occurred between 3 and 4 a.m.; in the daytime the hour 3 to 4 p.m. also shows the greatest number of fits. The least number occurred between 8 and 9 in the morning; only 878 fits occurred during this hour as compared with 3,241 between 3 and 4 a.m. The number is high from 9 p.m., when an increase is noted until 5 a.m., when there is again a considerable drop in the number. During the daytime the greatest number occurs during the hour preceding dinner rest, and again just before stopping work in the evening.

The Pathological Laboratory.—Dr. Mott's report is more than usually interesting on account of the masterly handling of the facts connected with insane heredity. He gave a full address on this subject to the London County Council.

The usual full reports of the incidence of tuberculosis, dysentery, and diarrhœa can be passed without further remark than they all show decrease, and thus prove the good results that come from scientific, thorough, and resolute handling.

The statistical work on heredity has been brought up to date. In all Dr. Mott deals with 3,845 cases, in which residence of a relative in one or other of the London county asylums is proved by the card system of record. Of these, 2,848 (1,424 pairs) were instances of two such residents in one family. In 160 cases there were three relatives in one family, in 27 four, in 6 five, in 2 six, and in 1 seven. In all, 1,620 families had more than one case of insanity recorded against it.

Dr. Mott has used his full records to attack again the question of antedating or anticipation, in order to show that "Nature is always endeavouring to end or mend a degenerate stock by the signal tendency to this occurring in successive generations."

Professor Karl Pearson, in *Nature*, of November, 1912, criticises on mathematical grounds the evidence of anticipation. Dr. Mott rejoins that he does not feel competent to reply to such an authority on mathematical biometry, but still relies on naked facts. We certainly are not competent to deal with the matter between two such authorities, but it is evident to us that Dr. Mott's figures are convincing. He shows that, while the age on admission of the total admissions is spread over decennia in fairly regular but unequal amounts, beginning with the larger number of ages under twenty-five, and gradually tapering off to seventy-five and upwards, those having heredity fall in much larger number (nearly twice as large) in the periods under thirty-five. There was only a percentage of 0·7 after sixty-five, and none after seventy-five. He adds the significant information that of 663 offspring of insane persons no less than one-seventh were imbeciles. Inter-sex ratios are slightly

against females, especially in the early involutional period, 35–44. An interesting question arises regarding the small quantity of aged people with inheritance. The ratios supplied by Dr. Mott would appear to confirm and justify the statement one often gives to relatives, that a senile failure of intellect is an accident, which does not reflect on the stock mental condition of a family. But is there a tendency in a family to suffer from such accidents—arterio-sclerosis, for instance? One wonders how many instances of insanity *occurring* in old age could be found to have resident relatives suffering in the same way.

The increased danger of dual inheritance (insanity, epilepsy, or nervous disease) over single is clearly shown by striking figures. Of the offspring of families having double inheritance, direct or collateral, 34·3 *per cent.*, reaching adult life, were affected; while, with single inheritance, that ratio falls to 6·7 *per cent.* An analysis of families having direct heredity gives a similar ratio of 22 *per cent.*, the families having only collateral heredity giving 3·6 *per cent.*

It is difficult to see how such statistics can be held subject to fallacy, but fallacy or no fallacy they are convincing. Of course these truths are not newly conceived. Everyone has had some opinion or feeling that insane or other inheritances favour attack both more frequently and at early ages, but now there is a truth that can be handled as a scientific fact, well equipped with unanswerable statistics.

Adverting to the general admission that "neuropathic taint" does not enter largely as a factor in general paralysis, Dr. Mott gives some tables which seem to bear this out. He finds that, comparing the incidence of the disease in all the resident patients with that in cases where there is relationship with other residents, the ratio of the latter is a good deal less than the former, while substituting death for residence and comparing the patients in the same method the ratio of incidence is exactly equal. In passing, we may say that in one or two instances these ratios need correction, but the errors, probably of transcribing, do not affect Dr. Mott's arguments. Dealing with the second of the two comparisons—that of deaths—Dr. Mott writes the following, which appears to us to be an excellent example of erudite and logical speculation:

Syphilis and General Paralysis.

I was asked in conjunction with Prof. Max Nonne, of Hamburg, to act as reporter at the International Medical Congress to be held in London in August on "The Nature of the Condition termed Parasyphilis." The two conditions of especial interest included under this term are *tabes dorsalis* (locomotor ataxy) and general paralysis of the insane. Recent researches have confirmed the opinion I expressed in the first volume of the *Archives* that these diseases own one essential cause, *viz.*, congenital or acquired syphilis. It was the collection of a number of cases of juvenile general paralysis in which congenital syphilis was the only ascertainable cause of the disease which led me to pronounce this definite opinion: no syphilis, no general paralysis. The close similarity in certain microscopic appearances of the brain in syphilis, general paralysis, and sleeping-sickness led me to the conclusion that a protozoal infection of the central nervous system was a cause. It was definitely proved as regards the existence of the trypanosome in the cerebro-spinal fluid in every case of sleeping-sickness, and it has been shown that when once the organism has invaded the central nervous system and has been found in the cerebro-spinal fluid, treatment by arsenic, mercury, and antimony is powerless to cure the disease. This finds an explanation in the fact which I have pointed

out in the Oliver-Sharpey lectures on the cerebro-spinal fluid. It is this: The choroid plexus secretes the cerebro-spinal fluid which functions as the lymph of the brain, and it does not permit these substances to pass into the fluid. If they were injected direct into the subarachnoid space containing the fluid it would probably kill the individual as well as the parasites. Now in the light of the discovery by Noguchi and Moore of the *Spirochæta pallida* in the brains of twelve out of seventy cases of general paralysis examined, we can understand why this disease resisted treatment by energetic administration of mercury in the past, and of salvarsan and other arsenical preparations in more recent times. It may be said that finding the parasite in twelve out of seventy cases does not prove that the remaining fifty-eight brains had undergone degenerative decay from the existence of the specific parasites. When I visited the Rockefeller Institute recently I had the opportunity of seeing Noguchi's preparations, and he informed me that he had now discovered the organism in forty out of 230 cases. French observers have discovered the parasites in seven successive cases of general paralysis which prior to death had suffered with seizures: they searched by smears, using the ultra-microscope or the Indian-ink method on the portions of brain which corresponded to areas excited and productive of the muscular spasms. We have employed these methods with success, and I have no doubt that in every case of general paralysis there are to be found foci of spirochætes if we were able to search long enough. One of the cases we have examined was a man of sixty who had not recently had seizures, but the Indian-ink method gave definite characteristic spirochætes in smears of the frontal lobe, as also did other cases, including a case of multiple gummata of the brain.

For some time past we have been impressed with the constancy with which the cerebro-spinal fluid of general paralytics gave a positive Wassermann reaction in all dilutions. Not only has this method enabled the authorities to diagnose this disease correctly in nearly 100 *per cent.* of the cases, but it throws a side-light upon the pathology of this disease. In syphilitic brain disease which is amenable to treatment with mercury and iodide of potassium, or the newer remedy introduced by Ehrlich, the spirochæte is the cause, but it may be supposed that it has not invaded the interstices of the brain-substance, but kept in the perivascular lymphatics, and is therefore capable of being attacked by the specific drugs employed. The Wassermann reaction in the blood and cerebro-spinal fluid is due to a complement-fixative generally regarded as a cell globulin arising in consequence of a reaction to the sensitising influence of a chemical substance produced by the living spirochæte. Now if the spirochæte is present in the interstices of the central nervous system in every case of general paralysis, foci of the parasites would produce a chemical sensitising substance which, escaping into the cerebro-spinal fluid, would produce a reaction most active in the immediate neighbourhood of the focus, but also a remote action on the central nervous system generally. To test this I have collected cerebro-spinal fluid withdrawn by lumbar puncture and fluid withdrawn from the lateral ventricles in thirty cases dying of general paralysis. The two fluids obtained from the thirty cases were subjected severally to twelve Wassermann tests in various dilutions, and the result was that fluids withdrawn by lumbar puncture, and which presumably had been longer in contact with the nervous tissue which provides the complement-fixative, gave a reaction from two to ten times more active than that withdrawn from the ventricles.

It might be asked, how do you account for the fact that not much more than half the cases of *tabes dorsalis* yield a positive reaction in the cerebro-spinal fluid? The disease is much more slowly progressive and is limited to the posterior spinal protoneurones. It is quite possible that the foci of the specific organisms which excite this degenerative process may be outside the spinal canal in the abdominal and thoracic aorta and other structures, and the sensitising chemical virus would escape into the lymphatics, which could, as experiment shows, only be carried up the posterior roots to the spinal cord; consequently, the degeneration is limited to these structures in this disease and the process is elective. Noguchi has found spirochætes in one case of tabes; it is possible that this is a case of tabo-paralysis. The only possible chance of curing this disease is to know what we are dealing with. We know that we are dealing with a living organism which has invaded the most important and vital structure in the body, and the problem is: How can we prevent it, and how can we cure it? Some important experimental researches are

being carried on at the Rockefeller Institute now, and apparently in tabes the results are promising. Essentially the treatment consists in intravenous injection of salvarsan, after some hours drawing off blood and using the serum to inject into the cavity of the cerebro-spinal fluid. Only about 2 or 3 *per cent.* of persons who have had syphilis subsequently develop general paralysis, and one problem requiring an answer is, What determines the disease in this 2 or 3 *per cent.* of infected persons?

The analysis of cases of general paralysis among relatives does not appear to show that the neuropathic inheritance plays a prominent part as it does in the true insanities. It does, however, seem to indicate that there is either (1) a special form of spirochæte, or a spirochæte which has been modified in its biological reactions by the wide-spread use of mercury in a community, whereby the organism resists the influence of this drug and remains latent in the system, possibly in a granule intracellular form; (2) that all those conditions of stress which lead to exhaustion of the nervous elements, such as in the general life of a highly cultivated and complex society bring about in uninfected individuals neurasthenia, predispose individuals infected with syphilis to a lighting-up of the disease by organisms which are latent in the central nervous system, awaiting to develop activity, as the pneumococcus and other organisms do when the vital activities of the tissues are lowered.

Leaving the factor of heredity, there is a most interesting account of the varying incidence of general paralysis in the parishes from which the London patients are drawn. We have repeatedly pointed to this particular interparochial variation in admission-rates as a source possibly of valuable information when properly investigated. Why should the Strand year after year head the parishes in proportionate contribution of insanity both as to admission and accumulation? This year again it contributes 13·9 per mille of the accumulation, while Lewisham supplies only 3·1. Dr. Mott has now seriously attacked this problem from this restricted point of view. He essayed to get full information as to the forms of insanity and nature of occupation of patients parish by parish, but he was defeated by the want of a universal practised classification among the superintendents. So he had to rely now on general paralysis. We may hope that he will continue some day his inquiry as regards the bearing of occupation, as there seems in that to be some hope of arriving at usable information, since there is but little scope for scientific disagreement in this relation.

The incidence of general paralysis when thus studied parochially is most striking. St. George's, W., heads the list in the males, with a ratio on admissions of 29·0 *per cent.* In the females it is only headed by St. George's, E. (5·9 *per cent.*), and Bermondsey (5·4), having itself 5·2 *per cent.* The two sexes combined have a ratio of 16·3 *per cent.* Bethnal Green, of all places, is the least affected, the ratios being males, 4·8; females, 1·9; total, 3·5. No doubt this question will be further worked up, and lead to some help being given to the study of ætiology when locally considered.

One more extract from the report which is, indeed, rich in interest:

The living nerve-cell has been examined by the ultra-microscope. It presents the picture of a viscid homogeneous colloidal spongio-plasm, containing an enormous number of minute oval or round granules, which appear highly refractile on the dark ground; the nucleus with nucleoli is seen in the centre of the cell, dark and less refractile. When the isotonic medium (cerebro-spinal fluid) is replaced by water an endosmosis takes place and the refractile granules escape; these remain discrete, and exhibit a Brownian movement, but do not coalesce. It is probable that

each granule consists of a colloidal fluid substance surrounded by a delicate membrane of (? lipoidal) substance. No Nissl granules are seen, nor fibrils, but when the cell dies the former appear and the nucleus stains deeply. Staining by Ehrlich's vital methylene-blue *in vitro*, shows that each of these refractile granules in the nerve-cell is surrounded by a membrane which has an affinity for oxygen. It is probable, therefore, that these granules represent an extensive surface of oxidation encompassed in the small space of the living cell.

The results described must be regarded as of a preliminary nature, for, on account of difficulties of technique, and failure with many methods that have been tried, successful results of staining have only quite recently been obtained, although the work has been in progress more than six months, and a large number of animals have been used. The animals were in most cases guinea-pigs, used for the Wassermann reactions.

Statistics.—We are saved the trouble of diving very deeply into the figures contained in the statistical tables themselves by the excellent memorandum drawn up by Mr. Keene. This annual effort cannot fail to be of signal service, its value increasing each year as the various points are elaborated.

The admissions are slightly in excess over those of the preceding year, but still below the average of the preceding five years. The female admissions are relatively fewer, and this fact, coupled with the higher recovery- and death-rates in that sex, leads to a distinct lessening of the female preponderance. From various facts Mr. Keene draws the conclusion that the increase in population is more due to accumulation than occurring insanity.

The combined deaths and recoveries when compared with the total on registers, show for the four years 1890–1893 a ratio of 21·26, as against one of 13·33 for the three years 1910–1912. The fall is regular in gradation, and, therefore, the more alarming. The proportion of first-attack cases among the total direct admissions appears to be fairly constant—roughly, about five-sevenths.

The average age of direct admissions seems to be gradually creeping up, there being a substantial decrease of cases below thirty in both sexes. This must be a subject for congratulation, however it is viewed, more especially if it can be found, in the light of Dr. Mott's figures given above, to have some direct relationship with anticipation.

A table of the last six years' occurrence of insanity in its prominent forms, among the direct admissions, shows that, with exceptions, these forms do not vary much in their occurrence, one year's decrease being balanced by increase in the next, but recent mania shows a constant tendency to decrease, the average of 15·09 in 1907 having given way to one of 12·26 last year, no year showing excess over its predecessor. The exact contrary is found in non-systematised delusional insanity, which has gone up from 5·79 to 10·18, again with no break in direction of progress.

Following on this table is another devised by Mr. Keene, compounded from the Association's Tables B 5, C 3, D 3, and E 2.

It exactly meets the point which for some years we have raised in these pages. The recoveries in particular forms of insanity are contrasted with the admissions under the same form, instead of, as formerly, with the total number of recoveries. Some little margin must be left for inaccuracy arising from change of form during residence.

But, as it stands, this table may be looked upon as giving sufficiently reliable information on the important point of the curability of particular forms, and to be therefore of immense and constantly increasing value. The table does not stop here. The basis, on which averages of happenings can be struck, is contained in three columns—one for those suffering from the diseases, as classified, who were on the register on January 1st, 1908; another, for the admissions from that date to December, 1912; and then a third column of the two previous columns added together, the combination showing the total under treatment for the individual diseases. Thereafter, the columns showing the recoveries during the last five years, the deaths during the same period, and the total residue at December, 1912. On these two sets of columns are founded the averages, these being the average recovery on the five-year admissions, the average recoveries on the total treated for the diseases as classified, and the deaths among the total treated. The arrangement is most ingenious in offering necessary information on several points, and it may well form the stock table for those who will, in large areas, do the great service to science of working out similar information.

Turning first to that disease which affords chances of either speedy recovery or speedy death—acute delirium—we find that the recoveries on the five-year admissions average 39·2 *per cent.*, while the deaths on the total treated for this fell disease average 24·4. On the same plan, general paralysis had a recovery ratio of 1·6, while the deaths were 77·4. Acute mania had 46·1 and 28·5 respectively, recent melancholia 44·3 and 22·3, the recurrent forms of the two diseases each supplying a higher rate of recovery, but a lower death-rate than their relative recent forms. Primary dementia had percentages of 16·4 recoveries and 15·3 deaths. Among the more purely psychical forms, in which death-rates can be discounted as being but little dependent on the mental condition, we find the following recovery rates, some of them surprising: alternating insanity, 26·7; delusional insanity (systematised), 11·2, (non-systematised), 22·2; volitional insanity (impulse), 32·6 (obsession), 43·2 (doubt), 25·0; moral insanity, 13·8. On looking at some of these figures it is impossible not to think that there is serious divergence of opinion as to what is the limitation of symptoms and signs denoting particular forms.

The parallel estimation of recoveries on the five years' admissions with those on total under treatment has an interest of its own, as showing the probabilities of late recovery. We hope next year to reproduce the full table as it stands.

As to *ætiology*, some day we hope that some table will be designed on the same lines, but substituting cause for form of insanity. As Dr. Lord points out, Table C 4 is largely useless, since it only shows the ratio of recoveries with particular causation, when struck on total recoveries, and not on the subjects of that causation. Mr. Keene's method of treating Table C 3 is the only possible way of extracting information of any good from Table C 4. Acquired syphilis seems to be trending upwards, though with a broken course. The same may be said of alcohol and its heredity, in spite of the hopes afforded by preceding decrease. Puberty and adolescence as a cause also shows a substantial increase.

Among the more prominent features of death causation, tuberculosis would appear to be subsiding, being the cause last year in 10·94 of the total deaths. This is well below any of the figures of the last six years, though it did succeed the highest in the same period. The average for the six years is 12·73. It is hoped for and expected that the strenuous attention to treatment by open air and other methods now practised will lessen the rate in time. Occasional spurts of high figures must occur from time to time, but there is a decided tendency the right way. Valvular disease shows curious variations from year to year, for which it would seem difficult to offer any reasonable explanation, but in the related disease, arterio-sclerosis, it is not hard to suggest a reason for the marked rise year by year from 5·32 in 1907 to 11·96 of last year. It is a factor that has been diligently written up year by year, and which no doubt will be found in ever-increasing force. No doubt there are some cases which clinically can be referred specifically to this sole condition, but we think that, as a whole, it simply amounts to a substitution of an easy and comprehensive term for some other equally general conditions with more homely names. It is a condition as old as the hills, but not until recently promoted to be a recognised entity worthy to be assigned as a primary cause of death. Why, then, has it not been so recognised? That there is a good deal in fashion, even in medicine, is the suggestion which is raised by a study of its relative incidence in the contributing asylums. It is also worth noting that it does not appear, either as an entity, or among the other pathological appearances found and set out by Dr. Mott at Claybury.

In the *Engineer's Report* Mr. Clifford-Smith gives the subjoined short account of the new eleventh asylum, which will be of interest.

The design of the asylum differs to a considerable extent from that of the other large institutions on the estate, although of necessity it must follow in some degree the general arrangement common to all. It has several special features, the chief perhaps being that all the buildings for the patients are to be detached. Sixteen of the blocks for patients are connected with the administrative departments and each other by open-sided covered ways, and these form the main asylum and are of two floors in height. The blocks outside the main asylum, with the exception of the admission hospital for recent and acute cases, and the convalescent homes, are of ground floor height only. The admission hospitals provide for fifty-four of each sex, and the villas for convalescing patients for thirty of each sex. In addition to the usual hospital for infectious cases there are to be two 30-bed buildings for the treatment of patients of each sex suffering from phthisis. The phthisis hospitals and the infectious hospital are arranged on the north of the main building and will form a section devoted wholly to the treatment of contagious diseases. In the construction of the buildings reinforced concrete will be used for all upper floors, and these floors will be faced with thick linoleum in place of the usual wooden flooring. Steel is also to be largely used in the construction of the main stores, bakery, laundry, recreation hall, and other large structures, while the coal bunkers and rain-water tank are to be wholly in reinforced concrete.

The asylum will accommodate 2,066 patients in the proportion of 968 females and 1,098 males, with a provision of 30 additional beds for male patients. The latter will become available as the single attendants marry and live out. Six medical officers, a matron and assistant matron, nine female sub-officers, 143 nurses and female servants, four male sub-officers and 109 attendants are also provided for in the buildings. There will also be a residence for the medical superintendent, and houses for the inspector, the foreman engineer, and the fireman.

London: Metropolitan Asylums Board Asylums.—The Board has taken example by the County Council in beginning its report with a statement of its duties. This it combines with some account of the growth of its varied powers and responsibilities. Its origin, of course, came from a desire to save expense by co-operation between the various parishes which constitute and are coterminous with municipal London. The Board consists of members elected by the guardians of the parishes, who are joined by managers appointed by the Local Government Board to the number of one-quarter of the whole body. Its energies have been directed to the "reception and relief of the sick, insane, or infirm or other classes of the poor." Among these have been the mentally defective, who would otherwise have been dealt with by each parish. Such mentally defectives have been confined to those who could be dealt with under the Poor Law, those who had to be dealt with under the Lunacy Law coming under the responsibilities of the County. This was the position at the time of the passing of the Mental Deficiency Act, and it is strictly preserved by the terms of the Act. Thus, hopes entertained elsewhere of having one central local authority for all shades of mental illness have been disappointed. Any change in such a direction would have gone to the root of the Poor-law, involving it in an alteration that would have demanded the most complicated legislation, affording at all stages opportunities for resistance, active and passive. In the case of the Board, it would have been rightly argued that it had already led the way in the treatment and training of juvenile deficiency, while with regard to adults it had provided quite satisfactory institutions. But, all said and done, there is much need for the most friendly co-operation between it and the County. The Education Acts will inevitably provide a point of contact where any failure of co-operation must lead to friction and consequent increase of expense. The border-line between "imbeciles" and "feeble-minded" is vague indeed in practice. In this relation, the withdrawal of senile dements from the scope of the Act is an unmixed blessing. The Board, rightly, in our opinion, claim that those who benefit by its ministrations are not "tainted with pauperism" any more than the inhabitants of county pauper asylums. In the case of fever patients there is special provision to the contrary, while the Mental Deficiency Act provides that disfranchisement shall not result from any form of treatment under the Act. It still remains a blot on the Lunacy Acts that a man, whose wife or child is taken from him by the most expensive disease that can fall on a household, shall go voteless.

The great change, by which Darenth is transformed simply and solely into an industrial colony, is reported to work successfully. The further arrangement by which the care of juvenile defectives passed from the responsibility of the Children's Committee to that of the Asylum Committee appears also to work well and successfully. Incidentally, it may be remarked that the Bridge Industrial Home is the only one left of the several houses of one sort or another which used to receive these unfortunate children. It has become an appanage of Darenth, the same sub-committee managing both, while the medical superintendent of Darenth decides whether applicants for industrial training shall go to one or the other. In time, one would think, the fact of

there being the two places will be of great service in affording means of differentiation in *régime*. Darenth still maintains its name for turning an honest penny by honest labour. It has, as is generally known, suffered the great loss of Dr. Rotherham, to whose genius must be attributed its wonderful progress. He has set the machinery to work, and we can look with confidence to a continuance of its excellent work under any successor. Dr. Rotherham's experience and success in a branch of psychiatry which he has made peculiarly his own, must make him a very welcome addition to the Central Board of Control. A new industry has been introduced at the Bridge Home—that of fruit and vegetable bottling. The results compare favourably with articles obtained at any of the large stores, at an insignificant cost, of course. It is to be largely developed.

The statistics are kept up with the closest adherence to the tables of the Association, and there is much room for congratulation on this head. The benefit of this care may not be apparent at first sight, but it has to be remembered that a true conspectus of the total alienation in London cannot be got solely from the London county asylums for any comparative purposes. That conspectus can only be obtained by adding the statistics of the Metropolitan Asylums Board's institutions to those of the London County Council. We look forward to a scientific and beneficial study of the statistical returns of such a large and definable area as London. Such cannot long be deferred in view of Dr. Mott's beginnings, and one can easily get into error unless all its true components are brought into reckoning. A striking example of this is afforded by the table (B 5) of direct admissions (excluding congenital cases), in which senile dementia is returned as the form of insanity. In the county asylums this was assigned in 5·0 *per cent.* of the direct admissions, while the senile dementia admissions to the Board's institutions was no less than 67·7 *per cent.* The two combined showed a percentage of 13·2. The Commissioners show a percentage average for England during the five years, 1907–1911, of 5·9. The disparity between all England and London in this relation no doubt arises from the fact that the lunatics in workhouses and living with their friends or others form a percentage of total lunatics in England (excluding London) of more than 18, while in London itself the same is less than 2. It is among these workhouse cases that one looks for the greater amount of senile dementia, and in London the workhouse is replaced almost exclusively by the Board's institutions. This is only one point of possible error, but the danger runs through the whole of the points of inquiry.

Northumberland County.—Dr. McDowall laments that the accommodation for the sick and infirm, which was agreed upon, has been held up in view of the Mental Deficiency legislation. The facts we have mentioned when dealing with the Kent reports prove that so much time has been wasted. Some new cottages built for married attendants, with suitable arrangements of service, allow of the men taking every meal at home. Doubtless this must increase their comfort and lessen their expense, seeing that the Committee allow each man £26 *per annum* in lieu of rations, with £2 for laundry.

In reference to the Guildhall Conference, Dr. McDowall tells his Committee some straight things:

> Some earnest men have long laboured to induce county councils and asylum committees to take up the consideration of at least parts of these great subjects, but with most disappointing results on the whole. When one considers the amount of human suffering and the enormous expenditure of money represented by the 135,661 insane persons in England and Wales, it is passing strange that not until now has a really serious effort been made to excite interest in a national danger and to alleviate suffering by increased scientific research. Here and there an earnest man has tried to stimulate the interest of his committee in the medical and scientific aspect of mental diseases, and in diffusing knowledge as to the care and treatment of the insane, but with a few cheering exceptions the response was seldom encouraging; generally it was the reverse, even to hostility. As was made abundantly evident at the Conference, many medical men are highly dissatisfied with medical affairs as they now exist in asylums, and it was explained how successful efforts have been made to increase the facilities at universities for the instruction of medical officers, and thus to enable them to attack by scientific inquiry the numerous problems which come under their daily notice. These facilities for acquiring scientific knowledge are being taken advantage of, and it now rests with asylum committees to offer encouragement to men who are attempting to do something to place the treatment of mental diseases on a scientific basis, and thus to save the people from a danger threatening the public well-being. With a central laboratory employing thoroughly capable men, much would be done to advance knowledge, and medical officers in provincial asylums would be able to conduct lines of inquiry, which in due time would, it is hoped, rival the recent achievements in other branches of medicine and surgery.

Stafford County, Stafford.—The Committee has favoured the idea of the first A.M.O. being a married man if he elects so to be. It has obtained and approved of plans and estimates for a suitable house near the main building. Dr. Christie has found the appointment of an outside stocktaker to be an unqualified success. It brings welcome relief to those who are responsible for the safe and accurate keeping of stores.

Stafford County, Burntwood.—Dr. Spence refers again to the overcrowding of his children's wards on both sides. He has so often complained of this that he is not surprised that the coming of the Mental Deficiency Act is made a reason for further delay. We must confess, however, to feeling that in this instance there may be some excuse for caution, since there must surely be some of the children who would be as capable of training in a proper institution as are the children at Darenth. But this does not excuse the county authority, whether acting by its asylum committee, or by its mental deficiency committee, from taking immediate action to remedy an undoubted wrong. A nurses' home, and cottages for married men have been planned, estimated for, and approved by the County Council, but hung up for the time. Additional benefits have been granted to the staff, for which gratitude is felt. As Dr. Spence says, such things cost money, but the cost of those asylums which "have grasped the nettle" must not be compared invidiously with that of others who have not so far fallen into line.

Stafford County, Cheddleton.—Three women died of appendicitis—an unusual number in asylum practice. One case of enteric occurred. During convalescence an ovarian abscess supervened and proved fatal.

From it a pure cultivation of *B. typhosus* was made. Dr. Menzies has found a Scylla and Charybdis. Old dysentery cases have to be kept warm, and this seems to have a deterrent effect upon relapses in those who have never actually got rid of Flexner infection. But a good number who had both tuberculosis and chronic dysentery suffered a recrudescence of the former on being deprived of open-air treatment, and some died. He writes about nurses:

> Very great difficulty has been experienced during the whole year in finding suitable nurses, and it is a complete mystery to me why mental training is not more popular; the food is far better than in the vast majority of general hospitals, the hours are not longer, a small salary is given instead of a premium being demanded, and the work is far easier and less trying, as well as being more interesting, while the training is so much more thorough than even in the best hospitals that the nurse has ready at hand a profession which for the rest of her life will bring in from two and a half to three and a half guineas per week. Yet we do not secure the pick of those who enter the nursing profession, and the large majority of those who come here leave or are rejected within the first month. The only moral to be gathered is that no efforts should be spared to keep up a high standard of diet and home comfort, and to lower the hours to seventy per week as soon as possible.

All this is undoubtedly true in every particular, from *our* point of view, but unfortunately ignorance and prejudice reign supreme in the classes from which we might look for good nurses, indeed in some classes that should know better. While these exist there will always be a difficulty in attracting the right people. We will venture to add to the moral drawn above, the suggestion that it is the duty of all of us, collectively and individually, to use our best endeavours to abolish the invidious and unmerited differentiation between the general and the asylum nurses.

Looking at the county as a whole, one is struck by one or two matters. There appears to be an inordinate amount of epilepsy in Staffordshire. Comparing the total population of the three asylums on December 31st with the total number of epileptics at that date, we find a ratio of 16·1 as against the ratio, for all county and borough asylums, of 12·7. No other county reaches this proportion, though one asylum, in the group of counties having more than one asylum, approaches it. Among the boroughs it is topped by Newport, West Ham, and York. In view of the close connection between epilepsy and insanity, it would appear that this excess in certain areas would repay special investigation. Tuberculosis lays a heavy hand on all three asylums, in two out of the three the tuberculosis death-rate on residence at the end of the year being double that of the average ratio of the asylums compared. The Stafford asylum heads the list of all England. This fact would not seem to be necessarily due to the advanced age of the structure, as has been at times alleged, for Cheddleton, one of the more recently built institutions, presses the former very hard, and Burntwood, of middle age, is not far behind. It would, therefore, seem that Stafford has an undue tendency to tuberculosis; whether that tendency has any ætiological relation to insanity or not would also be a subject for interesting inquiry. We have often before adverted to the remarkable combination of various trades, callings and occupations to be found in this county—agriculture, ironwork, mining, pottery, railways, engineering, and so forth.

These all afford some means of comparison as to the relative connection with mental disease, and altogether we think that this county would be a happy hunting-ground for an enthusiastic inquirer. The broad facts are that the county, as represented by the admissions into the asylums, has less male and more female heredity of insanity, less female but more male syphilitic disease, more male alcoholism and less female, all in comparison with the general averages of England and Wales. In no particular does Stafford depart very far from those averages.

Some Registered Hospitals.

Barnwood.—Dr. Soutar records a case of recovery in a lady who had been subject to maniacal excitement, fixed delusions, and faulty habits, after six years' treatment. He contrasts that with another case of melancholia, who had the same good fortune after even a longer period of treatment. He frankly confesses that he does not know why the former got well, but in the latter he always had hopes, as, to his knowledge, toxæmia played a large part in her illness, and there was the chance of correcting faulty metabolism. A definite line of treatment, varied in detail from time to time, and continued for a long time, overcame the fault.

We know so little of the origin and of the nature of those autogenic poisons that, in the treatment of many of our cases, much valuable time is undoubtedly lost. Sometimes we grope to success through a series of futile efforts—making attacks, more or less at haphazard, first on one and then on another possible source of poison production. Sometimes our line of action is clear, as in the case of a lady who quickly recovered last year after an offensive discharge from her gums (pyorrhœa alveolaris) had been cured, but clinicians will know how to treat many of these cases with efficiency and celerity only when skilled investigators have given us the results of extensive and difficult research into the causation of mental disorders—a work which is sadly hampered in this country by inadequate financial support.

Bethlem.—The following extract from Dr. Stoddart's report is important:

A close investigation of the ætiological factors of the insanities has induced me to agree with Prof. Freud of Vienna in his dictum that sexual "complexes" and "conflicts" play an enormous *rôle* in the causation of the constitutional psychoses which form the bulk of the cases we have to treat at Bethlem, although I was inclined, when this eminent physician's papers first appeared, to be somewhat sceptical and to ascribe his discoveries to differences between continental temperaments and our own. At the same time we have to realise that the aforesaid "complexes" and "conflicts" are effective only in patients who have a neuropathic constitution, usually due to neuropathic heredity.

Another extract conveys in a characteristically modest manner news which ought to have been of wide world interest. It has, however, hitherto escaped that attention which it undoubtedly deserves. We offer Dr. Stoddart our cordial congratulations.

It is gratifying to note that three cases of undoubted general paralysis made a satisfactory recovery. One of these, who was discharged in January, 1912, I have just seen and examined again, and find that his health remains excellent and that he is managing a large engineering firm in a capable manner.

We feel sure that such a learned and conscientious thinker having safeguarded his diagnosis of general paralysis with absolutely satisfac-

tory Wassermann and such-like tests, has in some sure manner excluded the possibility of the symptoms being in remission before he made his very definite statement. Up to now it had been thought impossible to secure the admission of antibodies to the areas in the brain which are unquestionably affected in this disease, there being apparently both physiological and anatomical difficulties in the way which seemed insurmountable. There will, no doubt, be a wide-spread desire to know how this has been effected. There have been signs and symptoms in the air for some time of the advent of a cure for general paralysis and a distinct feeling of hopefulness in the minds of more than one distinguished worker in this important field. But, of course, it may be that Dr. Stoddart means only a satisfactory recovery *according to law*, the necessity for detention having receded.

In the same paragraph Dr. Stoddart also reports the complete recovery of five cases of dementia præcox, "which is usually regarded as an incurable disease." Our soul again is troubled over this importation from foreign parts. We have dealt in Dr. Lord's report with the curability or incurability of dementia, and now wish to deal with the condition denoted by the compound term. If it is to be deemed to be incurable there must be a far greater difference between dementia præcox and adolescent insanity than was contemplated during the memorable debate a year or two ago. Sir Thomas Clouston proved that his cases of adolescent insanity were eminently curable, especially in the exalted form. Kraepelin holds that the possibility of recovery "answering to the strict demands of science is very doubtful, if not impossible to decide. But improvements are not as unusual, which in practice may be considered equivalent of cures." We are still labouring under the great disadvantage of not having any pigeon-hole in our classification into which cases can be placed. In consequence we speak with two tongues about this "symptom-complex." We note that Dr. Soutar speaks in an equally hopeless tone of the incurability of the disease, which, we fear, can never be adequately delimited as it should be before it can be deemed fit to foretell the future by its name alone.

Bootham Park.—Graceful remarks about the retirement of Dr. Hitchcock, after many years of work here, are made by the Committee and by his successor, Dr. Jeffreys. Dr. Hitchcock attended fairly constantly at the Association's meetings, and took much interest in the work of the Parliamentary Committee on behalf of Registered Hospitals. It was during his reign that the old hospital in York, which had a not very satisfactory history in ancient times, was closed, the present efficient institution taking its place.

We note that a case of mania, æt. 91, recovered after four months' treatment.

The Retreat, York.—Dr. Bedford Pierce records a bequest of £1,500 from a former lady patient for the poorest patients, to accord them additional and longer changes of air and visits to the seaside or elsewhere. The lady had felt herself the benefit of these changes so much that her thought was to promote the happiness of others who could not otherwise enjoy the trips. In dealing with this and other similar

bequests and donations, Dr. Pierce points out that if it were not for this kind of aid the finances of the institution might be threatened, in face of the ever-growing expense of maintenance. He relates that one lady was admitted at the age of 90, which he thinks to be a record; but he is beaten by the sister institution, as shown above. He has also a lady, æt. 94, who can be seen any day walking about the grounds unattended, and yet two others over 90, one being 95. Taken altogether, the hospitals in York seem to be healthy enough. Dr. Pierce is insistent on the benefits arising from giving patients, whose progress is arrested, a change to another institution. Wonders undoubtedly do occur from fresh environment. It would seem that it would be quite easy to try the experiment in his own county asylums, transfer between which would not entail the official trouble that would arise between county and county. He would much wish to see the provisions for the treatment of incipient insanity being carried out, and he would extend them especially to the poorer classes, who can never afford to have their sick relatives treated, except as *certified* inmates. The idea of such treatment was pressed hard on and accepted by the then Lord Chancellor (Lord Halsbury) at the instance of the Association. No doubt it will form an important plank in the Association's platform when lunacy legislation is about.

The Warneford, Oxford.—In dealing with heredity Dr. Neil rightly says that the truth, which is often concealed, is also often revealed in the temperament of the relatives when they visit the institution, and recalls a remark of Dr. Maudsley's that the insanity of the child is the pathological evolution of the parent's nature.

The following note may be useful in those cases, which sometimes trouble one, where there is any doubt as to the nature of an attendant's "employment," when associated with the recreation of patients and staff:

> In the month of August an attendant suffered fracture of the patella while taking part in a competition of athletic sports which had been got up for the joint amusement of the patients and staff. It was considered that he was in the discharge of his duty, as an attendant, when the accident took place. He was seen by the consulting surgeon, and removed to the Radcliffe Infirmary for treatment, He returned to duty after a period of total disablement of three months. During his absence he was paid his full wages, and the asylum received from the insurance company the compensation to which he was entitled under the Workmen's Compensation Act, the amount of the compensation being less than his wages.

Some Scottish District Asylums.

Aberdeen, Kingseat.—This asylum, opened less than ten years ago, is crying out for enlargement. It had, however, been foreseen that such would occur when the asylum was built. As Dr. Alexander points out, the type of institution makes it somewhat difficult to say how enlargement can be best carried out, there being all the questions incident to classification to consider. The hospital section particularly is needing enlargement, and a new closed villa for males is wanted. We note that fifty cases are boarded out, this system having staved off, without doubt, the need for increase in accommodation.