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of Great Britain and Ireland).*

EDITED BY

D. HACK TUKE, M.D.,
GEO. H. SAVAGE, M.D.

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

FRANCIS BACON, *Proleg. Instaurat. Mag.*

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

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1886. Godding, Dr., Medical Superintendent, Government Hospital for Insane, Washington, U.S. (*Hon. Member.*)
1889. Goodall, Edwin, M.D., M.S.Lond., M.P.C., West Riding Asylum, Wakefield.
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1888. Graham, T., M.D. Glas., Medical Officer, Abbey Parochial Asylum, Paisley.
1887. Graham, W., M.B., Med. Supt., District Asylum, Armagh.
1890. Gramshaw, Fabrace Sydney, L.K.Q.C.P.Irel., L.R.C.S. Edin., L.M., L.A.H. Dub., The Villa, Stillington, Yorkshire.
1891. Greatbatch, Herbert W., M.B., C.M. Edin., Jun. Assist. Med. Officer, Montrose Royal Asylum.
1886. Greenlees, T. Duncan, M.B., Medical Superintendent to the Grahamstown Asylum, Cape of Good Hope.
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1863. Howden, James C., M.D. Edin., Medical Superintendent, Montrose Royal Lunatic Asylum, Sunnyside, Montrose.
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1898. Hyslop, Theo. B., M.B., C.M. Edin., M.P.C., Asst. Med. Officer, Bethlem Royal Hospital, S.E.
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1899. Kowalewsky, Professor Paul, Kharkoff, Russia. (*Corresponding Member.*)
1891. Krafft-Ebing, R. v., M.D., Vienna. (*Hon. Member.*)
1866. Laehr, H., M.D., Schweizer Hof, bei Berlin, Editor of the "Zeitschrift für Psychiatrie." (*Hon. Member.*)
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1858. Lewis, Henry, M.D. Bruss., M.R.C.S. Eng., L.S.A., late Assistant Medical Officer, County Asylum, Chester; West Terrace, Folkestone, Kent.
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 1884. Macdonald, P. W., M.D., C.M., Med. Supt., County Asylum, near Dorchester, Dorset.
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 1891. Mackenzie, Henry J., M.B., C.M.Edin., M.P.C., Junior Assistant Medical Officer, Camberwell House Asylum, Peckham Road, London, S.E.
 1886. Mackenzie, J. Cumming, M.B., C.M. M.P.C. County Asylum, Morpeth.
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 1888. McAlister, William, M.B., C.M., Struan Villas, Kilmarnock.
 1886. McCreery, James Vernon, L.R.C.S.I., Medical Superintendent, New Lunatic Asylum, Melbourne, Australia.
 1870. McDowall, T. W., M.D. Edin., L.R.C.S.E., Medical Superintendent, Northumberland County Asylum, Morpeth.
 1876. McDowall, John Greig, M.B. Edin., Medical Superintendent, West Riding Asylum, Menston, near Leeds.
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 1886. Macpherson, John, M.B., M.P.C., Medical Superintendent, Stirling Asylum, Larbert.
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 1871. Merrick, A. S., M.D. Qu. Uni. Irel., L.R.C.S. Edin., Medical Superintendent, District Asylum, Belfast, Ireland.
 1867. Meyer, Ludwig, M.D., University of Göttingen. (*Hon. Member.*)
 1871. Mickie, Wm Julius, M.D., F.R.C.P. Lond., Med. Superintendent, Grove Hall Asylum, Bow, London.
 1867. Mickley, George, M.A., M.B. Cantab., Medical Superintendent, St. Luke's Hospital, Old Street, London, E.C.
 1881. Miersejewski, Prof. J., Medico-Chirurgical Academy, St. Petersburg. (*Hon. Member.*)
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 1887. Miller, Alfred, M.B. and B.C.Dub., Medical Superintendent, Hatton Asylum, Warwick.

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1885. Moore, E. E., M.B. Dub., M.P.C., Medical Superintendent, District Lunatic Asylum, Letterkeney, Ireland.
1891. Moore, George, J.P. M.D., M.R.C.S., Medical Superintendent, Jersey Lunatic Asylum.
1882. Moore, W. D., M.D., Alresford, Hants.
1886. Morel, M. Jules, M.D., Hospice Guislain, Ghent. (*Corresponding Member.*)
1880. Motet, M., 161, Rue de Charonne, Paris. (*Hon. Member.*)
1862. Mould, George W., M.R.C.S. Eng., Medical Superintendent, Royal Lunatic Hospital, Cheshire, Manchester. (*PRESIDENT, 1880.*)
1869. Moynan, Wm. Arthur, M.D. and M.Ch.I., Resident Med. Officer, Wyke House, Leleworth, London.
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1878. Murray, Henry G., L.K.Q.C.P. Irel., L.M., L.R.C.S.I., Assist. Med. Off., Prestwich Asylum, Manchester.
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1886. Myles, William Zachary, L.F.P.S., Med. Supt., District Asylum, Kilkenny.
1890. Nash, Vincent, L.K.Q.C.P., Assistant Medical Officer, Richmond District Asylum, Dublin.
1859. Needham, Frederick, M.D. St. And., M.R.C.P. Edin., M.R.C.S. Eng., late Medical Superintendent, Hospital for the Insane, Bootham, York; Barnwood House, Gloucester. (*PRESIDENT, 1887.*)
1890. Neil, James, M.D., M.P.C., Asst. Med. Officer, Warneford Asylum, Oxford.
1875. Newington, Alexander, M.B. Camb., M.R.C.S. Eng., Woodlands, Ticehurst.
1873. Newington, H. Hayes, M.R.C.P. Edin., M.B.C.S. Eng., Ticehurst, Sussex. (*PRESIDENT, 1889.*)
1881. Newth, A. H., M.D., Haywards Heath, Sussex.
1873. Nicholson, William Norris, Esq., Lord Chancellor's Visitor of Lunatics, New Law Courts, Strand, W.C. (*Hon. Member.*)
1879. Nicholson, W. B., M.R.C.S., Assistant Medical Officer, North Riding Asylum, Clifton, York.
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- 1872. Patton, Alex., M.B., Resident Medical Superintendent, Farnham House, Finglas, Co. Dublin.
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- 1889. Peacock, Dr., L.R.C.P. and L.M. Edin., M.R.C.S. and L.S.A., Lond., Resident Medical Officer and Proprietor, Ashwood House, Kingswinford, Dudley, Staffordshire.
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- 1873. Pitman, Sir Henry A., M.D. Cantab., F.R.C.P. Lond., Registrar of the Royal College of Physicians, Enfield, Middlesex. (*Hon. Member.*)
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- 1889. Raw, Nathan., M.D., M.P.C., Infirmary and Dispensary, Bolton.
- 1890. Régis, Dr. E., Castel D'Andorte, Beusca, près Bordeaux. (*Corresponding Member.*)
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- 1889. Richards, Joseph Peeke, M.R.C.S., L.S.A., Medical Superintendent, Female Department, Hanwell Asylum, W.
- 1869. Richardson, B. W., M.D. St. And., F.R.S., 25, Manchester Square, W. (*Hon. Member.*)
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- 1890. Ritti, Dr. J. M., Maison Nationale de Charenton, St. Maurice, Seine, France. (*Corresponding Member.*)
- 1871. Robertson, Alexander, M.D. Edin., 16, Newton Terrace, Glasgow.
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- 1887. Robertson, G. M., M.B., C.M., M.P.C., Assistant Med. Off., Royal Asylum, Morningside, Edinburgh.

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1859. Rogers, Thomas Lawes, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., 9, Shooter's Hill Road, Blackheath. (PRESIDENT, 1874.)
1879. Ronaldson, J. B., L.R.C.P. Edin., Medical Officer, District Asylum, Haddington.
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1860. Rorie, James, M.D. Edin., L.R.C.S. Edin., Medical Superintendent, Royal Asylum, Dundee. (*Late Hon. Secretary for Scotland.*)
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1866. Rutherford, James, M.D. Edin., F.R.C.P. Edin., F.F.P.S. Glasgow, Physician Superintendent, Crichton Royal Institution, Dumfries. (*Hon. Secretary for Scotland, 1876-86.*)
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1862. Schofield, Frank, M.D. St. And., M.R.C.S., Medical Supt., Camberwell House, Camberwell.
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EDITED BY

D. HACK TUKE, M.D.,
GEO. H. SAVAGE, M.D.

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

FRANCIS BACON, *Proleg. Instaurat. Mag.*

JANUARY, 1891.

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MDCCCXCI.

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THE JOURNAL OF MENTAL SCIENCE.

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No. 156. NEW SERIES,
No. 120. JANUARY, 1891. VOL. XXXVII.

PART 1.—ORIGINAL ARTICLES.

*On Present Physiological Theories of Epilepsy, à propos of the doctrines of Dr. Hughlings Jackson.** By Dr. JULES CHRISTIAN, Physician to the National Hospital, Charenton. (Translated by Dr. T. W. McDOWALL, Medical Superintendent of the County Asylum, Morpeth).

I.

There are questions upon which the sagacity and ingenuity of observers have been vainly exercised since the beginning of time. They remain for examination, waiting a definite solution, which may never be discovered. Such is the question of the nature of epilepsy.

The ancients had a very simple idea of this disease; a demon (according to others, a god) disturbed the patient, and produced the disordered movements which terrified those present.

This idea became modified later, and assumed a more scientific form: the *animal spirits* played the part at first attributed to a devil, and inquiry became limited to efforts to discover the causes which could so profoundly disturb the normal exercise of these spirits.

Thus system succeeded system, each offering its explanation, which only lasted as long as the system itself.

I need not disturb all this ancient dust. Nowadays we profess to proceed by scientific methods; to take as a basis of our speculations certain facts, experimentally demonstrated. Therefore I will discuss physiological theories of epilepsy, properly so-called, by beginning with the earliest, that of Marshall Hall.†

* See *Lumleian Lectures*, 1890.

† See T. Falret, *Théories Physiologiques de l'Epilepsie*; in "Archives général de Médecine," February to May, 1862.

Marshall Hall places the seat of epilepsy in the medulla oblongata. Thoroughly to understand his system, it is necessary to remember that this medulla oblongata, the seat of reflex or excito-motor movements, possesses the power of receiving impressions conveyed by centripetal conductors (the sensory nerves), and also of transferring them to the muscular system, by means of centrifugal conductors (motor nerves). If the medulla oblongata, morbidly excited, experiences a stimulus either from the brain or periphery, the stimulus will be abnormally transmitted to the muscular apparatus, and produce reflex movements, more or less irregular, more or less violent.

Such is, in few words, the theory of Marshall Hall. It presupposes two elements: 1st, the morbid excitability of the medulla oblongata; 2nd, an occasional cause, starting in some part of the nervous system, and bringing this excitability into play.

This fundamental idea is supplemented by secondary explanations of the different phases of the attacks. Marshall Hall considers that the first symptom is spasm of the muscles of the face, larynx, and thorax: that is to say, the muscles supplied by the nerves proceeding directly from the medulla (trigeminus, hypoglossal, spinal and pneumo-gastric); it necessarily follows that the attack begins by *laryngismus*, and *trachelismus*. Therefore we have as an immediate consequence the occlusion of the glottis, spasm of the respiratory muscles, imminent asphyxia, and as a remote result, stasis of the cerebral circulation, leading to loss of consciousness.

It was by this method of reasoning that Marshall Hall came to advise the performing of tracheotomy to cut short epileptic fits and to remove their dangers! I do not know of more lamentable conclusions from a preconceived idea.

Brown Séquard accepted generally Marshall Hall's theory. He also attached most importance to the excito-motor powers of the medulla. He offered a different explanation of the symptoms. He did not admit that the loss of consciousness was due to spasm of the respiratory muscles and consequent stasis of the cerebral circulation. He regarded that as the initial phenomenon, and profiting by the then recent discovery of Claude Bernard, he very ingeniously explained the loss of consciousness and the facial pallor by the sudden contraction of the cerebral vessels, due to stimulation of the vaso-motor fibres supplying them.

According to this hypothesis, the stimulated reflex centre acts at once on the vaso-motor nerves, and the loss of consciousness is brought about, not by congestion of the brain, but by anæmia instantaneously caused by contraction of the vessels. Brown Séquard has developed this theory with remarkable ability in a large number of papers, and has supported it by most ingenious experiments. Accordingly it was generally received until 1870, when the question assumed another aspect.

It was at this time that Fritsch and Hitzig published their first researches upon the motor centres of the brain. They demonstrated that mechanical irritation of certain regions of the cerebral cortex caused convulsions similar to those of epilepsy. This discovery upset all that was hitherto known of the functions of the brain: the most eminent physiologists had unanimously held that the brain was functionally homogeneous, and that stimulation of its surface or deeper parts was never followed by any motor reaction.

The experiments of Ferrier, of King's College, were not long in confirming these discoveries of the German physicians. They were the starting point of a crowd of works and observations,* of which I can only notice those which directly affect my subject.

It was proved experimentally that certain convulsive affections resembling epilepsy have a cerebral origin, and have their starting-point distinctly localized in a limited region of the cerebral cortex. Thus mechanical irritation (especially electrical) of certain cortical regions are indicated, either by limited attacks (monospasms, hemispasms), or by symmetrical generalized attacks, exactly similar to those observed in the various forms of epilepsy.†

Thus, without depriving the medulla of the function attributed to it by Marshall Hall and Brown Séquard, it is clearly established that this function does not belong to it exclusively, that it alone has not the exclusive power of provoking epileptic convulsions. The question immediately arises: is there a difference between convulsions of cortical

* François Franck, "Leçons sur les fonctions motrices du cerveau, et sur l'Épilepsie cérébrale," Paris, 1887.

† I do not examine the questions whether it is the cerebral cortex itself which is excitable, or whether it is simply traversed by the currents whose action is thus limited to the genuinely excitable nervous elements of the white matter. This is the objection urged by many physiologists, Vulpian among others, against the experiments of Fritsch, Hitzig, Ferrier, and others. From my point of view, this question can only be of secondary importance.

origin and medullary origin, and why sometimes the former, sometimes the latter, are produced?

This is the problem attempted to be solved in the *Lumleian Lectures* of this year by a physiologist well known for his works on cerebral localization—Hughlings Jackson.

According to this author, a recognized authority in cerebral pathology, the central nervous system is composed of three super-imposed levels, representing degrees of evolution more and more advanced; each of these levels includes a set of cerebral convulsions.

The *lower level*, formed by the spinal cord, the medulla, and pons, represents the simplest movements of all parts of the body; there the ponto-bulbar convulsions originate. To this lower level belong also the cerebellum and part of the brain—at least, the posterior region of the latter.

The *middle level*, which is concerned with epileptic convulsions, is constituted by the Rolandic region of the cerebral cortex and by the ganglia of the corpus striatum.

Finally, the *superior level*, formed by the centres of the prefrontal lobes, and consequently including the highest motor centres, presides over epilepsy, properly so called.

These three levels are all sensori-motor, and in each of them convulsions are produced by the same mechanism.

Such is, in few words, the anatomical classification of Hughlings Jackson, to which belongs a corresponding classification of convulsions. Those constitute genuine epilepsy only when they are of cerebral origin—when they originate in the highest level.

But the author goes further, and, having thus classified convulsions according to their origin, he attempts to explain the mechanism of the convulsion, and this is, if I am not mistaken, the important part of the memoir which I am analyzing.*

We know that Schroeder van der Kolck, wishing to convey an idea of the epileptic attack, was the first to compare the nerve centre to a Leyden jar, the convulsion to the discharge of the jar.

Hughlings Jackson adopts and develops this idea. He starts with this principle—that all nervous phenomena are due to a *nervous discharge*, that is, a *liberation of the energy of the nervous elements*; this discharge occurs in all healthy

* I believe I have caught the author's meaning; at the same time, I should state that I have seen Hughlings Jackson's work as a translation only.

operations ; when it is produced in an abnormal way there is a *discharge by explosion* (explosive discharge), and, as a result, *convulsion*.

Thus, in epilepsy, convulsion indicates that there exists a certain pathological instability in certain cortical cells, whatever may be the lesion which causes this instability. This may be the direct result of a disorder of nutrition, perhaps due to a stagnation of the nutrient fluids which bathe the cells. An increased nitrogenization of the substance of the nerve-cells would occur ; the cell-substance would become explosive almost like glycerine when one part of its hydrogen is replaced by nitric peroxide.

The epileptic attack is produced in the following way :— The cells of the prefrontal lobes, charged with explosive material, do, on receiving some outside stimulation, immediately discharge, and there is a convulsion. The discharge does not occur simultaneously in the whole prefrontal region ; it begins in some point in one of the corresponding halves of the brain (which is naturally composed of a right and a left half), and one after the other, like a train of gunpowder, the discharge occurs in the different groups of cells by means of the nerve-fibres. Without dwelling further on it, we understand how, according as the discharges are confined to one half of the disturbed level or extend to both halves, we shall have the convulsions limited to one side of the body or generalized. Speaking generally, we may say the more intense the *discharge*, or, if one prefers it, the *explosion*, the more numerous will be the groups of muscles affected.*

It may be well to remember that Gowers has adopted an almost identical explanation.† According to him, *the muscular spasm*, constituting the most prominent feature of the epileptic attack, ought to be considered as the result of the sudden and violent action of nerve cells, that is to say, the *discharge* of the grey substance. He considers each nerve cell as a magazine of latent energy, similar to a Leyden jar charged with electricity, or, rather, to a *tense spring*. Normally, nerve force is restrained by a power of resistance which prevents it manifesting itself. Let the resist-

* Having observed how frequently the attacks begin in the hand, Hughlings Jackson formulated the law that the spasm generally begin in the small muscles, represented, as he thinks, by small cells ; these would be less stable than the large.

† Gowers on Epilepsy and other Chronic Convulsive Diseases, Trans. by Canier, Paris, 1883.

ance diminish from any cause, immediately the nerve force, till then held in check, is liberated, and manifests itself by convulsions.*

II.

It is quite evident that the idea of *discharge, explosion*, in connection with convulsion, must be seductive, for from Schroeder van der Kolk to Hughlings Jackson and Gowers it has been advocated by many eminent observers. Is it possible, however, to regard it otherwise than as a hypothesis? Is it allowable to compare the nerve cell to a Leyden jar? Hitherto everything seems to show that there is no identity between the nervous and the electric fluid; besides, if the nerve cell does become charged with electricity or some analogous fluid, where does it originate?

The hypothesis of an explosive material in the cerebral cells appears to me still more doubtful, for until this *nitrogenous* material is separated—until its existence has been placed beyond doubt by rigorous analysis—I do not think we are justified in attributing to it any part in the mechanism of a convulsion. It appears to me very hard to admit that our groups of cerebral cells should be likened to collections of microscopic grains of explosive powder, or to minute bombs charged with dynamite exploding, without noise it is true, on the least shock.

It should be noticed, and in my opinion this point of view has been too much neglected, that in the convulsions we study we almost exclusively regard voluntary muscles. It will be granted that between the muscular contraction which I determine by my will, and that which is produced in the same muscle without my knowledge, without my intervention, there is not, there cannot be, any essential difference. If, then, there is an explosion in the second case, we must suppose that there is an explosion in voluntary contraction. An explanation is required why we are sometimes capable of regulating as we like (within certain limits) the duration, the intensity, the extent of our muscular contractions, whilst during convulsions all are beyond our will. Does not this alone seem to indicate that the essential phenomenon of our attack is to be found elsewhere?

By way of recapitulation on this point, I will say that if by "*nervous discharge*" we imply the "*simple liberation of*

* This is the explanation of convulsions following great losses of blood: the consecutive anæmia has the effect of diminishing the normal resistance.

energy of nerve elements”—and this is the meaning Spencer gives to it—then we simply express, in language more or less scientific, a fact whose mechanism has completely escaped us. Such words mask our ignorance, offer an explanation which explains nothing.

When we say that the cell of the mucous membrane of the stomach possesses in itself the power of digesting, and that this power is evidenced whenever the special physiological stimulus, that is food, comes in contact with that cell, we state a fact, nothing more; we explain nothing. So with our nerve cell, spinal or cerebral; it also has a functional potentiality. When it is excited physiologically or pathologically, a current is established, which, starting from the cell, traverses the motor nerve, and terminates in muscle; then the muscle contracts immediately.

That is all we know, all we can say; and Molière's physician was as learned as we when he said that “opium makes people sleep because it has a soporific power.” We are no further on now.

But, if it appears to be wise not to discuss further the inmost, the intra-cellular mechanism of a convulsion, there are other points of the theory of epilepsy which we may discuss with more benefit.

Nobody really doubts that epilepsy is a disease of the brain; upon that all are agreed, but no one has been able to determine with any precision the part of the organ affected, nor the nature of the lesion which produces the disease. All the researches of pathological anatomy have hitherto been at variance.*

Hughlings Jackson examines this part of the problem in an original manner. Dividing the brain into three layers, superimposed, as we have already seen, he views as *epileptic* only those convulsions which arise in the highest, exclusively cerebral, level. It is from the prefrontal centres that epileptic convulsions start.

From the middle level, from centres in the cortex, irradiate *epileptiform* convulsions.

* Sclerosis of the cornua Ammonis, first pointed out by Meynert, and demonstrated by other observers, has also been denied by many pathologists. It, however, appears to be of real importance in true epilepsy. One of my distinguished colleagues, Dr. Chaslin, physician to the Bicêtre, has found in a certain number of cerebral epileptics alteration of the cornua Ammonis, combined with diffuse sclerosis of the cerebral cortex. These results have been communicated to the Société de Biologie (March, 1890), and will serve as the beginning of a more complete and elaborate work.

I would like to ask the author what difference he considers really exists between an epileptic and an epileptiform convulsion. I will simply say that clinical experience does not justify his conclusion. It is not possible, given a convulsion, to decide, from its origin alone, whether it is or is not epileptic. The reason is very simple.

When we observe an epileptic we see occur indifferently complete attacks with generalized spasms of the muscles, or incomplete attacks, in which one or more groups of muscles are convulsed. It is evident that these convulsions proceed, the first from the higher level, the second from the middle or the inferior level; nevertheless, they are all equally, and for the same reason, *epileptic*. But what gives to a convulsion, I may even say to any symptomatic manifestation, its epileptic character is quite another thing, and this is what remains for me to prove.

The chief objection which I urge, not only against Hughlings Jackson, but against all the authors whose theories I have examined—Marshall Hall, Brown Séquard, and Gowers—is that of seeing in epilepsy only the convulsion.

But *convulsion is not the pathognomonic sign of epilepsy*: it may be absent—it is absent in a great number of cases. Even in the fundamental manifestations of epilepsy the *grand mal*, *vertigo*, and *momentary unconsciousness*, one alone is convulsive, the first. In vertigo, in “absence,” there is no convulsion.

It is therefore absolutely necessary to exclude convulsion in attempting to define epilepsy. The essential sign of the disease is somewhere else; it is in the *loss of consciousness*, sudden and absolute, which accompanies all epileptic manifestations, and without which there is no epilepsy.

Whatever may be the extent and intensity of the convulsions in a patient, whatever muscles may be affected, it will not be epilepsy unless, at the same time, there is loss of consciousness. So also, however slight the muscular spasm may be, it must be considered epileptic, if it occurs during this complete eclipse of the Ego.*

If this is so; if the essential characteristic of an epileptic attack is its suddenness, its complete, instantaneous abolition of intelligence and sensibility; if the convulsion is nothing more than an accessory, accidental element, is it not evident that the seat of the disease must be looked for, not in the

* See, on this subject, my book: “Epilepsie, folie épileptique,” Paris, 1890.

organs which produce movement, but rather in those where intelligence and sensibility have their seat?

Thus we localize epilepsy in the anterior part of the cerebral hemispheres,* where we are agreed to locate the higher faculties, which are suddenly and instantaneously abolished. According as the epileptic insultus remains in this region of the hemispheres, or, on the contrary, as it extends to neighbouring cerebral regions, we observe one or other of these manifestations, types of epilepsy.

In "*absence*" there is no propagation, the only area affected is the region of the hemispheres; the disease ends there.

In the "*grand mal*," on the contrary, the disturbance extends to organs which preside over movements, to the medulla, to psycho-motor centres, etc. The extent of the convulsive phenomena (varieties of the *grand mal*, incomplete attacks, etc.), varies according to the number of the centres secondarily affected.

Finally, in *vertigo*, the phenomena are, as in somnambulism, as in certain conditions of dreaming, or of alcoholic intoxication, as they manifest themselves when we remove the cerebral hemispheres from an animal; it is the locomotor centres of the spinal cord which come into action, and execute, without the control of the brain, the more or less complicated movements they are accustomed to.

This is another proof, we may say in passing, that the regulating centres situate in the brain participate in the sleep in which the organs of intelligence and sensibility are plunged. †

In a word, and I cannot repeat it too often, it is the brain which is primarily and essentially affected, the motor disturbances are only subsequent and secondary.

Shall I attempt to proceed further, and say something of the mechanism of those obscure phenomena? Certainly it would never strike me to attribute this sudden annihilation of all the properties of the cerebral cell to an *explosion*. In it I see rather a kind of shock, like what is produced by a sudden blow on the head, and, indeed, in the symptoms

* It is evident that my conclusions are identical with those of Hughlings Jackson, who places the origin of epileptic attacks in the prefrontal lobes, but I arrive at this conclusion by different reasoning.

† In the hypothesis of the tense spring of Gowers the sleep of the controlling centres explains the relaxation.

following cranial injuries there is a striking analogy to certain phenomena of epilepsy.*

But here I will stop; I will carefully avoid attempting to explain this.

There are in our, as in all sciences, a crowd of questions to which we can give but one answer: *we do not know.*† We must content ourselves by observing, studying, comparing. Let us, as little as possible, seek to explain. To anyone asking my opinion as to the approximate cause of epilepsy, I would reply, *I do not know.*

Ethics as applied to Criminology. By DR. ARTHUR
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The relation of criminality to the other forms of pathological and abnormal humanity is one of degree. If we represent the highest degree, as crime, by A⁶, A⁵, say, would stand for insane criminality, and A⁴ for alcoholism, perhaps, A³ for pauperism, A² for those weak forms of humanity that charity treats more especially, and A for the idea of wrong in general, particularly in its lightest forms. Thus, crime is the most exaggerated form of wrong; but these forms are all one in essence. A drop of water is as much water as is an ocean.

It is difficult to draw a distinct line between these different forms of wrong. This will become evident from the fact that they are dovetailed one into the other. Thus, when cross-questioning criminals, one often feels that not only are their minds weak and wavering, but that they border close on insanity. The same feeling arises after an examination of confirmed paupers. Here alcoholism is one of the main causes; the individual, on account of his intemperate habits, finds difficulty in obtaining employment, and this forced idleness gradually, from repetition, develops into a confirmed habit. Pauperism may be, in some cases, hereditary, but it is too often overlooked that the children of paupers can acquire all such habits from their parents, and so it can be

* It is well known that Westphal rendered guinea pigs epileptic by blows on the head with a hammer.

† These ideas have been developed with great ability by an illustrious savant, M. Bertrand, perpetual Secretary of the Academy of Science, in one of his last academical addresses.

carried from one generation to another, without resorting to heredity as a cause, which is too often a name to cover up our ignorance of all the early conditions. The extent to which alcoholism is involved in all forms of humanitarian pathology is well known; it is often indirectly as well as directly the cause of leading the young into crime; the intemperate father makes himself a pest in his own home; the children remain out all night through fear; this habit leads to running away for a longer time. Although not thieves, the children are compelled to steal, or to beg, in order to live; and thus many become confirmed criminals or paupers, or both. The great evil about alcoholism is that it too often injures those around, who are of much more value than the alcoholic himself. It makes itself felt indirectly and directly in our hospitals, insane asylums, orphan asylums, and charitable institutions in general. However low the trade of the prostitute may be, alcohol is her greatest physical enemy.

As just indicated, some of the lesser degrees of abnormal and pathological humanity may be considered under the head of "charitological." These are represented by the different kinds of benevolent institutions, such as asylums for the insane and feeble-minded, for the inebriate; hospitals, homes for the deaf, dumb, and blind, for the aged and orphans, etc.; and institutions for defectives of whatever nature.

It is evident, however, that the term "charitological" may not only be applied to what is pathological or abnormal, but also to that which is physiological or normal. Thus it can refer to institutions of quite a different order, but yet none the less charitable in nature. We refer, of course, to educational institutions, the majority of which are a gift to the public, and especially to those who attend them. It is obvious enough that every student is, in some measure, a charity student from the well-known fact that the tuition money in most cases pays a very small part of the expenses.

Now, no distinct line can be drawn between penal and reformatory institutions, and between reformatory and educational institutions; it is, again, a question of degree. But, in saying this, it is not meant that difference in degree is of little consequence. On the contrary, it is very important to distinguish between penal, reformatory, and educational for practical reasons, as in the classification of

prisoners, not all of whom are criminals. In a sense, all education should be reformatory,

But it may be asked, where can a subject end? It goes without saying that divisions are more or less arbitrary, if we are seeking reality, for things are together, and the more we look into the world the more we find it to be an *organic mechanism of absolute relativity*. Most human beings who are abnormal or defective in any way are much more alike than unlike normal individuals; and hence, in the thorough study of any single individual (microcosmic mechanism), distinct lines are more for convenience. Thus the difficulties of distinguishing between health and disease, sanity and insanity, vegetable and animal, are familiar. Whatever may be said from the educational point of view about abnormal cases is generally true, with few modifications, of the normal. Education and pedagogy are thus to be included to some extent in a comprehensive charitological system.

But although the distinct separation of one wrong from another is not easy, yet the decision as to the highest form of wrong may not be so difficult. This form consists, without doubt, in the act of depriving another of his existence; no act could be more radical; the least that could be said of anyone is that he does not exist. The desire for existence is the deepest instinct in nature—not only in the lower forms of nature, but anthropologically considered, this feeling manifests itself in the highest aspirations of races. In mythology, religion, and theology the great fact is existence hereafter, and in philosophy it has gone so far as pre-existence of the soul. Perhaps the deepest experience we have of non-existence is in the loss of an intimate friend, when we say so truly that part of our existence has gone from us. It is death which makes existence tragic.

Now the degrees of wrong may be expressed in a general way in terms of existence; that is, in depriving another of any of his rights we are taking from him some of his existence, for existence is qualitative as well as temporal; that is, it includes everything that gives to life content.

Thus, in this sense, a man of forty may have had more existence than another at eighty where the former's life has been broader, richer in experience and thought, and more valuable to others.

We may say in general that the existence of a person is beneficial or injurious in that degree in which it is

beneficial or injurious to the community or humanity. This statement is based upon the truism that the whole is more than any of its parts.

The degrees of wrong, therefore, should depend upon the degree of danger or injury (moral, intellectual, physical, or financial) which a thought, feeling, willing or action, brings to the community.

This same principle should be applied to degrees of exaggerated wrong or crime.

But, it may be said, should not the degree of freedom or of personal guilt be the main basis for the punishment of the criminal? The force of this objection is evident; historically, the idea of freedom has been the basis of criminal law; it has also been sanctioned by the experience of the race; and although no claim is made of carrying it into practice without serious difficulties in the way of strict justice (difficulties inevitable to any system), yet it has not only been an invaluable service, but a necessity to humanity. This is not only true on criminal lines, but this idea has been the conscious basis of our highest moral ideas.

But at the same time it must be admitted that the exaggeration of the idea of freedom has been one of the main causes of vengeance, which has left its traces in blood, fire, martyrdom, and dungeon; and though at present vengeance seldom takes such extreme forms, yet it is far from extinct. On moral and on biblical grounds, as far as human beings are concerned, vengeance can find little support; an example of its impracticability is the fact that some of the best prison warders never punish a man till some time after the offence, so that there may be no feeling on the part of either that it is an expression of vengeance. The offender is generally reasoned with kindly, but firmly, and told that he must be punished, otherwise the good discipline of the prison could not be maintained; which means that he is punished for the good of others. With few exceptions, a revengeful tone or manner towards the prisoner (save outside of prison) always does harm, for it stirs up similar feelings in the prison, which are often the cause of his bad behaviour and crime, and need no development. Kindness with firmness is the desirable combination. Vengeance produces vengeance.

But, taking the deterministic view of the world, the highest morality is possible. One proof is that some fatalists are rigidly moral. A psychological analysis will show that

persons who are loved and esteemed are those whose very nature is to do good—that is, they would not and could not see a fellow-being suffer; this is, from the necessity of their nature they were from infancy of a kind disposition. We admire the sturdy nature who, by long struggle, has reached the moral goal; but we cannot love him always. He is not always of a kind disposition: this is not a necessity of his nature. As the expression goes, “There are very good people with whom the Lord himself could not live.”

Is it not the spontaneity of a kind act that gives it its beauty?—where there is no calculating, no reasoning, no weighing in the balance, no choice? The grace of morality is in its naturalness. But to go still further: Do we like a good apple more and a bad apple less because they are necessarily good or bad? and, if we admitted that every thought, feeling, willing, and acting of men were as necessary as the law of gravity, would we like honest men less and liars more? True, we might at first modify our estimation of some men, but it would be in the direction of better feeling towards all men.

But, whatever one's personal convictions may be, questions of the freedom of the will and the like must be set aside, not because they are not important, but simply because enough is not known regarding the exact conditions (psychological and physiological) under which we act and think. If we were obliged to withhold action in the case of any criminal, for the reason that we did not know whether the will is free or not (allowing for all misconceptions as to this whole question), the community would be wholly unprotected. If a tiger was loose in the streets the first question would not be whether he was guilty or not. We should imprison the criminal, *first of all, because he is dangerous to the community.*

But if it be asked, how there can be responsibility without freedom? the answer is that there is at least the feeling of responsibility in cases where there is little or no freedom; that is, there is sometimes no proportion between the feeling of responsibility and the amount of responsibility afterwards shown. The main difficulty, however, is that in our present state of knowledge it is impossible to know whether this very feeling of responsibility or of freedom is not itself necessarily caused either psychologically or physiologically, or both. If we admit that we are compelled to believe we are free (as some indeterminists seem to claim), we deny

freedom in this very statement. Another obvious and practical ground for our ignorance as to this point is the fact that, although for generations the best and greatest minds have not failed to give it their attention, yet, up to the present time, the question remains *sub judice*. If we carried out practically the theory of freedom we should have to punish some of the greatest criminals the least, since, from their coarse organization and lack of moral sense, their responsibility would be very small.

A scientific ethics must regard the question of freedom as an unsettled problem. Any ethics would be unethical in taking, as one of its bases, so debateable a question.

Our general, sociological, ethical principle (as above stated) is *that the idea of wrong depends upon the moral, intellectual, physical, and financial danger or injury which a thought, feeling, willing, or acting brings to humanity.*

But accepting this principle, the important question is just what are these thoughts, feelings, willings, and actions, and by what method are they to be determined? The first part of this question, on account of the narrow and limited knowledge at present in those lines, can be answered only very imperfectly, if at all. As to the method, that of science seems to us the only one that can eventually be satisfactory. By the application of the scientific method is meant that all facts, especially psychological (sociological, historical, etc.), physiological, and pathological, must form the basis of investigation. Psychological facts that can be scientifically determined, as affecting humanity, beneficially or not, are comparatively few in number. Physiologically, more facts can be determined as to their effect on humanity. But it is pre-eminently in the field of pathology that definite scientific results can be acquired. As to the difficulty of investigating psycho-ethical effects, it may be said physiological psychology and psycho-physics have not as yet furnished a sufficient number of scientific facts.

By the scientific application of chemistry, clinical and experimental medicine with vivisection, to physiology, many truths of ethical importance to humanity exist. But there is much here to be desired; for example, what is said about questions of diet and ways of living in general is scientifically far from satisfactory. The development of pathology in medicine has been without precedent. Its direct ethical

value to humanity is already very great; but the outlook into the future is still greater. It is only necessary to mention the discovery of the cholera and tuberculosis germs (a *conditio sine qua non* of their own prevention). Immunity, in the case of the latter, would be one of the greatest benefactions yet known to the race. Medicine can be said to be the study of the future, especially in the scientific and prophylactic sense. It is to experimental medicine that scientific ethics will look for many of its basal facts.

In emphasizing the scientific method as the most important, it is not intended to exclude others. The *à priori* method has been of inestimable value to philosophy, ethics, and theology, and to science itself in the forming of hypotheses and theories, which are often necessary anticipations of truth, to be verified afterwards. The *à priori* method is related to the *à posteriori* as the sails to the ballast of a boat: the more philosophy, the better, provided there are a sufficient number of facts; otherwise there is danger of upsetting the craft.

The present office of ethics is, as far as the facts will allow, to suggest methods of conduct to follow, and ideals to hold, that will bring humanity into a more moral, physiological, and normal state, enabling each individual to live more in harmony with nature's laws. Such an applied ethics must study especially the phenomena manifested in the different forms of pathological humanity, and draw its conclusions from the facts thus gathered.

But there are many scientists who look with suspicion upon the introduction of philosophical thought and methods into their field. We may call them pure-scientists; that is to say, those who believe that the term scientific truth should be applied only to that form of truth which can be directly verified by facts accessible to all. Yet from this point of view the arrangement, classification, forming of hypotheses and theories, and drawing philosophical conclusions are not necessarily illegitimate, provided those processes are clearly distinguished from each other and rigidly separated from the facts. Perhaps the study which, more than all others, will contribute towards a scientific ethics is criminology, the subject matter of which touches the popular mind very closely, owing, in a great measure, to the influence of the Press; and though this has its dangers, yet it is the duty of this, as of every science, to make its

principles and conclusions as clear as possible to the public, since in the end such questions vitally concern them.

Crime can be said, in a certain sense, to be nature's experiment on humanity. If a nerve of a normal organism is cut, the organs in which irregularities are produced are those which the nerve controls. In this way the office of a nerve in the normal state may be discovered. The criminal is, so to speak, the severed-nerve of society, and the study of him is a practical way (though indirect) of studying normal men. And since the criminal is seven-eighths like other men, such a study is, in addition, a direct inquiry into normal humanity.

The relation also of criminology to society and to sociological questions is already intimate, and may in the future become closer. Just what crime is at present depends more upon time, location, race, country, nationality, and even the State in which one resides. But notwithstanding the extreme relativity of the idea of crime, there are some things in our present social life that are questionable. A young girl of independence, but near poverty, tries to earn her own living at three dollars a week, and if, having natural desires for a few comforts and some taste for her personal appearance, she finally, through pressure, oversteps the bound, society, which permits this condition of things, immediately ostracizes her. It borders on criminality that a widow works fifteen hours a day in a room in which she lives, making trousers at ten cents a pair, out of which she and her family must live, until they gradually run down towards death from want of sufficient nutrition, fresh air, and any comfort. It is criminally questionable to leave stoves in cars, so that if the passenger is not seriously injured, but only wedged in, he will have the additional chances of burning to death. It has been a general truth, and in some cases is still, that so many persons must perish by fire before private individuals will furnish fire escapes to protect their own patrons. It is a fact that over five thousand people are killed yearly in the United States at railroad-grade crossings, most of whose lives could have been spared had either the road or the railroad passed either one over the other. But it is said that such improvements would involve an enormous expense; that is, practically, to admit that the extra money required is of more consequence than the five thousand human

lives. And yet, strange as it may seem, if a brutal murderer is to lose his life, and there is the least doubt as to his premeditation, a large part of the community is often aroused into moral excitement, if not indignation, while the innocently-murdered railroad passenger excites little more than a murmur.

There is, perhaps, no subject upon which the public conscience is more tender than the treatment of the criminal.

Psychologically, the explanation is simple, for the public have been educated gradually to feel the misfortune and sufferings of the criminal; it is also easier to realize, since the thought is confined generally to one personality at a time. But if the public could all be eye-witnesses to a few of our most brutal railroad accidents, the consciousness gained might be developed into conscientiousness in the division of their sympathies. But this feeling, however paradoxical, is a sincere, though sometimes morbid expression, of unselfish humanitarianism, for the underlying impulses are of the most ethical order, and over-cultivation is a safer error than under-cultivation. The moral climax of this feeling was reached when the Founder of Christianity was placed between two thieves.

The Circulation of the Blood and Lymph in the Cranium during Sleep and Sleeplessness, with Observations on Hypnotics (Prize Essay). By JOHN CUMMING MACKENZIE, M.B., Assistant Medical Officer, Northumberland County Asylum, Morpeth.

Sir Henry Holland, in his chapter on Sleep, considers its investigation should include causes which prevent as well as those which favour or produce it. In the investigation of sleeplessness we assume the converse of this as true, and advert briefly to what experimental physiologists regard as causes and accompaniments of sleep before engaging on its pathological condition, for the therapeutics of sleeplessness imply a knowledge of both. Disturbances of sleep are so constantly the heralds and associates of mental disease as to make insomnia, more than any other condition, common to all, or pathognomonic. The object of sleep, says Sir Henry Holland, is reparation, and sleep itself repose of sensibility and volition, whose cause is a change of condition of the nervous substance closely related to these functions, probably never to be ascertained by investigation, "yet," he continues, "not the less real as a change on that account."

Among other distinguished physiologists, Michael Foster looks for an explanation of the condition in molecular changes, applying the analogy of the cardiac systole and diastole to the sleeping and waking conditions of the brain. Preyer, however, believes that the presence of lactic acid—a product of protoplasmic activity—tends to produce sleep, for while the reaction of muscular activity, or work, is acid from this formation, that of quiescence or repose is alkaline. In an allied chemical process, Pflüger looks for the causation of sleep in the exhaustion of intra-molecular oxygen. For a muscle will continue to react to stimulation, and give off carbonic acid after its circulation is withdrawn, which, however, must soon be renewed to keep up the irritability; but why the stored-up oxygen should become exhausted, in the presence of its source, the blood, is not clear.

Associating changes in the cerebral circulation with the causation of sleep is historical, for that a form of sleep or stupor is induced by compressing the carotid arteries is a fact to which these vessels probably owe their name (Kusssmaul and Tenner). At the threshold of investigation in this direction is the doctrine of the constancy of the cranial contents as formulated probably by Munro Secundus (Edin.). Taken as applied to the circulation, therefore, we adduce evidence bearing on the variability of (1) the absolute, and (2) the relative cranial contents, as the basis of inquiry into any cerebral circulatory change. Dr. Kellie, of Leith, published experiments made to demonstrate the doctrine of Munro. These were on sheep slaughtered in the ordinary way by the butcher, on dogs killed by ligaturing the carotid arteries, and by prussic acid. He concluded that the brain vessels are not emptied by any means of general depletion as vessels elsewhere are, although profuse hæmorrhages drain it “of a sensible portion of its red blood”—its place being taken by serum—“watery effusion within the head,” he says, “being frequently a consequence of great depletion.” These conclusions were apparently interpreted as pointing to the invariableness, in all circumstances, of the amount of blood within the cranium—a view regarded as opposed to the experiences of general practice.

Dr. George Burrows followed with a nearly similar set of experiments on rabbits. He found, on opening the carotid artery and jugular vein, that scarcely a blood vessel was visible after death, while, following death from strangulation, every vessel was turgid with blood. Two killed with prussic acid were suspended while the heart pulsated—one by the ears, the other by the hind legs. In the former the head was completely

anæmic, but intensely congested in the latter. Two were ligatured around the trachea—one being suspended by the ears after death and the other laid upon its side. In the former the cerebral vessels were depleted, but congested in the latter. He concluded that bleeding diminished the quantity and momentum of blood in the brain, and that, as a rule, the brain is congested after death from any form of asphyxia, or interference with the return of venous blood. Diminution of one system of vessels does not necessarily imply repletion of the other, and that circumstances vary the amount of blood within the cranium. Those, he says, who maintain the doctrine of its constancy there have not considered the extra vascular serum, but the whole contents, he concludes, “blood, brain, and serum together, must be at all times nearly a constant quantity.”

By introducing suspension he was able to show that subsidence of fluids was not confined to cavities subject to atmospheric pressure, but operated in the closed cranium. The demonstration was no part of Kellie's experiment. The formula of Munro did not, and probably could not, contain a place for it, the blood being regarded as the only movable contents of the air-tight box. Donders, carrying on the investigation, closed air-tight with a piece of glass an opening trephined into a rabbit's skull, and with a microscope observed the vascular changes.

Kussmaul and Tenner repeated and elaborated the experiments of Donders, and confirmed his conclusions. These observers found, on closure of the left subclavian artery and compression of the innominate, the brain become pallid, the smaller vessels invisible, and contraction of the veins opening into the longitudinal sinus, with a doubtful contraction of the sinus itself. During closure of the nostrils or convulsions, the veins enlarged, but the brain position and pallor remained unchanged, and continued so till after death. On restoring the circulation the brain became pink, the finest vessels visible, and the veins enlarged. In the opened cranium the vascular phenomena were the same, but on closing the nostrils or on convulsions supervening, the brain swelled without turning red, although the veins on its surface enlarged. Similarly Kellie opened the cranium of a dog and bled the animal to death. The brain, he says, subsided, and contained very little blood, whereas in the unopened skull the brain filled the cranium, and contained “a considerable quantity of blood.” Many of the conclusions of Kellie, therefore, and the rival ones of the eminent observers who followed him, differ in degree rather than kind; some

maintaining that instead of differing at all, Burrows and Kellie subscribe to the same doctrine. These experimental results show that, while the absolute contents of an intact cranium continue to fill the cavity, the proportion of blood may vary.

We are now in a position to consider the reputed relationship between sleep and the circulation. Dr. Marshall Hall believed sleep to be a result of congestion of the brain—a view, as a cause of natural sleep, probably without place in modern physiology, although the complexity and difficulty of the subject is expressed in the wide and varied range of its distinguished and authoritative hypotheses. Dr. Hammond, of New York, concludes that sleep is directly caused by anæmia, or diminished brain circulation. Mr. Durham, in Guy's Hospital Reports, concludes similarly, maintaining that the cerebro-spinal fluid adapts itself to variations in the amount of blood by receding to spinal cord spaces during congestion, and re-ascending, aided by atmospheric pressure on the soft parts, when the cerebral blood is diminished. Dr. Cappie, of Edinburgh, compensates the variations from the blood itself, and argues that an inactive brain is followed by a diminution of its capillary circulation, and a consequent retreat of its volume from the surface of the unyielding skull. To prevent a vacuum, the retreat is covered by turgescence of the pia-mater veins, into which blood is sucked and forced, aided by atmospheric pressure on the vessels leaving the skull, leading to "altered balance of encephalic circulation," or pressure less expansive, and more compressing, which is his formula for sleep. Kussmaul and Tenner found that during convulsions, or closure of the nostrils, the veins swelled, but the brain pallor remained unchanged. In the dead animal, pressure on the thorax or diaphragm propelled blood into the veins of the neck and skull—even when the throat is ligatured it ascends by the dorsal and vertebral veins. Further, Mr. Durham, in experiments on a dog, found that "the longer the administration of chloroform was continued the more distended did the veins on the surface of the brain become;" as its effects passed off, natural sleep supervened, the venous distension subsided, and the brain became pale.

A clinical *résumé* of the condition is illustrated in the case of E. I., æt. 23, a strong, healthy housemaid, who, to relieve pain and restless nights following a surgical operation on the foot, had a hypodermic injection of half a grain of morphia for a few nights with good results. Two months afterwards she suffered from renal colic, for which she had, with other treat-

ment, one grain of morphia hypodermically for two days in succession. On the third day the paroxysms were so continuous and severe that she had a total of two-and-a-half grains in three hours. The pain subsided for forty minutes after, and then recurred again. In the paroxysms she tossed herself frantically about the bed, shouting "Oh, if I could sleep." The pupils were pin-pointed. Something must be done. Chloroform was gently administered to bring her within grasp of the morphia. It was discontinued in twenty seconds—the respiration suddenly slowing, deepening, and finally stopping altogether. The face became cyanotic. In about three minutes the pulse began to intermit, and all efforts to rouse her failed. Artificial respiration was at once begun, and the right median basilic vein opened and allowed to bleed unchecked. She was lifted into a hot bath that happened to have been ready for another purpose, it being a portable one, her head hung over the edge, and the artificial respiration was continued. In immediate sequence, she groaned, opened her eyes, breathed unaided, and in about twelve minutes after the chloroform was administered she was marching up and down a carpeted corridor between two nurses. After a two hours' immunity the coma again supervened, but with the usual restoratives she was awake and lively four hours afterwards. For some days subsequently she was anæmic from loss of blood, but her recovery was perfect. Durham's chloroform experiment is a commentary on the case, the action of the chloroform being to give a sudden fillip to the compression already increased by the morphia, but which the sudden and decided depletion immediately relieved. Cappie, regarding the retinal veins as part of the cerebral system, appeals to the ophthalmoscope as showing the state of the circulation in the brain. Dr. Hughlings Jackson found the retinal arteries smaller and the veins larger during sleep, and, in a case of abnormal disposition to sleep, Professor Gairdner (Glasgow) found congested retinal veins, but barely visible arteries. In a case ("British Medical Journal," 5th July, 1873) of coma from charcoal fumes, the retina was in a similar condition. Cappie believes, and quotes, that "with a sufficient amount of pressure consciousness is suspended," yet, the transference of blood from the brain capillaries to the veins on its surface is not, in his theory, a cause of sleep, but an invariable consequence of slowing molecular activity. Denying circulation to the cerebro-spinal fluid, he ignores it as a compensatory mechanism, for, he says, even if the subarachnoid spaces communicate with the ventricles of the brain, the compensation would take place too

slowly for the frequent instantaneousness of sleeping and waking. He doubts the existence of Magendie's foramen, but now histologists agree that it, and probably other two (Mierzejewsky), perforate the floor of the fourth ventricle.

As further evidence of anastomosis, the perivascular spaces of the brain, and perineural lymphatics, can be injected from the subarachnoid spaces (Landois and Stirling), the latter communicating with the spongy bone, veins of the skull, and surface of the face (Kollemann); and the nasal mucous membrane with the subdural and subarachnoid lymphatic spaces (Meynert). Further, the cavernous venous spaces, described by Cruveilhier, adjoining the longitudinal sinus, and lined like it, Ludwig Meyer regards as a compensatory mechanism, designed to replete the cranial cavity,—dilated during brain anæmia, and collapsed on the return of the full current of blood (Meynert).

Beyond and behind all these is a sensitive motor mechanism. Arteries all over the body undergo rhythmic movements of contraction and dilatation as demonstrated on the rabbit and frog by Claude Bernard, Schiff, Riegel, and others. These movements cease on division of the sympathetic or spinal cord, pointing to their vaso-motor origin. Burckhardt, on four cases of defective skulls, obtained tracings of three phases of brain movement: (a) The movement common to arteries (the vascular wave of Mosso) 2-6 per minute. (b) Pulse wave 60-80 per minute. (c) Respiratory wave (Ecker) 15-20 per minute—the expiratory rise due to jugular vein stasis and increased aortic pressure, and inspiratory fall due to blood suction heartwards.

The behaviour of the cerebro-spinal fluid before this alternate protruding and depressing force, is shown by Quinke, who, from the spinal subarachnoid space, injected with cinnabar the Pacchionian glandulæ, dura mater, sheaths of cerebral nerves, and cervical lymph glands, the pulse and vascular waves travelling from base to apex, and the respiratory one from vertex to base with similar effects, except in expiration, when the venous blood opposes the lymph current. The swelling of the basal walls of the ventricles diminishes while the higher channels are tumid and constricting the ventricles from the vertex shutting off advancing basal fluid, some of which escapes through the foramen of Magendie opposing the cinnabar from the ventricles, a portion of whose fluid is pressed into the veins of the choroid plexus. On the arterial systole reaching the vertex, diastole sets in at the base, preventing the return of the escaped fluid, as well as pushing fluid past the shrunken upper parts into Pacchionian bodies and sinuses, and then into basilar

nerve sheaths and cervical glands. The dilated choroid arteries secrete fluid which prevents the return of that expelled. The cinnabar, it was observed, failed to reach the perivascular spaces, because, says Burckhardt, during systole parenchymatous fluid fills the spaces in a direction opposed to the course of the injection, and during diastole the arteries fill their own spaces and no cinnabar can enter. Subarachnoidal fluid is forced into the subdural space, and from there filtered into veins and sinuses through the Pacchionian prolongations. Burckhardt maintains that the injection experiment of Quinke proves the vascular wave a motor mechanism, designed to carry off waste products through the lymphatics by setting up currents in the brain fluids.

The relation of these movements to sleep may be explained by the theory that attributes sleep to the accumulation of waste products of tissue metabolism, and recent research has shown this to be no mere theory. For the regular uninterrupted vascular peristaltic movements peculiar to sleep lead, says Burckhardt, to increased deportation of waste products, explaining brain restitution during sleep—a view subscribed by Meynert, who claims for lessened consumption but a minor share in the refreshing influence of sleep.

Mendel found nocturnal urine richer in phosphoric acid than that passed during the day. This observation is shown by reference to the accompanying elimination tables, estimated for consecutive periods of 12 hours—"Diurnal" signifying from 6.30 a.m. to 6.30 p.m., and "Nocturnal" from 6.30 p.m. to 6.30 a.m. Wood also observed that the alkaline phosphates of the urine are slightly increased, but the earthy phosphates more decidedly diminished during mental activity.

Mendel considers, therefore, that nerve tissue increases during mental work, and that excitation involves a synthetic chemical process, and, therefore, a decrease of waste products. The nerve current of rest, increased products of chemical decomposition, and the mechanism for the removal of waste products, exist also during sleep (Meynert). On the same authority "sleep implies a universal diminution of activity, but waking by no means implies increased activity of every part of the cortex," nor, let me add, does sleeplessness. For Burckhardt observed that regularity of the vaso-motor wave was peculiar to sleep, while during waking it reflects the faintest activity, or projection from the external world, the complexity in its variations being determined by the character and form of the excitation. Burckhardt observed that during pain the wave was one of prolonged depression, while sudden

fright caused a rapid rise, followed as quickly by a fall (seen also in the median artery of the rabbit's ear). Quiet humorous reading giving a curve of very irregular variations, and elevation arising less from intellectual processes than from emotions. Further, Ditmar, from manometrical measurements of blood-pressure in the carotid artery during sensory stimulation, found increased arterial pressure keep pace with sensation, as is shown by Goltz and Schlesinger in arteries of spinal-cord centres. That is, that vaso-motor systole, or blood-pressure, increases with the painfulness or intensity and duration of the stimulus. For while reflex response to a weak stimulus applied to the skin of a decapitated frog is small and delayed, reply to a stronger stimulus is ample and sudden, demonstrating the relation between stimulus and reflex (in the sense of Meynert's repulsion), the equation, or physiological equivalent of pain, as well as showing that the reflex, or repulsion, depends on the summation of stimuli, which are transmitted in waves, and not on a single impulse (Stirling). For Schiff and others found on impairing conduction through grey matter that burning the skin only gave rise to a sensation of warmth (analgesia). Similarly, Meynert applies the well-known fact that dipping the finger in water at 50° Celsius is attended with a sensation of warmth, while dipping the whole arm or body is attended with pain, the excitation being more numerous and widely spread in grey matter, of which inhibition is a function, and, with blood pressure, is diminished on removal of the cortex, but increased on its stimulation. The impulse or activity, therefore, need not come from an afferent nerve, but may, as, *e.g.*, an emotion, originate in the cerebrum, giving rise to blushing or pallor, for "stimulation of a nerve may produce inhibitory or augmentative effects" (Foster). Red fluid, therefore, and blood produce the same effects on the retina (Meynert), but the inductions or associations called up by the latter are more intense and widespread, just as a painful emotion, or psychical pain, depends on ex- and in-tensity of inhibition, or of irradiation in the association system. Thus Burckhardt found emotion, as being more widely spread, to more intensely influence the vascular wave than thought. We observe, therefore, that the vascular systole, or inhibition (anæmia), keeps pace with painful activities. "Marked inhibition of nervous impulses from the forebrain excites," says Meynert, "like the inhibited conduction of painful sensory stimuli, or the suggestion of torture, a concept of the impossibility of counteracting this inhibition which may ultimately lead to suicide." But suicide or death,

as the reflex of the widest spread inhibition of association, most intense systole, or "extreme concept of repulsion," Meynert considers may simply be intended to ward off destruction from other portions of our individuality, for, he observes, be the actions of men what they may, "avoidance of greater pain is the determining motive."

The experiments of Ditmar, and tracings of Burckhardt, show that diminished blood-pressure, or hyperæmia, follow non-painful activities, as well as show the converse. For the latter observer found the vascular wave raised by a warm bath, but lowered by a cold one, while Goltz shows that the processes and conditions of blood-pressure are opposite, and not existing together. He elicited on gentle stroking the ordinary croak and embracing spasm in the frog, but inhibited both on applying a painful stimulus at the same time; showing that painful and non-painful, as opposed processes, give rise to opposite conditions of blood pressure, the variety and degree depending, in the psychological sphere, on the extent of association called up, and whether active with pleasurable or non-pleasurable concepts. "A new and stronger emotion," says Sir Henry Holland, "will often totally obliterate a weaker one existing before, though the causes of the latter are still actively present; exemplified in the voluntary infliction of a momentary pain, as pinching or other strong sensation, to counteract the first access of pain which we know will follow a blow or injury. I recollect," he says, "cases where patients combed the hair to bleeding to obviate some distressing sensation elsewhere, for the mind cannot maintain two impressions simultaneously, and, though the succession in such case may be uniformly pleasurable or painful, still it is sequence, and not coalescence of effects." The same authority considers that the circulation may so act on the nervous system as to produce any degree of sleep, for he regards "changes of circulation in the head as doubtless concerned in all these variations." Sleep, he says, is not a "unity of state," but a series of fluctuating conditions, related, and having close kindred to some disorders of the brain.

Differentiating on the same lines, Maudsley says, "sleep is a fluctuating state, not only of the cerebro-spinal system as a whole, but of its different parts."

The pillow in its varying quantity closely demonstrates this relationship, for we have observed that (1) posture varies the circulation in the head, and (2) that the venous circulation there increases with the degree of sleep. Further, diminished elimination of urinary products, as in anuria, may lead to coma,

or deep and prolonged sleep (Christison). In the accumulation of waste products the cause and motive to sleep is ever present, probably impoverishing the brain of oxygen, exciting a dyspnoetic phase of nutrition by interfering with the respiration of nerve-cells; for as soon as the condition of painful sensations exists a dyspnoetic phase of nutrition is set up (Meynert).

To illustrate the anatomical possibility of endless degree or variation in sleep, we have only to refer to the expansion of the pia mater with its "terminal" vessels (Cohnheim) of nearly equal diameter, laid along association and projection systems (shown by injections), as favouring a functional activity of one set of the centres while others rest (Meynert). But let the centres active be where and what they may, the relations between activity and blood-pressure in the brain remain the same.

Sleeplessness, as a variety of cerebral activity, is attended by an irregular vascular wave, anæmia or hyperæmia of the brain, while sleep, or the systole and diastole of regular rhythm, comes in between the two. Sleeplessness, therefore, from what we have shown, is divisible into two great varieties as it is accompanied by increased or diminished cerebral blood pressure (anæmia or hyperæmia), each variety reflecting its own etiological process of pain or pleasure. It is clear, therefore, that degrees and varieties of insomnia, some of which may be complicated with and allied to other diseases, can have no common remedy, explaining much of the varied and apparently contradictory results obtained from hypnotics—even in the experiences of the same observer. Following, therefore, this classification of sleeplessness, hypnotics also resolve themselves into two great therapeutic groups, according as their pharmacology influences the character of the proximate etiological process, or the cerebral blood pressure, in which the variety of the insomnia is mirrored.

Be, however, the variety or degree of sleeplessness what it may, it is never a safety valve, but frequently an aura of subtle and far-reaching evils, the removal of which, even by "any means," is entreated from every department of literature and experience.

Before making clinical observations on hypnotics (Bacon's "balm of life") the following case is given *in extenso* as illustrating two conditions of insomnia, and, as shown by an appeal to therapeutics, distinct, but yet existing together. R.B., male, æt. 60. Suffering from muscular twitchings, inco-ordination, ataxic gait, exaggeration of reflexes, resistance

to passive movements, tremulous and difficult speech. Bundling and destroying his bed-clothes night and day, and scarcely ever asleep. 18th Nov., 1888, 2.14 p.m.—Given $\frac{1}{100}$ of a grain of the hydrobromate of hyoscin; at 2.35 he is drowsy, but still clutching at the bed-clothes, and the dose is repeated, twelve minutes after which he is asleep, but the muscular twitchings are observed here and there—a slight touch readily eliciting the motor inclination. Easily wakened, he goes to sleep again almost immediately. Pulse 60, full and regular, respirations 20 per minute. Wakened for tea at six, but asleep again at 7.45, when the pupils are sluggish and slightly dilated, and the reflexes seem charged with excitement. Awake at ten, but looking stupid and sleepy, moving his head first one way then another. 19th Nov.—This morning he is wandering about and restless as ever. At 12 noon he gets $\frac{1}{100}$ grain hyoscin. At 1.40 he is lying down, but his limbs actively jerking amongst the bed-clothes, which he fumbles and bundles hither and thither, when he now gets 15 grains urethane. At 2.5 p.m. he is asleep, and the bed-clothes are tucked about him without any resistance. Awake again at 2.35, but quietly looking at the wall, and manifesting no muscular impatience. The muscles are fairly flaccid, resistance easily overcome, and reflexes not so excitable to touch. Slept from three to four o'clock with no apparent muscular twitchings. Restless from six to nine o'clock, when he gets other 15 grains urethane. 20th Nov.—Restless from four a.m., but awake all night. At 11 a.m. he gets $23\frac{1}{2}$ grains urethane, and is left busy with his bed-clothes. At 12.40 he is not asleep, but quietly resting. 21st Nov.— $23\frac{1}{2}$ grains urethane repeated last night, after which he slept all night. Urethane discontinued to-day, but hyoscin continued as a night draught, until, on the 8th Dec., the maximum dose of $\frac{1}{50}$ grain is reached. It is finally discontinued on the 15th January, 1889. For twelve of the nights he was on hyoscin he slept all night, but was restless and destructive for the remaining forty-three nights. He became emaciated to a degree, and died from exhaustion on the 14th of March, 1889. A post-mortem examination was not obtained.

Hyoscin given alone induced sleep, but a sleep in harness, for a spasm or movement was nearly as easily elicited on touch as when awake. Urethane induced muscular stillness, or rest, without obliterating the cerebral restlessness. With urethane in combination with hyoscin, however, the spinal-cord impatience subsided, and there was sleep with muscular flaccidity super-added.

Hyoscin.—Hyoscin was discovered by Ladenberg in 1880. In the "Practitioner" for Nov., 1886, Dr. J. Mitchell Bruce has observed concerning it as follows:—Case I.—Hydrophobia with spasms. Result, death. Case II.—Delirium, apparently from hyperpyrexia. Result, recovery. Case III.—Cardiac dilatation, albuminuria, dropsy, and delirium. Result, compensation practically re-established. Case IV.—Pleurisy, empyæma, and alcoholic delirium. Result, success. Case V.—Chronic Bright, hallucinations and delirium. Result, discharged unfit. Case VI.—Acute double pleuro-pneumonia with delirium. Result, recovery. Case VII.—Insomnia with restlessness. Result, failure. Case VIII.—Profound hysteria or dementia, with refusal of food. Result, sent to an asylum unfit. Case IX.—Epileptiform convulsions, with a history of head injury (in combination with bromide). Result fair, but discharged unfit. This last case is a parallel to the case of R. B., with urethane and hyoscin.

Dr. Drapes, in his experiences of hyoscin ("British Medical Journal," April 7th, 1889), concludes something as Dr. Bruce has done. These observations accord with my own experience as far as they have gone, but while the results of these observers were confined, in some of the cases, to one, two, or more applications of the drug, the following is a record of continuous and systematic use over periods of from five to ten weeks, showing the ultimate effects of the drug on habits and nutrition generally.

Throughout these observations the urea is estimated by decomposition with hypo-bromite of soda prepared at the time, and estimating the amount of nitrogen gas evolved (Russell and West).

The phosphoric acid is estimated by a S. S. of uranium acetate, with a solution of ferrocyanide of potassium as an indicator.

CASE I.—Jane A., æt. 19. An excited, sleepless, and acute maniac. 3rd December, 1888—Put on $\frac{1}{100}$ grain hydrobromate of hyoscin at bed-time. 16th—Weight 126lbs., sleeps better, but her food has to be spooned into her. 17th December—Now on $\frac{1}{40}$ grain hyoscin morning and evening. 25th—As a rule she is noisy and restless every night; hyoscin increased to $\frac{1}{20}$ grain twice daily. 1st January—Sleeps for a few hours in the early morning. 16th January—Weight 122lbs. She is destructive, idle, and very untidy in her habits; hyoscin discontinued. 12th February—Works a little in the wards. 20th—Working in wash-house. 28th March—Weight 137lbs. She is clean, tidy, and bright, and fast convalescing. 20th May—Discharged recovered.

CASE II.—Annie W., æt. 41; married. Labouring under chronic mania for 14 years. Her treatment included an experience in most hypnotics, croton oil vesication, shower baths, and having her head shaved; but she remained violent, noisy, destructive, and untidy. October, 1879—She is noted as on hyoscyamine, and quieter; and for ten days usefully employed. November, 1888—She crouches naked in the corner of a shuttered room. When bearable she is up, and sits on her haunches in a corner with her dress over her head; but in a moment she may rush along the ward, tossing and knocking over everything moveable; then, as suddenly, squats as before in an opposite corner. She looks pale, wiry, and wild. November 27th—Put on $\frac{1}{100}$ grain hyoscin thrice daily. December 12th—She is calmer since last note, but is now getting wild. Dose increased to $\frac{1}{50}$ grain thrice daily. 14th—Walking beyond the grounds, what she has not done for years. Weight 121lbs. 25th—In bed excited. Her nights vary from noisy all night to slept well. 28th—Wild and dirty as ever, and in bed. January 5th—Hyoscin increased to $\frac{1}{40}$ grain thrice daily. February 1st—Weight 115lbs.; hyoscin discontinued. March—Weight 118lbs. She is on small doses of tinct. opii thrice daily, and she is up part of every day, and frequently the whole day.

CASE III.—Elizabeth G., æt. 35; married. She is suspicious, delusional, very abusive, and violent, especially on the entrance of the medical officers, on whom she would make an onslaught tooth and nail if not restrained; when *in furore* she exhausts herself. She belongs to the discontentedly lean, and never takes time to fatten, although her appetite is very fair. She is restless at night, but her habits are tidy, and she sews or knits daily when at her best. 20th November, 1888—Put on $\frac{1}{100}$ grain hyoscin morning and evening; quieter after first dose. 27th November—Quietly muttering to-day. 9th December—Aggressive and violent again. 10th—Dose increased to $\frac{1}{50}$ grain twice daily. 13th December—Quietly winding wool. 18th—Weight 103lbs. 26th—Restless and discontented, but not violent. 16th January—Wild as ever, appetite variable; hyoscin discontinued; weight 97lbs. 1st March—Weight 102lbs. Result, no improvement.

CASE IV.—Elizabeth B., æt. 30. Chronic maniac. January, 1888—Shouting, "Oh, the pain in my head!" Her habits are untidy. A course of chloral hydrate was followed by one of hyoscyamine; weight 102lbs. May—Weight 88lbs. September 24th—Hyoscyamine only given occasionally. She is unimproved. November 18th.—Put on $\frac{1}{100}$ grain hyoscin twice daily. November 28th—Conduct unchanged, but quieter at night. December 18th— $\frac{1}{40}$ grain hyoscin hydriodate twice daily substituted. January 5th, 1889—Covered by a canvas rug, she lies naked in the dirty coir teased from her destroyed bed. She tears everything tearable, and is disgustingly dirty. If the door of her room is unguarded, she may rush out, and

break a mirror or window. A $\frac{1}{40}$ grain hyoscin hydrobromate given twice daily; hydriodate stopped. January 9th—Sleeps better, but otherwise is unimproved. April 1st—Weight 92lbs.; hyoscin discontinued. May 3rd—Getting small doses of tinct. opii. She is now up daily, and walking beyond the grounds; weight 96lbs.

CASE V.—Henry E., æt. 50; suffering from acute mania. 13th December, 1888—Weight 146lbs.; sleepless, destructive, noisy, and undressing himself. Given $\frac{1}{100}$ grain of hyoscin as a night draught. 15th—Still noisy, and dose increased to $\frac{1}{80}$ grain. 16th—Slept for six hours last night. 19th—Restless again. 20th—Dose increased to $\frac{1}{60}$ grain morning and evening. 21st—Slept eight hours last night. 29th—He is as excited as ever, and frequently noisy all night. 9th January—Weight 131lbs. 14th January—Never at rest; pokes the fire, knocks things about, talking excitedly and gesticulating, but good natured. Weight 128lbs.; hyoscin stopped. March 1st—Weight 136lbs., but is unimproved. April, 1890—He has acquired untidy habits, but otherwise he remains unchanged.

CASE VI.—John H., æt. 36; married. He is idle, mischievous, and abandoned. 13th December, 1888—Weight 172lbs. He scarcely ever sleeps, and is to-day put on $\frac{1}{100}$ grain hyoscin thrice daily. 15th December—Sleeping better. 24th—Frequently suffers from diarrhœa, and is mentally unimproved. 26th December—Hyoscin increased to $\frac{1}{80}$ grain thrice daily; habits dirty. 29th December—Tears the strongest canvas bed-rugs in the house. 9th January—He is intractable as ever, but sleeps better. 14th January—Weight 159lbs. He refuses his food, which he throws all over the room. 31st January—Secluded for violence. 24th February—Continuously secluded. He speaks coherently, and with deliberation, but is exceedingly cunning and destructive. 20th March—Weight 121lbs. The hyoscin is discontinued to-day, and tinct. opii in small doses substituted. He is getting very feeble, and nightly disembowels his mattress, and sleeps inside it. May 17th—He died from phthisis.

CASE VII.—A. Bell, æt. 23; single. She is now in her third attack of acute mania, talking and gesticulating incessantly. 5th September, 1888—Weight 120lbs. She is noisy every night, and her habits untidy, destructive, and indecent. 10th December—Given $\frac{1}{100}$ grain hyoscin at night. 16th—She is up for a few hours daily, but as excited as ever. 17th—Weight 104lbs. 18th—Hyoscin increased to $\frac{1}{80}$ grain every evening. 26th—She goes to sleep about half-an-hour after her draught, and sleeps from three to four hours. Weight 108lbs. 1st January—Restless every night. 16th January—Weight 111lbs.; hyoscin discontinued. 1st February—Weight 126lbs. 27th—She is idle, but clean in her habits. 4th April—She works in the laundry. April, 1890—Working there still, but is now a silent dement.

CASE VIII.—Anchor. T., male, æt. 38. Suffering from chronic mania for 14 years, with exacerbations of excitement, when he tears

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the strongest canvas to shreds. He is noisy, and dirty in his habits. 15th December, 1888—He is at the height of excitement, and altogether like a wild beast. 12.40 p.m.—Given $\frac{1}{30}$ grain hyoscin; at 1.10 he is quiet, and at 1.40 asleep. 6 p.m.—Getting excited as ever, and is given another $\frac{1}{30}$ grain, ten minutes after which, while pulling a picture from the wall, he fell back in what seemed a genuine epileptic fit, with a momentary apparent loss of consciousness. He slept from 6.30 to 8 p.m. At 9.30 his temperature is F. 99°, and pulse 96—regular and full; pupils large and sluggish; skin moist, and no sign of collapse. He seems very drowsy. He went to sleep at 10, and slept for seven hours. 16th—Talking and gesticulating, but much subdued. 20th—Weight 152lbs.; hyoscin $\frac{1}{30}$ grain continued every evening. 30th—Sleeps, on the whole, fairly well. 14th January—He is up daily, and very quiet; weight 149lbs.; hyoscin discontinued. When 17 years of age he had one fit, but there is no record of any since. April, 1890—Unimproved and hopeless.

CASE IX.—Elizabeth D., æt. 50, widow. Suffering from melancholia. For months she sits idle all day, wishing for death. She had been on hyoscin and paraldehyde, but without much apparent benefit. The further record of the observation is found on Table I.

According to Clouston, hyoscin is a type of a cortical motor depressant, while Leech observes that it is, in cases of sleeplessness with delirium, as is well known, that hyoscin is often used with such great advantage, especially where great mental disturbance is accompanied by considerable excitement of the circulation. Hyoscin is capable of paralyzing all brain excitement, but not, especially when used systematically, of giving that rest in which mind tissue heals.

Its best reputation is acquired when the necessity for continuing it disappears on a few applications. Systematic use is, however, difficult to avoid, as toleration is early acquired. There was an almost universal loss of weight, which, however, was most marked in acute maniacs, and probably from impaired appetite. By the time the drug was discontinued, the greater number of these cases were idle, and untidy in their habits; those who were untidy to begin with becoming more so. This degradation takes place comparatively suddenly in young cases, and particularly so when they are acute and recent. In the chronic and old it is more insidious and less apparent, but equally certain. These disadvantages were, in some instances, recovered from on withdrawing the drug. From these observations, therefore, hyoscin, it may be observed, is an allayer of mental excitement rather than of motility, which, however, becomes depressed secondarily, or as a consequence.

TABLE I.
ELIZABETH D., æt. 50; Melancholia.

"DIURNAL"—6.30 A.M. TO 6.30 P.M.														"NOCTURNAL"—6.30 P.M. TO 6.30 A.M.																									
Date.	Diet.		Temp.		Pulse.		Resp.		Reaction.	Urine passed for the 12 hours.	C.O.	Grains.	Medicine.	Date.	Grains.	C.O.	Reaction.	Specific Gravity.	Phosphates.	Urea.	Sleep.	Temp.	Pulse.	Resp.	Quantity of Urine.	C.O.	Grms.	Phosphates.	Urea.										
	Solids.	Fluids.	9 a.m.	1 p.m.	9 a.m.	1 p.m.	9 a.m.	1 p.m.																						7 p.m.	7 p.m.	7 p.m.	7 p.m.	7 p.m.	7 p.m.	7 p.m.	7 p.m.		
1890														1890.																									
Apr. 18		942									942			18.19													688												
" 19		227									227			19.20	None	426	Acid	1021	.44	7.7								64											
" 20														" 21	"	"	"	"	"	"																			
" 21														" 22	"	"	"	"	"	"																			
" 22	798	750									1013	.35	6.1	" 23	"	"	"	"	"	"																			
" 23		156									1028	.31	4.6	" 24	"	"	"	"	"	"																			
" 24		876									1029	.31	6.7	" 25	"	"	"	"	"	"																			
" 25	765										1021	.44	6.7	" 26	"	"	"	"	"	"																			
" 26		460									1019	.63	8.2	" 27	"	"	"	"	"	"																			
" 27	737	874									1017	.65	7.9	" 28	"	"	"	"	"	"																			
" 28	783	1000									1024	.63	13.8	" 29	"	"	"	"	"	"																			
" 29	850	750									1015	.46	8.9	" 30	"	"	"	"	"	"																			
" 30	850	750									1021	.45	8.	May 1																									
" 1	800	294									1021	.45	8.	" 2																									
" 2	737	800									1017	.63	12.6	" 3																									
" 3	680	750									1022	.75	12.4	" 4																									
" 4		306									1025	.70	8.7	" 5																									
" 5	783										1025	.63	9.5	" 6																									
" 6	680	436									1026	.65	12.9	" 7																									
" 7	737	224									1032	.64	8.9	" 8																									
" 8	765	880									1020	.66	9.3	" 9																									
" 9	783	800									1027	1.10	13.4	" 10																									

IN THE 24 HOURS.

TABLE I.—(Continued.)

Date.		"DIURNAL"—6.30 A.M. TO 6.30 P.M.										"NOCTURNAL"—6.30 P.M. TO 6.30 A.M.										IN THE 24 HOURS.	
Date.	Diet.		Urea.	Temp.	Pulse.	Resp.	Reaction.	Urine passed for the 12 hours.	Medicine.	Urine passed for the 12 hours.	Reaction.	Specific Gravity.	Phosphates.	Urea.	Sleep.	Temp.	Pulse.	Resp.	Quantity of Urine	Phosphates.	Urea.		
	Grms.	Fluids.																				Grms.	Grms.
1880.	May 10	783	800	304	Acid	1023	72	10.2	97.6	97.8	98	94	22	20	May	10-11	Hyoscin	100	23	936	1.43	30.6	
	" 11	822	"	444	"	1017	67	9.6	98	97.8	108	100	34	24	"	11-12	none	98	25	860	1.32	21.4	
	" 12	850	"	442	"	1018	61	9.1	97.4	97.8	103	100	18	20	"	12-13	"	100	23	716	1.32	19.7	
	" 13	"	"	574	Alk.	1020	74	11.2	97	97.8	96	105	27	24	"	13-14	"	97.8	97	1128	1.55	21.9	
	" 14	"	"	596	Acid	1016	64	8.8	97.4	97.8	96	91	23	20	"	14-18	"	97.4	93	910	1.34	19.3	
	" 15	"	"	658	"	1017	60	12.3	97.2	97.8	98	94	20	20	"	15-16	Hyoscin	90	22	12.8	1.23	3	
	" 16	737	"	385	"	1020	66	8.7	97.2	96.8	98	92	22	20	"	16-17	"	89	24	967	1.48	18.7	
	" 17	793	900	448	"	1018	68	8.7	97.2	97.4	94	88	20	24	"	17-18	"	90	23	1018	1.52	17.1	
	" 18	"	850	570	"	1015	74	8.3	97.2	97.4	88	75	20	18	"	18-19	"	97.6	98	26	1150	1.58	16.6
	" 19	"	"	480	"	1017	89	8.6	97.8	97.2	96	92	26	18	"	19-20	"	92	20	980	1.79	18.2	
	" 20	"	800	452	"	1016	97	10.5	97.2	97.8	96	98	20	21	"	20-21	500 Alk.	94	24	1038	1.37	22.9	
	" 21	"	882	"	682	"	1016	89	11.2	97.2	97.8	98	23	21	"	21-22	"	88	24	1004	1.47	22.7	
	" 22	"	462	"	1020	81	10.5	97.4	97.8	100	98	19	23	23	"	22-23	Paraldehyde 60 m	98.4	100	24	1038	1.37	22.9
	" 23	"	376	"	1021	78	11.1	97.4	97.8	98	96	24	24	23	"	23-24	"	94	26	850	1.54	20.	
	" 24	"	372	"	1022	78	11.8	97.2	97.8	98	96	22	23	23	"	24-25	"	97.8	98	812	1.50	22.	
	" 25	"	516	"	1015	60	9.7	97.2	97.8	100	90	26	21	25	"	25-26	"	98	24	1220	1.36	19.4	
	" 26	"	370.	"	1020	62	9.2	97.4	97.4	90	84	26	22	22	"	26-27	none	97.4	95	928	1.20	15.9	

NOTES TO TABLE I.

April 19th. Nocturnal urine lost; April 20th. No collection of urine made; April 21st. Diurnal urine lost; April 22nd Patient very miserable and unemployed; April 23rd. Appetite fair; May 6th. Restless at night; May 10th. No change; May 16th. Seems, if possible, more miserable; May 21st. No change; May 23rd. Almost refuses her medicine; May 25th. Takes her medicine only in presence of stomach tube.
 N. B.—No medicine was given during the day from April 18th to May 26th.

It may further be observed that while the urea is diminished, the phosphates are slightly increased.

Urethane.—The therapeutic action of this drug is already clearly demonstrated in combination with hyoscin in the case of R. B., where, by contrast, the sedative or hypnotic action of the two drugs is manifestly different in kind—from a probable preference for different foci of activity.

The characteristic action of urethane finds demonstration in the experiments of Coze, who found that rabbits under its influence could stand large doses of strychnine. Jackmann used it successfully when chloral hydrate failed in the treatment of a case of traumatic tetanus, and the following cases extend its application in the same direction :—

CASE I.—Catherine E., *æt.* 13; an epileptic imbecile. The few words of her vocabulary are used irrelevantly. Her gait is staggering. Fits followed scarlatina six years ago, and she has had no fewer than six in twenty-four hours since; and frequently a bout of twenty to forty. 30th March, 1889—Given two grains urethane thrice daily. 9th April—Dose increased to $8\frac{1}{4}$ grains thrice daily. 18th—Fits fewer and less severe. 30th—Fits ceased, and urethane discontinued. 2nd May—She has had eight severe fits this morning. 4th—Given five grains bromide of potassium thrice daily. 6th June—Fits average two in the twenty-four hours. 10th June—Fits average six in the twenty-four hours. 14th—She is in a severe bout; fit succeeds fit with an almost continuous coma. She has had two enemata of chloral hydrate and bromide, but the fits are not subdued. 15th June—Patient died.

CASE II.—George R. R., married, *æt.* 38. Suffering from acute mania, muscular excitement, and nervousness. 3rd May, 1887—He has not slept for five nights, but a hyoscyamine draught last night was followed by six hours' sleep. This morning he is excited and restless, but looks exhausted. His tongue is dry, appetite poor, and thirst considerable. At 3 p.m. he is given 20 grains of urethane, and other 20 grains at 7 p.m., and 20 at 10.45 p.m. 5th—He slept six hours last night. His appetite is improved, and he is put on 20 grains urethane thrice daily. 6th—He slept well last night, and is quiet and taking all his food to day. 7th—Urethane increased to 25 grains thrice daily. 8th—Quieter to-day; he answers questions; the muscular excitement is almost gone, and his appetite is excellent. He says the medicine is cinchona. 10th—Urethane discontinued. 10th June—He is working in the grounds daily. 22nd—Discharged recovered, and in good bodily health.

CASE III.—Annie B., *æt.* 38, married. She is as a rule stupid and incoherent, and an epileptic for the last ten years. During and after a bout she is either maniacal or very stupid. The number of fits recorded on Table IV., before the urethane was begun, gives a

TABLE II.
ANNIE B.; æt. 38; Epilepsy.

Date.		Diet.		Urine passed for the 12 hours.		Reaction.		Specific Gravity.		Phosphates.		Urea.		Fits.		Sleep.		Temp.		Pulse.		Resp.		Quantity of Urine.		IN THE 24 HOURS.								
1890	Date.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.	Gms.	O.C.							
																												Grains.	Fluids.	Grains.	Grains.	Grains.	Grains.	Grains.
May	2	737	1060	688	cid	1018	76	14	1	98-8	97-4	72	80	18	16	May	2-3	None	534	Acid	1021	78	91	1	1	Hours	7 p.m.	16	1220	175	231	2		
"	3	793	1250	232	318	1022	32	47	1	97-8	98-8	74	80	20	22	"	3-4	"	1016	Alk.	1010	75	91	2	8	Hours	7 p.m.	80	1242	107	3			
"	4	765-4	1000	318	"	1026	66	6	"	97-8	97-6	82	80	23	19	"	4-5	"	688	Acid	1015	90	91	none	8	Hours	7 p.m.	76	966	156	151	none		
"	5	850	900	388	"	1028	102	11	"	97	97-6	74	76	19	20	"	5-6	"	642	"	1015	75	9-2	1	9	Hours	7 p.m.	72	1030	177	20-2	1		
"	6	793	900	400	"	1025	81	8-3	"	97-4	97-4	82	80	22	24	"	6-7	"	888	"	1013	81	9-4	none	7	Hours	7 p.m.	82	1288	162	177	1		
"	7	"	"	180	"	1025	53	5	"	97	97-2	68	76	21	20	"	7-8	"	482	"	1018	65	6-1	1	8	Hours	7 p.m.	80	662	118	11-1	1		
"	8	737	1000	356	"	1016	42	6-2	"	97-2	97-4	80	82	21	22	"	8-9	Urethane 10	784	"	1011	78	14-8	1	7	Hours	7 p.m.	82	1140	120	21	2		
"	9	755	1000	618	"	1016	83	10-1	2	97-8	98-2	80	82	21	21	"	9-10	"	10	688	Alk.	1012	64	8-8	none	8	Hours	7 p.m.	82	1286	147	18-9	2	
"	10	858	"	422	"	1015	40	5-9	"	98	98-4	78	82	22	21	"	10-11	"	10	900	"	1011	54	7-1	1	7	Hours	7 p.m.	78	1322	111	13	1	
"	11	850	"	446	"	1015	59	6-1	1	97-6	97-8	72	80	22	22	"	11-12	"	10	666	"	1012	59	7-9	none	8	Hours	7 p.m.	84	20	1112	118	17	1
"	12	737	900	300	"	1019	29	6-7	1	98-4	98-6	80	80	23	24	"	12-13	"	30	1120	"	1011	64	10-2	"	7	Hours	7 p.m.	82	20	1420	93	16-9	2
"	13	661	900	360	"	1017	45	6-1	2	97-6	97-6	74	81	20	23	"	13-14	"	30	708	"	1013	56	8-4	"	5	Hours	7 p.m.	75	22	1068	101	14-5	2
"	14	"	"	480	"	1015	44	6-2	1	97	98	73	80	20	23	"	14-15	"	30	312	"	1019	43	4-1	2	5	Hours	7 p.m.	76	22	762	87	10-6	2
"	15	"	"	514	"	1015	60	7-2	none	97	98-4	78	84	21	19	"	15-16	"	30	500	Acid	1015	65	7-4	none	6	Hours	7 p.m.	82	19	1014	126	14-6	none
"	16	623	750	226	"	1023	49	6-4	"	98	98-6	78	80	22	21	"	16-17	"	30	840	Alk.	1010	75	7-6	"	7	Hours	7 p.m.	77	22	1076	124	14	"
"	17	"	"	466	"	1018	44	8-8	"	98-2	98-4	76	80	18	21	"	17-18	"	30	242	Acid	1020	59	4-6	"	5	Hours	7 p.m.	75	15	708	123	13-4	"
"	18	"	"	398	"	1019	76	8-8	"	98-4	98-6	78	81	23	21	"	18-19	"	30	734	"	1010	68	8-3	"	6	Hours	7 p.m.	74	20	1130	144	16-3	"
"	19	661	"	420	"	1018	39	8-2	"	98-2	98	82	84	21	22	"	19-20	"	30	574	"	1014	63	6-5	"	8	Hours	7 p.m.	80	19	994	123	14-3	"
"	20	"	"	450	"	1013	35	6-3	"	97-6	98-6	70	80	21	19	"	20-21	"	30	862	"	1010	53	7-4	"	7	Hours	7 p.m.	78	22	1312	88	13-7	"

fair account of their frequency since her admission six months ago. The urethane was only given at night, and after the third dose of 30 grains she had no nocturnal fits, while the day ones certainly lost their severity. She is now never incoherent, she knits or sews, and walks out daily, and her memory is good. She takes an interest in her surroundings and in current events. I feel sure that a similar dose during the day would diminish or entirely subdue the day fits also.

As shown by the experiments of Coze and Gordon, urethane diminishes the spinal reflexes and peripheral sensation. Urea is slightly increased by small doses, as was shown by Gordon, but diminished by large ones. The phosphoric acid is always diminished—its diminution, within certain limits, keeping pace with the dose; fits, as seen from the table, similarly affecting its elimination, while they have an increasing or opposite action on the urea. The temperature, pulse, and respiration are diminished on large, but not appreciably affected by small doses. No sickness, diarrhoea, or loss of appetite was observed from its use, but in some cases the appetite was certainly improved. Urethane, in its therapeutics, it may be observed, is closely allied to the bromides. In my experience all hypnotics in large doses depress the heart's action, and with the exception of sulphonal, reduce the temperature. Even the latter drug in continuous and large doses is no exception to the rule. The action on the heart may explain the curve of urinary excretions, an action probably diastolic, or opposed to that of the digitalis group. This latter observation probably applies to all the so-called hypnotics referred to in this paper.

The indications of urethane, it may be observed, therefore, are found in the milder forms of irritability of the nervous system, exaltation of function, fidgets, epilepsy, and the insomniæ associated with these conditions.

Opium.—The historic "Gift of God" has entered upon a new trial—not as a competitor, however, for it has probably no compeer, but to erase from its record alleged disadvantages that mar its reputation, and narrow its hopes and uses; it still tops the list as a hypnotic, and experience but widens the field of its application while other hypnotics pass away.

CASE I.—John C., married, æt. 50, suffering from mitral and aortic disease, with great cardiac irregularity, sleeplessness, and dyspnœa. He sits propped up in bed night and day, with coat and vest off, and shirt unbuttoned. His limbs are cedematous, and he looks sallow, distressed, and exhausted. 17th Sept., 1888—Put on 5m doses each of tincts. opii and digitalis. After the third dose he is sitting

up and dressed. The digitalis is discontinued. There is an apparent relief to the breathing, and the heart is steadier and less irritable, but still irregular. 18th—Given $\frac{1}{2}$ grain of opium and 5m̄ tinct. digitalis at bedtime. 19th—Slept four hours last night. This morning the breathing is much relieved, and the fluttering discomfort over the heart is very slight. 20th—He is dressed, sitting in a chair, for he cannot stand without support; his facial expression, however, is comfortable. Yesterday he said he was dying, but to-day he is hopeful and cheery; his appetite is improved, and the œdema disappearing. He gets opium thrice daily. 11th Nov.—Still on opium. He walks to the dining room unassisted, although with difficulty. 23rd—Discharged mentally recovered.

The deep-seated pressure is diffused, and the heart stimulated, partly from acting under more favourable conditions. The dropsy and sense of impending death disappear, and the nervous system becomes relieved of the constant irritation of an irregular pulse wave.

CASE II.—William D., æt. 75. A feeble and noisy chronic maniac or dement. The inner lower surface of left leg is covered by an enormous foul-smelling ulcer of 20 years' standing. June, 1886—Iodoform dressing and rest in bed lessened this surface, and the suppurating points are nearly healed, and at the end of August he left his bed. Dec.—Resting in bed again. The ulcer is not yet healed, and the œdema in its neighbourhood is considerable. Feb., 1887—Sitting up again. March—The ulcer is broken down and foul-smelling as ever. Appetite poor and general health feeble. His nights, almost invariably, are noisy. April 26th—He is put on 45m̄ paraldehyde as a night draught. May 1st—Getting one grain of opium at night. 3rd—30m̄ tinct. is substituted. He sleeps and rests better. June—Getting as many as 60m̄ tinct. opii every evening. The ulcer is healed, his appetite is good, and he moves about the airing court daily; good-natured and cheery. 8th. Oct.—Opium discontinued. Dec. 1st—He is very feeble and the ulcer completely broken down. His appetite is poor, and he never leaves his bed. 6th Jan.—Still in bed, and the ulcer improved, but not healed. 27th—He is up a little occasionally. 20th Feb.—Died from pneumonia.

The paraldehyde had no apparent effect, but for the five months he was on opium the ulcer remained healed, and he was up daily. Two months after it was stopped, the ulcerated surface again broke down.

The healing of the ulcer may be partly explained by the removal of the chronic starvation that may have helped to keep it open.

CASE III.—C. M., female, æt. 15, suffering from typhoid. Even-

ing temperature as high as 104°F. Stools about six per diem; intestinal pain considerable; pulse 120-140; skin dry, but extremities clammy, with severe headache and distressing sleeplessness. Given $\frac{1}{4}$ grain opium, made into pill form with bread crumb, every four hours. After the third pill the skin became active, the diarrhoea restrained, the pulse soft and diminished in frequency, and a refreshing sleep was enjoyed when it was most needed.

CASE IV.—Sarah B., single, æt. 21, suffering from acute rheumatism, pericardial effusion, headache, severe tinnitus, irregular breathing, and great want of and desire for sleep. Given a pill containing one grain of opium and three of calomel every three hours until sleep was induced. The relief became apparent after the second pill; the head symptoms and joint pains becoming less severe, breathing slower and more regular, pulse soft, heart less energetic, and the patient slept quietly.

This combination seems to have a special indication in conditions of pyrexia, when headache or noise in the head is complained of, and is aggravated or caused by too energetic cardiac action. In the cases of chronic mania in which hyoscin failed, the success obtained from opium, it will be observed, is unapproached by that of any other drug used. In painful conditions it searches out the seat of unrest almost wherever it is, and frequently restores the break in the physiological unity. In the insomnia and miseries of senility, its sleep more closely approaches that of health, while the body weight frequently increases as evidence of the improvement in nutrition.

To the digestion, in such cases, it is soothing, and, it may be, stimulating, especially when that function is long established and habituated to a variety of conditions. The circulation is more equably distributed, especially in cases of atheromatous and relatively impermeable blood vessels, where the resiliency that adapts itself to the heart's beat is lost or modified.

Dr. Stephen Mackenzie, in a paper on the treatment of chronic uræmia by morphine, read before the Medical Society of London, claimed to have got good results from morphine in uræmic dyspnoea. Dr. Loouns, who among American physicians has made this practice his own, records a case of complete uræmic coma in which he administered $\frac{1}{4}$ grain of morphine in a single dose with good results. "In no instance," he says, "am I aware that I have caused a fatal narcotism."

Mr. Alfred Grace reports two cases of puerperal convulsions treated by morphine; a first injection of one grain was followed by a second of nearly that dose. Both made a perfect recovery. In the discussion on Dr. Stephen Mackenzie's

TABLE III.—WILLIAM S.; æt. 50; Chronic Bright's, and Melancholia with delusions.

Date.	Medicine.	Urine passed in 24 hours.	Reaction.	Specific gravity.	Urea.	Albumen.	REMARKS.
1889. June 21	Grains. None	C.C. 1306	Alk.	1018	Grms. 23·8	Grms. 23·3	Considerable debility and dyspnoea
" 22	"	1448	"	1019	24·1	20·4	
" 23	"	1930	"	1017	32·1	23·3	
" 24	"	1817	"	1012	18·2	26·1	
" 25	"	1646	Acid	1016	21·6	—	
" 26	"	1604	Alk.	1017	23·4	—	
" 27	"	1774	Acid	1010	21·	45·8	
" 28	"	1618	"	1015	24·	—	
" 29	"	2385	"	"	31·5	33·6	
" 30	"	1831	"	"	21·7	22·7	
July 1	"	3009	"	1011	30·	30·5	
" 2	Opium ½	2655	Alk.	1014	26·	61·3	
" 3	"	2214	Acid	1016	27·7	24·6	
" 4	"	1987	"	1017	27·6	35·5	
" 5	"	3151	Neut.	1011	33·	35·5	
" 6	"	2087	Acid	1018	30·9	29·9	
" 7	"	2413	"	1015	30·2	51·	
" 8	Opium 3	709	"	1019	13·7	3·9	Purged four times; urine for 12 hours lost during night
" 9	"	1490	"	1017	21·4	10·9	
" 10	"	1774	"	1016	24·3	20·5	
" 11	"	1490	"	"	22·1	9·2	
Aug. 21	None	2995	"	1010	22·5	24·	
" 22	"	3166	Alk.	1009	28·1	20·	
" 23	"	2541	Neut.	1011	24·3	18·2	
" 24	"	3293	Acid	1009	30·	42·6	
" 25	"	3379	Alk.	1009	26·9	23·3	Legs oedematous
" 26	"	2626	Acid	1012	23·9	11·8	Slightly jaundiced
" 27	"	3123	"	1010	24·9	7·4	Weight 12st. 7lbs.
" 28	Morphine ¼	2555	"	1010	22·7	34·5	Doing a little work.
" 29	"	2186	"	1012	23·9	25·8	
" 30	"	1732	"	1013	22·5	20·7	Perspiring freely; appetite good, and thirst not in- creased.
" 31	"	1632	"	1012	22·7	17·2	
Sept. 1	"	1547	"	1012	20·4	3·5	No constipation
" 2	"	1036	"	1016	18·4	13·5	Purged three times during the night
" 3	"	1746	Alk.	1009	19·9	8·8	Weight 13st. 1½lbs.; slightly purged
" 4	None	1277	"	1012	13·9	12·	Oedema increased
" 5	"	1717	"	1011	21·5	18·1	
" 6	"	2101	"	1010	20·1	13·9	
" 7	"	1717	"	1010	17·6	18·1	
" 8	"	1533	"	1014	18·5	11·	
" 9	"	1476	"	1015	16·8	19·1	Not able to work
" 10	"	1760	"	1014	17·6	7·9	Weight 13st. 11lbs.
" 11	Mag. Sulph. after meals 20 thrice daily	1604	"	1018	23·4	8·5	
" 12	"	1590	"	1017	23·5	19·7	Slightly purged twice
" 13	"	1604	"	1017	25·6	24·1	
" 14	"	2158	"	1014	28·	18·8	
" 15	"	2314	"	1014	26·9	12·	
" 16	"	2186	"	1015	25·9	11·7	
" 17	"	2782	"	1014	26·	39·9	Weight 13st. 3lbs.
" 18	Mag. Sulph. 20 before meals thrice daily	2200	Acid	1014	26·1	31·6	
" 19	"	2058	"	1017	29·5	31·	
" 20	"	1973	"	1017	27·	38·	Mentally not so well
" 21	"	1916	Alk.	1016	23·6	26·4	
" 22	"	2371	"	1017	30·8	20·	

TABLE III.—(Continued.)

Date.	Medicine.	Urine passed in 24 hours.	Reaction.	Specific gravity.	Urea.	Albumen.	REMARKS.
1889.					Grms.	Grms.	
Sept. 23.	Grains.	C.C.	Alk.	1018	27.6	11.1	
" 24	thrice daily	2087	Acid	1021	28.5	18.8	Weight 12st. 11lbs.
" 25	"	1760	"	1019	28.1	18.8	Edema almost gone
" 26	20 after meals } concentrated }	1689	"	1018	26.6	42.4	Commenced work
" 27	"	1732	"	1018	20.6	20.5	
" 28	"	1504	"	1018	23.9	31.6	
" 29	"	2101	Alk.	1016	26.5	20.7	
" 30	"	2371	"	1015	26.9	40.1	
" 31	"	1817	Acid	1019	26.5	33.2	Weight 13st.
Oct. 1	"	1760	"	1018	22.1	11.6	
" 2	20 before meals } concentrated }	1760	Alk.	1016	27.1	32.2	
" 3	"	2243	Acid	1016	25.6	19.4	
" 4	"	1519	Alk.	1021	26.4	23.7	
" 5	"	1604	"	1019	32.6	35.2	
" 6	"	2170	Acid	1018	28.6	24.2	
" 7	"	1930	Alk.	1017	22.1	7.7	Weight 12st 12lbs.
" 8	"	1902	"	1020	26.9	24.8	
" 9	40 concentrated	1817	Acid	1020	23.5	22.8	Purged slightly twice
" 10	"	1519	"	1020	23.8	16.1	
" 11	"	1480	Alk.	1022	28.2	14.5	
" 12	"	1680	Acid	1022	25.2	24.4	Purged slightly twice
" 13	"	1703	Alk.	1021	24.3	22.5	
" 14	"	1774	"	1019	23.2	22.2	Weight 12st. 7lbs.; slightly purged twice
" 15	"	1817	"	1020	17.9	16.8	{ Edema scarcely apparent anywhere
" 16	40 double previous } concentration }	1206	"	1021	28.4	27.6	
" 17	"	1831	"	1018	26.2	22.4	
" 18	"	1533	"	1018	25.4	40.6	
" 19	"	1689	Acid	1020	26.4	16.4	
" 20	"	2782	"	1010	29.3	30.8	
" 21	"	2143	Alk.	1013	25.8	23.5	12st. 10lbs.
" 22	"	2697	"	1010	20.7	34.7	
" 23	None	2200	Acid	1013	26.7	38.6	
" 24	Caffeine 6	2541	"	10 0	23.2	14.3	
" 25	"	3180	"	1017	14.7	5.1	Micturition increasing in frequency
" 26	"	2158	"	1010	26.6	13.5	
" 27	"	2824	"	1010	20.5	31.4	Thirst considerable
" 28	"	2589	"	1010	26.8	38.6	
" 29	"	3918	"	1008	25.5	28.8	Weight 12st. 12lbs.
" 30	Caffeine 6	3194	"	1006	29.7	19.7	
" 31	None	3180	"	1009	24.4	24.4	
Nov. 1	"	3151	"	1007	28.1	29.5	
" 2	"	4117	"	1007	26.3	30.5	Slightly purged
" 3	"	3363	Alk.	1005	14.6	22.1	Some urine lost
" 4	"	3208	"	1008	20.8	26.6	
" 5	"	3265	Acid	1007	25.7	42.8	Weight 13st. 4lbs.
" 6	"	3663	"	1011	20.7	29.9	
" 7	"	3024	"	1007	26.1	34.4	
" 8	"	3663	"	1007	15.2	15.4	Some urine lost
" 9	"	3492	"	1008	17.7	13.5	
" 10	"	2669	"	1010	9.5	15.5	
" 11	"	2598	"	1010	18.2	18.3	No collection made here
" 12	"	1902	"	1007	15.3	17.1	
" 23	Tr. Strophanth 7½m.	3336	Alk.	1006	14.8	17.8	
" 24	"	3364	"	1008	18.3	22.6	
" 25	"	3261	"	1007	12.2	38.5	Part urine lost
" 26	"	3683	"	1008	12.7	14.8	Large part of urine lost
" 27	"	2663	"	1010	4.2	7.7	Part urine lost
" 28	"	2072	"	1010			
" 29	"	782	"	1007			

paper, Dr. C. Theodore Williams mentioned a case in which morphine had been given before the diagnosis of eclampsia was made, and apparently, he adds, with benefit, although it was kept back as contraindicated. There was no reference, however, made, in that discussion, to the action of the opiate treatment on the excretion of albumen. The following observation was made to show this action, as well as the effects of the opiate treatment on the urine, in a case of the variety referred to :—

CASE V.—William S., *æt.* 50, suffering from chronic Bright's, with delusions, accusing his neighbours at home of operating on him with telephones, galvanic batteries, and electric machines. He is big-boned and muscular. There is evidence of an old severe compound fracture of the lower third of both bones of the left leg. After a series of experimental urinary testings, the following method was taken throughout the observation, as throwing down most albumen. To two drachms of urine were added 10m of strong nitric acid, and heated to boiling point. The albumen was filtered, dried, and weighed on filter paper of known weight. There was no attempt made to separate the albumen from the inorganic constituents, the observation being a relative one. The results are detailed on Table III. The patient died on 10th Dec., 1889. The kidneys weighed, right 12oz. and left 12½oz. The lungs were studded with tubercular nodules, and abundant pus cavities here and there.

Dr. Clouston, in his great experience, believes opium to cause loss of appetite and of weight, while a habit or craving is apt to be set up. Undoubtedly such disadvantages do occur; but probably it is undeniable, as was echoed by Dr. Leech at Manchester, that "in sleeplessness due to pain there can be no doubt that no other hypnotic approaches opium in value." Nasse, in the treatment of psychoses by opium, found benefit from its use in cases of mania of from four to seven or more months' standing.

Under hyoscin it is referred to in such cases.

CASE VI.—Frances L., *æt.* 30. Puerperal mania. Her sixth child was born eight weeks ago. 4th June, 1889—Weight 119lbs.; hæmoglobin 60 per cent., red cells 3,830,000, white cells '3 per hæmic unit. 15th June—She is restless, her appetite is poor, and she looks pale. Put on 8m tinct. opii morning and evening. 30th.—Mentally she is very much improved. 8th July—Working in the wards being insufficient, she is sent to the laundry. 18th.—Hæmoglobin 60 per cent., red cells 4,530,000, white about '2. Weight 134lbs. 18th.—Convalescence is noted as established. She is not very anxious to go home to her husband, who is her second, and apparently unkind to her. 26th Oct.—Weight 141lbs. She is discharged recovered.

Renault recommends opium in asthenic and anæmic cephalalgia, and in cerebral symptoms with chlorosis and anæmia, it bringing to the brain, he says, the necessary quantity of blood.

The late Sir Robert Christison, says Brunton, used to say that, "Not only coryza, but probably all inflammations could be nipped in the bud by opium if given sufficiently early and freely."

Dr. Clouston, in referring to paraldehyde, says:—"If it did no good it did not do any harm. That," he continues, "is a great thing in any drug, if true."

With this expression I conclude and heartily concur.

Sulphonal.—Introduced about two years ago, sulphonal is one of the latest, and probably most important hypnotic of the alcoholic series. First prepared by Professor E. Baumann, of Freiburg, and examined and recommended by his colleague, Professor Kast, its physical characters and chemistry have already been well described by others. Clinically its two great physical disadvantages are its insolubility and bulk. To those not familiar with the drug it may be stated that it is crystalline, and may be considered as practically devoid of taste and smell.

Its solubility is about one in 450 of cold, but slightly more soluble in warm water. Professor Kast has shown it to be slightly more soluble in acid and saline solutions. It is soluble readily in alcohol or ether. It has been given in hot fluids, suspended in gum, and in many other ways.

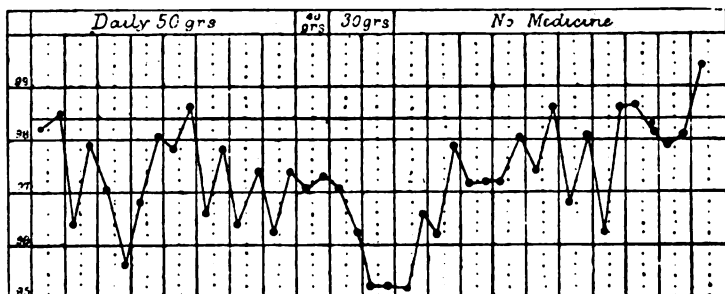
However administered, it should be first finely powdered. I invariably place it on the tongue, when this is possible, and let it be washed down.

The following variety of cases may help to illustrate the actions of the drug, and its advantages and disadvantages in disease:—

CASE I.—Anchor. T. (described under hyoscin), 2nd July, 1889—He is excited, and in strong rags for the last six weeks, and his habits are dirty and destructive. Put on 15 grains sulphonal morning and evening. 3rd—No change apparent. 4th—He is a little quieter. 5th—His appetite is good, and he is quiet and well behaved. 6th—Improving in his habits and asleep nearly all day. 8th—Still improving, and lies quietly on a bedstead. 9th and 10th—Appetite ravenous. 18th—Sleeps all night and part of the day. His bowels are regular. 21st—He is up to-day, and is quiet, tidy, and respectable. Sulphonal discontinued. 28th—Relapsed again, and is in bed as wild and untidy as ever. The 15 grains sulphonal twice daily resumed. 15th Aug.—Improved again and up to-day. 20th—Sulphonal discontinued. 25th—Relapsed again. 16th Oct.—In bed still and unimproved. Weight, in strong shirt, 120lbs. As a rule he is noisy all night. Put on 80 grains sulphonal in the evening

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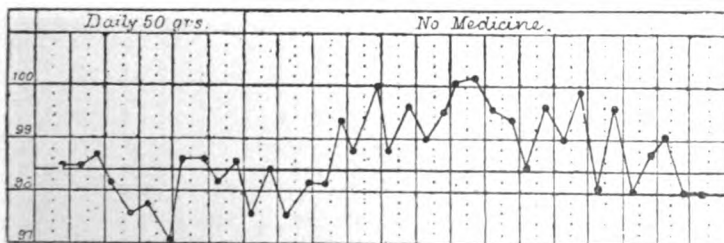
and 20 grains in the morning. 17th—Slept $8\frac{1}{2}$ hours last night. He is quieter to-day and taking all his food. 18th—Slept all night, but is shaky on his legs and inclined to sleep to-day. 19th—He is unable to stand unassisted, but is clean and not destructive in his habits. Sulphonal discontinued. 20th—Getting noisy again, but asleep part of the day. 21st—He has recovered the use of his legs, but is untidy in his habits, and lies quietly until roused. 22nd and 23rd—He is clean, quiet, resting all day, and his appetite is good. 24th—Talkative again at night. Sulphonal in doses of 20 grains in the morning and 30 in the evening resumed. 25th—Restless last night, but quiet to-day. Habits tidy. 26th—Slept six hours last night, but he is restless to-day. 27th and 28th—Clean, and not destructive, and asleep all day except at meals. 29th, 30th, and 31st—Gait ataxic. Weight 121lbs. 1st Nov.—Asleep all day. 2nd—Habits untidy while asleep. 3rd—Never attempts to leave his bed, and sleeps almost continuously. Morning dose reduced to 10 grains. 4th—Morning sulphonal discontinued. He sits in a chair, being unable to stand without assistance, and never speaks unless spoken to. His habits are clean. 5th—Sulphonal discontinued. 6th—Weight 127lbs. Wherever he is placed he never attempts to leave, and never speaks except in answer to questions, and then very briefly. 7th—Slowly recovering the use of his legs. 8th, 9th, and 10th—Slept all night and part of each day. 13th—Weight 137lbs. 20th—Weight 142lbs. 27th—Weight 140lbs. He is up daily,



works in the flock room, and goes to our weekly dance, in which he takes an active part, being quite a new experience for him here. 2nd Dec.—Relapsed again, and remains the hopeless chronic maniac. The temperature in degrees Fahrenheit at 9 a.m. and 6.30 p.m. is recorded on the chart from 26th Oct. to 15th Nov.

CASE II.—Arthur H., single, *æt.* 21. Suffering from acute mania. Oct. 14th, 1889—He is sleepless, sometimes violent, destructive, and noisy, stuffing his pockets with rubbish, and looking pale, pasty, and exhausted. Oct. 15th—Weight, 139lbs. Hæmoglobin 82 per cent., red cells 4,940,000, white cells .32. To-day he is put on 30 grains sulphonal in the evening, and twenty in the morning. His habits are dirty. 16th—Slept eight hours last night

he looks stupid, but is noisy still. Reflexes active. 17th—Slept all night. To-day he is so ataxicas to be sent to bed, saying he feels nervous, seasick, and shaky. 18th—Slept all night, but is unable to stand unaided to-day. Never tries to leave his bed, and is not destructive. Appetite good. Complaining of noises in his ears. Reflexes feeble and slow. 19th—Slept all night. His habits are clean, but he is drowsy and inclined to lie still. Sulphonal discontinued to-day. Superficial reflexes elicited easily, but knee jerk very faint. 20th—Patellar reflexes absent, he slept all night. Nine a.m. shouting for his dinner. He is clean and not destructive. Pulse full and soft. He looks drowsy. 21st and 22nd—Slept all night, but is noisy to-day and stronger on his legs. Complains of humming in his ears. Pupils large, skin moist and clammy, and reflexes still in abeyance. 24th—Reflexes elicited, and he is noisy and destructive again. Sulphonal resumed to-night in doses of 20 grains in the morning, and 30 in the evening. Weight, 139lbs. 25th—Slept $7\frac{1}{2}$ hours during night, but is still restless. 26th—Slept $9\frac{1}{2}$ hours last night, and is slumbering all day, but easily roused. Reflexes absent. He is clean and not destructive. 27th—Slept all night and sleeping all day; ataxic, complaining of noise in his ears, and cannot hold the pen or stand unaided. Muscles flaccid, and reflexes exaggerated. He never asks for anything. Habits untidy, especially when asleep. When wakened for his food, he mumbles, "Let me sleep." Intensely drowsy, and soft food is spooned into his mouth. Pulse soft, full, and regular. 29th—Reflexes still increased, right plantar more than left, and the left patellar larger and more active than the right. Asleep day and night, and untidy in his habits. Weight 139lbs. 30th—A pin driven into the muscles of his arm or nose, but no response or sign of waking; when shaken in addition, he takes in a long breath and drowsily opens his eyes. Habits untidy. Sulphonal discontinued. 31st—He is unable to sit or stand without help, and is

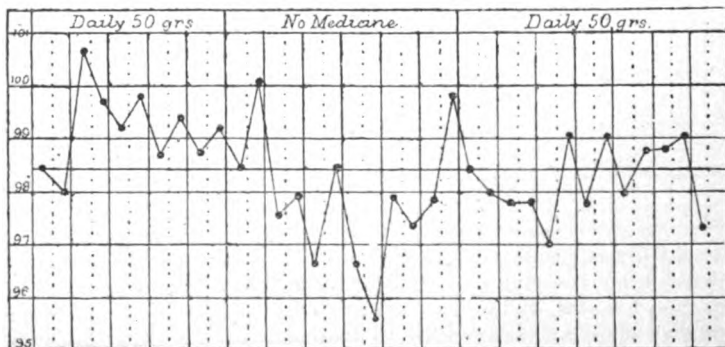


sleeping day and night, except when fed. 1st Nov.—Untidy during the night, and sleeping on. 2nd—Still untidy. Can stagger out of bed now, however, and weeps and cries for his mother as if he had overslept himself. 3rd—Slept $9\frac{1}{2}$ hours last night. Reflexes very faint, patellar scarcely appreciable, and is very infrequent. Still

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ataxic in gait, but he is up and dressed, clean, and behaving well. 4th—Appetite good, but he is still emotional. 5th and 6th—Behaving well. Weight 141lbs. 10th—Sleeps well, but undressing himself and noisy all day. Habits clean. 13th—Weight 136lbs. 1st Dec.—Working in grounds and well behaved. The chart shows the morning and evening temperature from 25th October to 13th November.

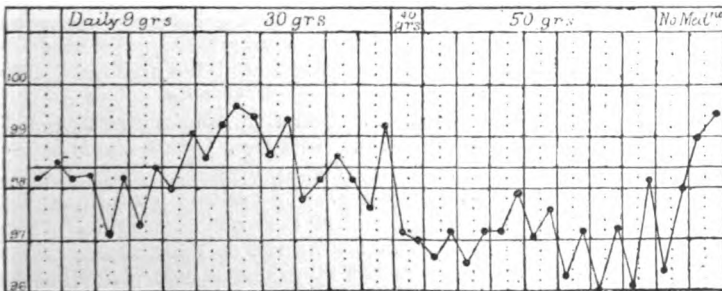
CASE III.—George L., single, æt. 25. Suffering from acute mania. 15th Oct., 1889—He is sleepless, untidy in his habits, and his appetite is poor. Weight in strong shirt 121lbs. Hæmoglobin 90 per cent., red cells 4,880,000. Put on 30 grains sulphonal at night and 20 in the morning. 16th—He slept for 9½ hours last night, and he lies quietly in bed this morning. Pupils large, tongue covered with whitish fur, he is sleepy, but easily roused up, and says he feels giddy and drunk. 17th—Slept all night, stupid, but destroyed his shirt, pupils large, accommodation sluggish, and complaining of impaired sight. 18th—Slept all night. Gait more ataxic than yesterday, lies in bed this morning for the first time. 19th—Patellar reflexes in abeyance, but the superficial ones are present. His habits are untidy, he lies quietly all day, and the sulphonal is discontinued. 20th—Ataxic, but not so drowsy; skin surface warm and moist. Complains of “buzzing” in his ears. He recognizes where he is. 21st—Slept eight hours last night, and is not so shaky on his legs, but is getting destructive again. 23rd—Mischievous, but clean in his habits. 24th and 25th—Slept all night. 26th—Restless all night. The 30 grains sulphonal at night and 20 in the morning resumed. He is up to-day, and helping in the wards, and is clean and tidy. 27th—Slept all night, and is sleeping this afternoon. 28th—Slept six hours last night and is drowsy to-day. Gait ataxic. 30th—Staggering about the ward, is idle, and trying to undress himself. 31st—Gait reeling, and for safety to himself he is ordered to



bed. 1st Nov.—Slept all night, but is restless and destructive to-day. Left patellar reflex is larger than the right, but both

plantars are faint. 2nd—Asleep all day. The temperature chart is from the 15th October to the 1st November. 3rd—Drowsy to-day. There is no response to a pin prick that draws blood, but tickling the sole or ribs elicits instant response. Weight 114lbs. The morning dose of 20 grains discontinued. 5th—He is up to-day and very quiet, his gait is reeling, and he never ventures to move off his chair. 7th—Sulphonal discontinued. 11th—Well behaved, sleeps all night, and as a rule an hour after dinner. 12th—Working daily. 29th—Weight 120lbs. 20th March, 1890—He is discharged recovered.

CASE IV.—William H., æt. 60. Acute melancholia. Sits all day with his hands clasped, determined and depressed, and often quietly groaning "Lost." Appetite poor, skin pale, dry, and parchmented looking. He is big, but thin and poorly nourished. Aug. 21st, 1889—Put on one drachm paraldehyde as a night draught. Aug. 26th—He made a determined effort to cut his throat to-day. Oct. 14th—Weight 169lbs. He is now in bed, where he sits more than half the night. Oct. 21st—Weight 167lbs. Oct. 22nd—Put on six grains sulphonal at night and three grains in the morning. 23rd—Slept at intervals during night. 24th—Slept for 3½ hours. 25th—Slept at intervals, a total of 5½ hours. 26th—Slept 3 hours. 27th—Slept 4½ hours. 28th—Slept 3½ hours. Weight 168lbs. 29th—Slept 2½ hours. Dose increased to 20 grains at night and 10 grains in the morning. 30th—Slept none all night. 31st—Slept at intervals, a total of 6½ hours. 1st Nov.—Slept a little. 2nd—Slept a total of 8½ hours. 3rd—Slept 4½ hours. 4th—Slept 3 hours. He is given 40 grains sulphonal to-night. Weight 168lbs. 5th—Slept a total of 6½ hours. Dose increased to 50 grains in the evening. Complaining of noises in his ears. 6th—Asleep at intervals. 7th and 8th—Slept 6½ hours each night. 9th—Slept 8½ hours. Tongue whitish and bowels constipated. 10th—Slept 9 hours. He cannot stand unaided. The reflexes are exaggerated. Weight 170lbs. 11th—Slept all night. Sulphonal discontinued. 12th and 13th—Slept very little. Temperature record is from 24th Oct. to 13th Nov.



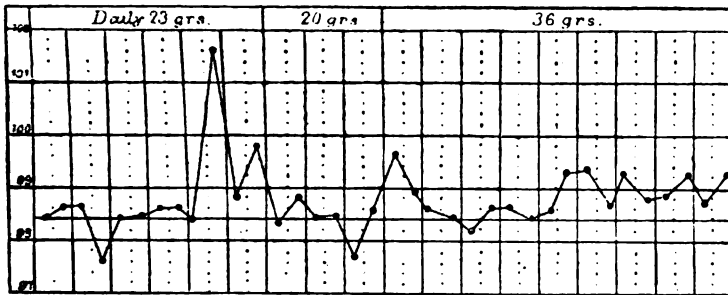
14th—Sleeping better, but often complains of pain over abdomen. 15th—Wakeful. 16th and 17th—Very restless. 18th—Weight

162lbs. 19th—Slept 4 hours. 20th—Sick last night, but slept 5 hours. 25th—Weight 170lbs. From 21st to 28th he slept fairly well. 29th and 30th—Wakeful all night. 1st Dec.—Slept fairly well. 10th—Intensely miserable. Jan., Feb., and Mar., 1890—He is in bed. In April his weight is 136lbs., and, if possible, he remains more miserable than ever.

CASE V.—Richard T., married, æt. 45. He is gloomy, suspicious, and depressed, and the mental portion of his admission certificate begins with "sleeplessness." His appetite is poor, but he is well nourished, tall, and powerful. Feb. 24th, 1889—Gets 60m paraldehyde every evening. 26th—Sleeps better at night. 30th March—The almost invariable night report is "restless most of the night." 4th April—Works in the wards, but says he is not so well in his mind. 14th April—Still restless, and his cheeks are, as a rule, high coloured or ruddy, with a cyanotic tinge. The paraldehyde is discontinued to-day at his own request. 6th June—Very depressed and says he is to be "carried down by a concealed stair and thrown into a vacuum below." Goes to the flock room, but sits all day with his face buried in his hands. Put on 15 grains sulphonal morning and evening. Weight 162lbs. 20th—He sleeps better and his appetite is good, but complains of feeling stupid and giddy. Dose increased to 30 grains twice daily. Weight 166lbs. 21st—He had to be assisted from the flock room to-day, being unable to walk or leave his chair; a slight push would unseat him. When asked a question he either shakes his head or says, "Don't know." His memory seems asleep and requires rousing up. Tongue moist, but covered with a whitish fur; pupils much dilated. Pulse 60, regular and full, and respiration 18. He seems unable to speak, and is shivering as if suffering from intense cold. He is sent to bed and says, "I feel quite stupid and scarce knows what am doin'." In a letter to his wife inco-ordination is very apparent, for he repeats himself and spells much as he speaks. This is very marked when compared with letters written before the sulphonal was begun and after it was discontinued. 5th July—Almost constantly asleep, except when roused for meals. Sulphonal discontinued. 7th—Locomotion steadier, and he is up daily. 13th—His appetite is good, he is bright, expresses no delusions, and sleeps well. 12th Aug.—Working in the grounds. 20th Aug.—Discharged recovered.

CASE VI.—Eleanor L., æt. 19. Suffering from puerperal mania. Her first child is just six weeks old. 13th Oct., 1889—She is untidy in her habits and quite idle. 16th—Weight, dressed, 112lbs. Hæmoglobin 60 per cent., red cells 2,880,000, white cells 4 per hæmic unit. 24th—She is on 10 grains sulphonal in the evening and three grains in the morning. She is clean in her habits, up daily and sewing a little, but very quiet. 30th—Put on 20 grains at night, but from the 2nd to the 13th November she is getting 30 grains at night and six in the morning. Temperature record from 24th Oct. to 10th Nov. She is much improved mentally and bodily. 14th—Sulphonal dis-

continued. She works in the laundry. 19th Feb.—Discharged recovered.



CASE VII.—E. S., *æt.* 40. Puerperal maniac. The drug was blamed for giving her diarrhœa, and discontinued on that account, but she also made a perfect recovery.

CASE VIII.—James H., *æt.* 29. Suffering from acute mania. Tried with sulphonal and paraldehyde, both of which appeared to benefit him. The further record of this case is given on Table IV.

CASE IX.—William W., *æt.* 53. In the advanced second stage of general paralysis. Gait very ataxic, speech characteristic, difficult, and indistinct. He, too, had a course of sulphonal and paraldehyde as detailed on Table V. When on his third successive 50 grain dose of sulphonal, the paralysis became almost complete, and the drug was at once discontinued.

CASE X.—Louisa S., single, *æt.* 38. She is sleepless, suspicious, and living in the expectation of something that is going to happen to her, such as to be poisoned, destroyed, mesmerised, or shaken up with electricity. She is thin and poorly nourished, and looks as if she lived on tea. 17th Oct.—Weight 101lbs. She is restless and sleeps very little. She is put on 10 grains sulphonal. 18th Oct.—Slept for 8 hours. 19th—Slept for 8½ hours. 20th and 21st—Restless all night. 22nd—Sewing in the morning and reading in the afternoon. 23rd—Slept for 9½ hours. Sulphonal increased to 20 grains. 24th—Restless all last night and sick to-day. 30th—She is refusing her food. 2nd November—Appetite very poor. Sulphonal discontinued. 3rd—She is sick and in bed to-day, and looks pale, cold, and collapsed. Pupils very large, and tongue covered with whitish fur. 6th—Appetite very fair. January, 1889—Much improved in every way.

From the tables it may be observed that the phosphates in the urine are increased by small doses of sulphonal, but diminished by large ones. The urea is probably, if anything, similarly influenced, as was also observed by Dr. Gordon (Aberdeen), who, however, concludes from his experiments that the phosphates are diminished, which, in my experience, takes place only under large doses.

TABLE IV.

JAMES H.; set. 29; Acute Mania.

Date.	Diet.		"DIURNAL"—6.30 A.M. TO 6.30 P.M.				"NOCTURNAL"—6.30 P.M. TO 6.30 A.M.				IN THE 24 HOURS.									
	Grms.	Fluids.	Urine passed for the 12 hours.	Reaction.	Specific Gravity.	Phosphates.	Urea.	Temp.	Pulse.	Resp.	7 p.m.	7 p.m.	Temp.	Pulse.	Resp.	Quantity of Urine.	Grms.	Phosphates.	Grms.	
1890																				
Apr. 26	1219	1927	745	Acid	1031	43	128													
" 27	"	"	630	"	1022	37	18-9													
" 28	"	"	784	"	1018	56	13-9													
" 29	"	"	800	"	1014	68	11-3													
" 30	"	"	884	"	1015	57	10-5													
May 1	"	"	462	"	1027	24	15-3	99	99											
" 2	"	"	1664	Alk.	1010	54	17-1	99	98.4											
" 3	"	"	900	Acid	1016	18	10-4	98.4	98.6											
" 4	"	"	864	Alk.	1020	17	14-3	98.6	98.9											
" 5	"	"	390	"	1022	68		98.6	98.6											
" 6	"	"	600	"	1016	66	10-9	98.6	98.6											
" 7	"	"	794	"	1015	67	9-9	99	99											
" 8	"	"	1054	"	1015	66	10-8	98.4	98.4											
" 9	"	"	832	Alk.	1015	63	15-1	98.6	98.4											
" 10	"	"	878	"	1013	66	13-8	98.6	98.4											
" 11	"	"	852	Alk.	1016	67	14-9	98.6	98.3											
" 12	"	"	640	Alk.	1019	91	13-8	98.6	98.3											
" 13	"	"	430	Alk.	1015	43	8-1	99	98.6											
" 14	"	"	538	Alk.	1013	68	14-7	98	98.6											
" 15	"	"	404	Alk.	1012	66	13-7	98.2	98.8											
" 16	"	"	639	"	1015	64	11-9	98.2	98.2											
" 17	"	"	639	"	1015	70	12-9	98.2	98.2											
" 18	"	"	639	"	1015	70	12-9	98.2	98.2											
" 19	"	"	639	"	1015	70	12-9	98.2	98.2											
" 20	"	"	639	"	1015	70	12-9	98.2	98.2											
" 21	"	"	639	"	1015	70	12-9	98.2	98.2											
" 22	"	"	639	"	1015	70	12-9	98.2	98.2											
" 23	"	"	639	"	1015	70	12-9	98.2	98.2											
" 24	"	"	639	"	1015	70	12-9	98.2	98.2											
" 25	"	"	639	"	1015	70	12-9	98.2	98.2											
" 26	"	"	639	"	1015	70	12-9	98.2	98.2											
" 27	"	"	639	"	1015	70	12-9	98.2	98.2											
" 28	"	"	639	"	1015	70	12-9	98.2	98.2											
" 29	"	"	639	"	1015	70	12-9	98.2	98.2											
" 30	"	"	639	"	1015	70	12-9	98.2	98.2											
" 31	"	"	639	"	1015	70	12-9	98.2	98.2											

TABLE IV.—(Continued.)

"DIURNAL"—6.30 A.M. TO 6.30 P.M.										"NOCTURNAL"—6.30 P.M. TO 6.30 A.M.																								
Date.	Diet.		Temp.	Pulse.	Resp.	Urea.	Specific Gravity.	Phosphates.	Grms.	Reaction.	Urine passed for the 12 hours.	C.C.	Reaction.	Specific Gravity.	Phosphates.	Grms.	Urea.	Hours.	Temp.	Pulse.	Resp.	Quantity of Urine.	C.C.	Grms.	Phosphates.	Urea.	Grms.							
	Solids.	Fluids.																										9.15 a.m.	2 p.m.	9.15 a.m.	2 p.m.	7 p.m.	7 p.m.	7 p.m.
1890																																		
May 17	1134	2100	1330	Alk.	1011	1.33	19.4	97.6	98.7	72	88	24	24	24	Sulphonal	50	52	Acid	11	1.3	10	98.2	76	24	1393	1.44	20.7	Grms.	1393	1.44	20.7	Grms.		
"	18	1219	"	938	"	1015	1.26	14.7	98.4	72	80	22	22	22	"	402	402	Alk.	1011	43	4.8	12	98.4	76	24	1388	1.69	19.5	Grms.	1388	1.69	19.5	Grms.	
"	19	"	"	596	"	1018	1.19	8.5	98.7	97	78	20	18	19-20	None	None	492	492	Acid	1015	72	9.1	9	97.6	66	20	1088	2.62	17.6	Grms.	1088	2.62	17.6	Grms.
"	20	"	"	1278	"	1013	1.14	16.6	98.2	97.8	91	68	22	18	"	584	584	"	1015	73	10.1	8	98.8	70	21	1363	3.13	26.7	Grms.	1363	3.13	26.7	Grms.	
"	21	"	"	1128	"	1017	1.67	16.7	98.8	98.8	98	84	20	24	"	934	934	"	1015	149	19.1	8	98.4	76	22	1362	3.16	25.8	Grms.	1362	3.16	25.8	Grms.	
"	22	"	"	1068	"	1011	2.49	8.5	98.4	99.6	80	92	24	24	Paraldehyde	60 m	816	816	Alk.	1015	1.29	14.5	6	99.4	84	24	1014	3.78	32.8	Grms.	1014	3.78	32.8	Grms.
"	23	"	"	1154	"	1021	1.53	21.3	98.8	99.6	72	84	24	22	"	"	No	No	Nocturnal	urine	passed	4	98.6	72	20	1154	1.53	21.3	Grms.	1154	1.53	21.3	Grms.	
"	24	"	"	672	"	1016	1.64	25.1	99.4	99.6	88	88	24	22	"	"	urine	passed	5	10.5	10.5	6	99.6	84	22	1035	1.64	16.4	Grms.	1035	1.64	16.4	Grms.	
"	25	"	"	1030	"	1025	1.64	25.1	99.2	74	80	22	26	26	None	None	438	438	Acid	1020	98	12.2	4	98.8	64	21	1035	1.64	16.4	Grms.	1035	1.64	16.4	Grms.
"	26	"	"	784	"	1022	1.45	25.9	98.8	98.7	64	68	20	20	"	"	"	"	"	"	"	6	98.2	60	21	1222	2.43	38.1	Grms.	1222	2.43	38.1	Grms.	

NOTES TO TABLE IV.

April 26th. Very talkative, restless, and idle, but habits clean.
 April 26th. Weight, 9st.
 May 2nd. Very restless at night.
 May 6th. Sleeps better.
 May 9th. Appetite good.
 May 13th. No change.
 May 17th. Slight ataxia in the morning.
 May 18th. Slept two hours to-day.
 May 20th. Going about saying he is drunk.
 May 21st. Lost of ataxia gone to-day.
 May 23rd. Not sleeping so well.
 May 24th. Refuses to pass urine during the night.
 May 26th. Restless at night.

TABLE V.

WILLIAM W., set. 53; Advanced Second Stage of General Paralysis.

Date.	"DIURNAL"—6.30 A.M. TO 6.30 P.M.				"NOCTURNAL"—6.30 P.M. TO 6.30 A.M.																				
	Diet.		Temp.	Pulse.	Resp.	Urea.	Phosphates.	Specific Gravity.	Reaction.	Urine passed for the 12 hours.	C.G.	Reaction.	Specific gravity.	Phosphates.	Urea.	Sleep.	Temp.	Pulse.	Resp.	Quantity of urine.	C.G.	Phosphates.	Urea.		
	Solids.	Fluids.																						Grms.	C.G.
1890																									
Apr. 25	1871	2100	440	Acid	1021																				
" 26	"	"	904	"	1013	1:19 1:84	92	9.7																	
" 27	"	"	834	Alk.	1016	1:41 1:37																			
" 28	"	"	770	"	1013	1:61 1:57																			
" 29	"	"	712	Acid	1018	1:76 1:18																			
" 30	"	"	58	"	1023	1:71 1:13	2:88	6:98	6	62	62	16	16												
May 1	"	"	512	"	1019	1:51 1:11	98	7:68	6	62	62	16	16												
" 2	"	"	932	Alk.	1014	1:02 1:3	98	9:8	4	60	61	16	16												
" 3	"	"	880	"	1015	1:08 1:2	98	2:98	6	62	68	18	17												
" 4	"	"	851	"	1016	1:27 1:5	15	9:96	8	68	60	17	17												
" 5	"	"	711	Acid	1017	1:06 1:4	14	8:98	8	64	60	16	17												
" 6	"	"	640	"	1020	1:11 1:4	3	9:8	6	62	60	17	17												
" 7	"	"	686	Alk.	1013	1:41 1:6	8	9:8	6	60	66	16	16												
" 8	"	"	942	"	1014	1:32 1:4	9	9:7	4	60	66	16	16												
" 9	"	"	1064	Acid	1013	1:23 1:3	2	9:6	7	98	60	16	16												
" 10	"	"	900	"	1013	1:32 1:4	9	9:7	6	60	66	16	16												
" 11	"	"	1032	"	1013	1:29 1:5	5	9:8	8	62	64	18	18												
" 12	"	"	1196	Alk.	1015	1:41 1:3	1	9:8	8	99	70	68	18	19											
" 13	"	"	538	Acid	1018	1:21 1:3	2	9:6	6	98	68	76	15	16											
"	"	"																							

TABLE V.—(Continued).

"DIURNAL"—6.30 A.M. TO 6.30 P.M.										"NOCTURNAL"—6.30 P.M. TO 6.30 A.M.																		
Date.	Diet.		Urine passed for the 12 hours.	Reaction.	Specific Gravity.	Phosphates.	Urea.	Temp.		Pulse.	Resp.	Date.	Medicine.	Urine passed for the 12 hours.	Reaction.	Specific Gravity.	Phosphates.	Urea.	Sleep.	Temp.		Pulse.	Resp.	Quantity of urine.				
	Solids.	Fluids.						8.40 a.m.	2.15 p.m.											8.40 a.m.	2.15 p.m.			7.20 p.m.	7.20 p.m.	C.C.	Grms.	C.C.	Grms.
1890																												
May 14	1871	2100	906	Alk.	1016	1.54	17.5	98.6	98.6	64	16	19	None	1306	Alk.	1010	1.80	15.7	9		98.6	16	2212	2.74	33.2			
"	15	"	974	"	1012	1.21	13.1	98.6	98.6	68	70	16	Sulphonal 50	1180	"	1013	1.32	16.4	9		99.7	21	2154	2.53	29.5			
"	16	"	964	"	1016	1.49	15.8	98.6	98.8	64	66	16	"	1380	"	1010	1.36	13.8	10		98.8	70	2344	2.85	29.6			
"	17	"	711	"	1018	1.27	14.6	98.8	98.8	72	74	18	"	950	Neut	1009	86	10.1	11		98.2	66	1861	2.13	24.7			
"	18	822	1530	310	1015	.67	3.8	99.7	98.4	96	68	20	None	630	Acid	1015	1.10	11.3	18		98.4	68	16	940	1.77	15.1		
"	19	1871	2100	762	Acid	1013	.37	12.4	98.2	99.7	64	72	None	622	"	1012	.77	10.5	13		98.8	66	17	1414	2.04	22.9		
"	20	"	974	"	1016	1.6	20.2	98.6	98.6	68	70	16	"	1038	"	1010	.88	11.6	11		97.8	62	16	2012	2.48	31.8		
"	21	"	464	"	1018	.91	9.7	98.8	98.7	70	72	16	"	1480	"	1007	1.11	17.5	9		98.4	66	16	1944	2.02	26.5		
"	22	"	1500	"	1010	1.32	18.8	99.7	98.7	70	68	16	Paraldehyde 60 m	956	Alk.	1009	1.22	11.9	10		98.4	58	16	2456	2.54	30.7		
"	23	"	628	"	1017	.92	15.5	98.4	98.4	74	74	16	"	1400	Acid	1005	.84	14.3	10		97.6	58	16	2028	1.76	39.4		
"	24	"	444	"	1022	1.01	13.1	98.4	98.4	68	68	16	"	1000	"	1011	.74	15.5	10		98.4	58	16	1444	1.75	28.6		
"	25	"	1066	"	1013	1.29	16.3	98.7	98.2	62	60	16	"	1464	Alk.	1007	.80	13.3	9		98.4	58	16	2520	2.09	29.6		
"	26	"	"	"	1130	Alk.	1007	.62	10.3	98.6	98.4	74	None	840	Acid	1007	1.07	13.6	9		98.2	58	16	1870	1.69	23.9		

NOTES TO TABLE V.

April 26th. Weight 10ct. 7lbs.
 April 26th. Appetite ravenous.
 April 26th. Too staxic to be employed.
 April 26th. Nocturnal urine lost.
 May 6th. Keating more.
 May 9th. Sleeps well, is quiet, and very facile.
 May 17th. Slept two hours during the day.

May 18th. Some urine lost; habits untidy; slept nearly all day, and cannot walk without support.
 May 20th. Habits tidy to-day.
 May 23rd. Sulphonal effect gone.
 May 24th. Sleeps well, and is otherwise as usual.
 May 26th. Weight 11st. 8lbs.

The case Henry T., already referred to, had an intoxicated gait, but his speech was stammering and slow, and from his letter-writing, his ideation seemed to share in the inco-ordination. He wrote as he spoke, and probably as he thought, for there is an attempt to put this on paper—by repeating himself and spelling the words much as he spoke them; in short, his writing is a phonetic representation of his speech. Inco-ordination was one of the symptoms recorded by Professor Kast. In his experiments on dogs, this observer records their intoxicated and drowsy behaviour, and traces the activity of the drug to the central nervous system, especially the cerebrum. Dr. Leech, in his paper on “Recently Introduced Hypnotics and Analgesics” (“British Medical Journal,” 2nd Nov., 1889), refers to the muscular inco-ordination, quoting the similar observation of Bornemann, Fischer, Burnett, Rehm, and Perregaux—the latter recording ataxic disturbances of fine movements of the hand, while Fischer, in referring to the ataxia, refers also to the speech becoming affected. While this, however, comes near to the letter-writing character, the literature, as far as I know, contains no reference to it, or to what seems like the ideational stammering. When well under the influence of the drug patients experience the helplessness, motor difficulties, and, to a less extent, the mental confusion of intoxication, without, however, much of its hilarity or sense of well-being. They appreciated, and frequently expressed this, irrespective of their mental condition, for the wild chronic maniac, who was never coherent on anything else, in response to the usual salutation, answered “drunk” or “tipsy.”

Small or medium doses.—The circulation.—The giddiness sometimes complained of is apparently a result of the same cause, and probably not proceeding from a circulatory disturbance. Comparison of the strength and frequency of the heart's action before, during, and after the observation was discontinued, show that in large doses the drug has an action on the heart, opposed to that of digitalis. Beyond, however, an apparent softening of the pulse, no other action is observed in doses sufficient to aid sleep and make the action of the drug very apparent. This pulse-softening is due probably, in part, to the warm, moist skin surface from vaso-motor dilatation, as is seen in natural sleep. Dr. Leech found that sulphonal had a local dilating influence on the vessels in cold-blooded animals, and recommends its use when the circulation is depressed. Dr. Cranstoun Charles found that arterial pressure was slightly lowered, though, he says, in three cases

a subsequent slight rise was noticed. In these doses, however, the heart is not apparently affected beyond the softening of the pulse, and a probable slightly diminished frequency as a result.

Temperature and respiration.—There is at first reduction of temperature, as observed from the tracings, which, however, soon recovers itself, going above the normal—an action, as far as I can find, not recorded by any previous observer. Stockman, in his report on the coca alkaloids, observes that Ott, experimenting on himself with cocaine, found a rise of pulse and temperature. Mosso also found, with the same drug, an increase of body temperature; and considers cocaine the most energetic drug yet known possessing this action.

Reichert found that division of the spinal cord prevented this rise, showing that the action is of central origin.

To sulphonal, therefore, may be accorded a place on the but short list of substances possessing what may be called a pyretic action.

Respiration at first becomes somewhat less frequent, but deeper; then coincident with the rise in temperature and vasomotor changes, it becomes again frequent, but of regular rhythm.

Reflexes.—The skin and tendon reflexes become increased, but on continuing the same dose, gradually subside, and in some cases the patellar reflex eventually disappears altogether. Shick observes that sulphonal sometimes depresses and sometimes exalts reflex excitability; while Gordon, in a recent paper ("British Medical Journal," 29th March, 1890), found the reflex function of the spinal cord reduced in frogs. There is a gradual increase in the motor disturbances. The gait is of a drunken type, going from slight inco-ordination to staggering, reeling, and, on large and continued doses, entire suspension of voluntary movements. The conjunctival, skin, tendon, and plantar reflexes, when the patient is asleep, and for some time under the influence of the drug, are frequently abolished, but that of the nose, while seldom abolished, is often faint and infrequent.

Mental and sense phenomena.—Some patients, when not sufficiently under the influence of the drug to cause sleep, expressed themselves as nervous, shaky, and sea-sick. The pupils become dilated and sluggish. Some, on being under the influence of the drug for a week or more, complained of defective vision, and others of seeing colours. The senses of taste and smell are not affected. Noises in the ears were an invariable complaint, the majority describing it as buzzing,

others ringing; a female melancholiac that her head was "queer;" another, that her head felt as if made of wood; while a third complained of hearing voices; but all the three complained of "queer things" before. Hallucinations are, however, referred to by Bornemann, who records that his patient thought he had four arms, four hands, and two heads. This probably was a form of diplopia, which this patient is recorded as having had. The sense of hearing seems acute, out of all proportion to the other senses, more especially when the patient is asleep. The majority said they did not dream at all; others had dreams of an agreeable kind, such as dreams of home and flower gathering. A male acute melancholiac complained of disagreeable dreams when on doses of 40 grains, but would not tell their nature. A young maniac, who had been pricked with a pin when asleep and then roused up, said he was dreaming of lions and tigers.

In the skin-sense there is a short initial hyperæsthetic stage, which is soon lost, however, and, as will be seen further on, gives place to a well-marked analgesia on larger doses. It may be observed here that sulphonal disputes the claims of quinia to a separate *ism*, for there is seen, in what one might call sulphonalism, many of the phenomena of cinchonism. To the maniac, with robust circulation, or hyperæmic conditions, it seems to bring rest, while in melancholia, with weak circulation, or brain anæmia, the gloom is frequently intensified, and there may be a stupor superadded, which often obscures the original condition, but which fortunately always disappears on withdrawing the drug.

Digestion and the gastro-intestinal tract.—The appetite was never in any case impaired, but as a rule improved, and in some cases became excessive and ravenous. The case of Louisa S. may be regarded as the exception, and an example of what may occur in the case of an anæmic brain and feeble circulation, but this probably is not an unmixed anorexia due altogether to sulphonal, as she was sent here partly for refusing her food. This variety approaches what one might call the anorexia already recorded by others. Sickness was rare, but was more frequent in the depressed than in the exalted. The tongue of sulphonal is probably a typical one, and, as a rule, is covered with a milky white fur, as if the organ had its first coating of white-wash; is always moist, however, and the saliva seems increased. In some cases there is diarrhœa, more frequently in females than in males, but as a rule the bowels are not at all affected.

Large doses.—When large and continuous doses are given the patient may sleep on almost day and night; the muscles become quite flaccid, and locomotion impossible. If the drug be pushed further, voluntary power subsides, and when he is roused up for his food, he looks at it, but cannot stretch forth his hand to take it, and when put into his mouth he cannot masticate. There is now considerable skin-anæsthesia, especially to painful impressions, which is most marked during sleep.

Although Dr. Leech, in his paper, refers to sulphonal and other recent hypnotics as possessing little, if any, analgesic influence, Dr. Gordon found peripheral sensation diminished in frogs. The reflexes become now again increased and amplified; a tap on the right patellar tendon is followed at once by a large kick out, with many smaller oscillations, and by smaller but similar movements of the left leg. On stroking the sole, even slightly, the limb is at once drawn up; the untouched one promptly following the movement. His habits now become untidy, and the temperature that has been above the normal goes slowly down, and may touch 95° F. or under. The pulse becomes small, soft, and infrequent; the skin cold and clammy, and respiration slow and shallow, or in some cases slow and gasping. It would seem that the prolonged abeyance of vaso-motor activity, has led to loss of heat, aided by a condition of asystolism, which most of all contributes to the collapse. He is disinclined to speak or be roused up, and a fairly strong shaking elicits but a grunt or monosyllable; then he lapses back again. He is intensely drowsy. If the medicine is now discontinued, the reflexes slowly return in the inverse order—first toning down, then the patellar reflexes probably disappear altogether, but get increased again before resuming the normal. The temperature, too, retraces its course with an inverse curve, going above the normal, and then finally coming down to it, when the muscular and locomotive evidence of the drug disappear, and the patient recovers.

Antidotal treatment.—Adam P., æt. 46. Suffering from acute recurrent excitement. From seven p.m. April 24th to seven p.m. April 25th he had no medicine. Quantity of urine passed in these twenty-four hours, 741 c.c., and phosphates 1.35 grammes. From seven p.m. on the 25th to seven p.m. on the 26th—the next twenty-four hours—he had a total of 220 grains sulphonal. Quantity of urine passed, 695 c.c., and phosphates 1.03 grammes. Two hours after the last dose

he became comatose or nearly so, and impossible to rouse up. Pulse over 100, irregular, intermitting, and scarcely perceptible. Respiration very shallow and infrequent; skin surface cold and clammy; muscles quite flaccid; reflexes abolished, and pupils immensely dilated and paralyzed.

A tube was passed into his stomach, it requiring no effort to keep the mouth open, and four ounces of brandy and a pint of strong hot coffee injected. He was then shaken, and roused up by flecking his face, hands, and feet. In less than ten minutes after the stomach injection he was singing at the pitch of his voice, and in twenty minutes more he was up and dressed. He never looked behind him, and the bout was completely out short.

In addition to the foregoing clinical evidence, the sulphonal antidote receives further confirmation in the case of J. M., æt. 65, who died from pulmonary apoplexy, and had been on sulphonal at the time. The post-mortem examination showed that the heart, which was very flaccid, stopped in diastole. All its cavities were gorged with blood, the valves and vessels atheromatous, and the aortic valves incompetent. The brain contained several ounces of clear serum, with a large part of the falx cerebri ossified.

The whole evidence, therefore, points to the condition as that of cardiac failure, or asystolism, with cerebral anæmia.

The indications for treatment, therefore, lie in the speediest and most effective method of stimulating and increasing the cardiac systole—the action of the digitalis group.

Cumulation.—The form of cumulation observed by Mairêt accords with my experience. He says that when the patient is saturated with the drug small doses have a soporific influence in keeping it up, which they did not previously. This looks to Dr. Leech, who quotes it, as a cumulative action in the case of sulphonal. I have found in such patients as L. S., a debilitated female, with no very obstinate insomnia, that with small doses of five or six grains at bedtime the effects were almost inappreciable for the first night, but then night after night the sleeping intervals lengthen, and go on doing so for some time, but soon, however, the dose, to keep up its effect, must be increased. But probably there is no cumulative power proof against habit, for sooner or later it overcomes and defeats the storing-up claims of the most cumulative drug. Females, probably, require smaller doses than males, but in my experience this is, however, by no means a rule, for probably sex is no more a determinant of dosage in regard to

sulphonal than it is in regard to other drugs. The cumulative action and potency of the drug is most marked in general paralysis, where its first apparent action is to intensify the ataxia and make the subjects tired. Six noisy and sleepless cases of this variety were given ten grains nightly. Sleep was enjoyed by the majority after the third dose, but rest by all.

The sleep of sulphonal is never sudden, and in ordinary doses never profound, especially to begin with. Rabbas says that sulphonal acts for a longer time than chloral hydrate, and that it will act where paraldehyde fails. Dr. Leech observes that all the hypnotics he refers to fail occasionally to produce sleep.

Dr. Morton ("Brit. Med. Journal," December 14th, 1889) records a case in which sulphonal succeeded in giving relief when morphine caused excitement. These examples go to show that hypnotics, like other drugs, have their characteristic indications, which is probably responsible for much of what appears as idiosyncrasy or sporadic failures. For why! The pathology of insomnia is almost *non est*, and therefore necessarily the whole subject of hypnotics uncertain and highly empirical, if not *in nubibus*.

From the form of cumulation already referred to it will be apparent that the smaller the dose the longer is the soporific influence delayed, but this is also favoured by the vigour of the patient and obstinacy of the insomnia. I agree with Dr. Leech that sulphonal, more than chloral or any other drug, is slow in producing its effects, though sleep may follow from one-half to three-quarters of an hour. A dose, however, that is no more than sufficient to induce sleep at night will, if administered during the day, do no more than keep them in a drowsy condition between sleeping and waking. When well saturated with the drug the effects are apparent from one to four days after it is discontinued. Like Garnier, I prefer large single doses to accumulated small ones. Burnet records cyanosis and a semi-comatose condition in a case after thirty grains, and Wolff the case of a child suffering from chorea, who, after taking four grains of sulphonal four to six times daily for six days, became apathetic and sleepy for many hours, with vomiting and frequent and irregular pulse.

What is natural sleep?—Kohlschütter judged of the depth of ordinary nocturnal sleep by the intensity of the noise required to wake the sleeper. Sleep, he found, reaches its maximum within the first hour. Dr. Wilson Philips, as quoted by Sir Henry Holland, believed that no sleep is healthy but that from which we are easily aroused.

In the sleep of sulphonal the whole sentient surface is slowly but completely cut off from conscious contact with the external world. When well wrapt in this sleep the skin anæsthesia is considerable, while a moderately conversational tone is sufficient to cause the sleeper to expose his pupils, which are much dilated, and but faintly react to a strong lamp-light. According to Rählmann and Witkowski, stimulation of any sensitive surface during sleep causes pupillary dilatation, but no such change, however, is elicited in the sleep of sulphonal. Sir Henry Holland considered that that which is often felt and described as *heavy sleep* is generally, we have cause to presume, the least perfect form of it, proving that it is not natural or complete. "That may be presumed generally the soundest sleep," he observes, "in which the tranquillity of the bodily organs commonly dependent on the will is most complete, and as to the varying effect of stimuli applied to sensation or perception, the other great function of the brain involved in this state." This test he regards as perhaps the most certain, were it not, he says, that we have cause to believe the different senses to be often, unequally closed, even at the same moment of time. The unequal closure is very apparent as observed in the sleep of sulphonal. The best proof given by the patient himself of the soundness of his sleep is, says that observer, the absence of consciousness or the recollection of having dreamed, which comes into closest connection with our waking existence. The absence of recollected dreams was to him, however, no proof that no dreams in such cases existed, for he believed, in common with such distinguished men as Aristotle, Sir William Hamilton, and others, that no moment of sleep is without some condition of dreaming, although this is no dogma of modern physiology. When we wish to go to sleep, says Michael Foster, we withdraw our automatic brains from the influence of all external stimuli. From a very different standpoint the monopolism or monotonism of Mr. Braid is a recommendation to much the same effect. Hypnotism or suggestive therapeutics is probably a still further development. Professor Bernheim, in his treatise, says that there is nothing by which to differentiate the induced sleep from natural sleep, although, he observes, suggestion may be realized with or without sleep, for "sleep is not possible in all cases, but the idea of being hypnotized must be present." Dr. Binns, in his "Anatomy of Sleep," I think, quoting from Richerand, and referring to the succession in which the organs of the senses are laid to sleep, says: "We hear and understand the

conversation of those around us when we can no longer distinguish their persons." "The organs of the senses laid asleep in succession awake in the same order." Schroff, as quoted by Stockman, in describing the onset of narcosis from cocaine in the frog, says: "One bridge after another which connects the organism with the outer world is broken," until at last "only the heart works on quietly and strongly, caring for the inner organism." These observations show, therefore, that natural sleep, and sleep however induced, are in many of their apparent manifestations very similar phenomena, although experience knows but one sleep of nature, and what is it?

*Defects in the Working of the Lunacy Act, 1890.** By R. PERCY SMITH, M.D., F.R.C.P., Resident Physician, Bethlem Royal Hospital.

I feel greatly honoured by being allowed to open a discussion on the working of this Act; but as Bethlem admits more private cases in the year than any other institution in the kingdom, and as the chief alterations in the law concern the admission of private patients, it is perhaps appropriate that the discussion should be opened by someone resident at Bethlem. I feel I cannot do this better than by bringing before your notice facts which have occurred, and if in doing this I weary you, it will be merely a small reflection of the weariness we have experienced in the last six months from this new law.

I will not waste time by further preliminary remarks, but will commence enumerating instances where there has been difficulty or defect in the working of the Act, as far as this hospital is concerned. The difficulties have been grouped according to the clauses of the Act.

Clause 6 (1).

"Upon the presentation of the petition the judicial authority shall consider the allegations," etc.

One of the greatest difficulties in the working of the Act, as far as the admission of patients is concerned, has been in getting a justice or magistrate to consider the petition, *e.g.* :

1. Case of L. W. (admitted to Bethlem Hospital, 14/5/90).— Upon presentation of the petition two justices in succession for trivial reasons declined to sign; but did not appoint a time for

* Read before the Medico-Psychological Association, Nov. 20, 1890.

consideration of the petition. Eventually the first justice was prevailed upon to sign upon a second appeal being made by the petitioner. In the same case the County Court Judge on being applied to certified that the signing would interfere with his judicial functions. This delay caused great anxiety and loss of time to the petitioner. (*Vide* letter of Dr. Outterson Wood to "British Medical Journal.")

2. Case of K. E. M. (admitted to Bethlem Hospital, 16/6/90).—The patient's father writes to another daughter, June 30, 2 p.m.: "I spent over an hour this morning, but did not get the papers signed. I am going again to Mr. —'s house at 6 p.m." At 6.15 p.m. he writes again: "I write to say that I got Mr. —'s signature this afternoon, having gone to Col. — in vain." The petitioner was a solicitor, who had come up from Herefordshire about his daughter, and who was compelled to waste valuable hours as described above.

3. Case of E. G. (admitted on an urgency order, 6/7/90).—Upon presentation of the petition the first justice applied to refused to sign, but did not appoint a time for the consideration of the petition, and referred the petitioner to the Marylebone Police Court. The petitioner having sent her daughter to the Court with the petition, its consideration was refused as she was not present herself, but no time was fixed for its consideration. A list of four justices acting for Marylebone was given her. Three out of these four were out of town; the fourth refused to sign, and said the stipendiary magistrate was the man to do it. The order was eventually signed by a justice in Lambeth. The petitioner was a widow, whose son was the patient, and the delay and worry was a very unnecessary addition to her troubles. (*Vide* my letter to "British Medical Journal," July 19, 1890.)

4. Case of S. J. A. (admitted on urgency order, 18/8/90).—The petitioner writes from Lewisham: "I have tried my utmost to get the order signed by a justice of the peace for this district. I have called on the three following, and find they are out of town." [Here follow the names.] "I have seen at the — Police Court the magistrate for the day, Mr. —, who informs me that it is his practice not to sign without first seeing the patient. I to-night have seen Mr. —, who also says he will not sign any order unless he first sees the patient, and from what he knows of his brother J.P.'s for this district, they would not sign without seeing the patient." The reception order was not signed till the last possible day of the patient's detention under an urgency order, and the case being an acute

puerperal one, it would have been most detrimental to her to have to leave the hospital. The petitioner was a clerk, who could ill-afford to waste a whole week in this manner.

5. Case of A. E. S. (admitted to Bethlem Hospital under an urgency order, 18/8/90).—The petitioner writes: “I have had to send on Miss S—’s papers to the Isle of Wight, asking Mr. —, the magistrate, to sign and return, for everyone I go to is away from home. We have everything excepting this one signature.”

6. Case of W. M. (admitted to Bethlem Hospital, 22/9/90).—The following telegram was received: “Magistrate out. Shall not be able to bring patient till about seven o’clock.” This patient had been originally admitted to a private asylum, but the justice who signed was found to be one not specially appointed under the Act, and his signature was therefore invalid, and the patient, who was rapidly improving from a maniacal attack, had to be discharged. He himself went up to the Commissioners, and asked to be allowed to remain as a voluntary boarder; but this was refused, and in a short time he became as bad as ever, was very dangerous, and eventually had to be taken to an infirmary, where he was certified and sent to Bethlem. One may say that the relapse was almost entirely due to the fact that, owing to the improper action of the justice, he had to be discharged too soon.

7. Case of A. S. (admitted to Bethlem Hospital, 23/9/90).—The petition had been taken to the sitting magistrate at a Police Court. He refused to sign unless the medical men were present who had certified, but did not appoint a time for the consideration of the petition. Eventually the order was signed by a justice of the peace, delay having been caused in the admission of a maniacal case.

The clause says, “the judicial authority *shall* consider,” etc. Yet in some of the cases given above there has been refusal to consider the petition for various reasons not mentioned in the Act. In the case of stipendiary magistrates, it would seem that even if the consideration of the petition at the time of presentation interferes with the proper exercise of other judicial functions, yet a time ought to be fixed for its consideration in accordance with the clause; and it should not be summarily dismissed.

Clause 6 (2).

“The judicial authority . . . may . . . visit the alleged lunatic.” In two cases admitted here on urgency orders the

patients have been much alarmed at the visit of the justice to the hospital for the purpose of seeing them before signing the reception order, one of them thinking she was to be sentenced to something, and the other that she was to be made a pauper lunatic. In both the bad impression remained for days and added to the patient's misery.

Clause 7.—Dismissal of Petition.

It would be well to have a statement as to what is considered to be the difference between dismissal of a petition [Clause 7 (1)] and refusal to make a reception order [Clause 7 (2)], and whether, in the latter case, a notice ought to be sent to the person in whose charge the patient is, where the alleged lunatic is detained under an urgency order. Magistrates and justices have refused to sign reception orders without giving any statement in writing to the petitioner of the reasons [Clause 7 (1)], and for other reasons than interference with the exercise of other judicial functions.

Clause 8.—Right of lunatic to be examined by judicial authority.

In cases where it cannot be certified that the exercise of the right of a patient to see a judicial authority is prejudicial, but yet he is in such a mental state as to be unable to know what he is doing, serving him with the notice of right to a personal interview with a judicial authority seems to be entirely superfluous, and needlessly adds to the abundant red tape provided by the Act. It is often difficult to decide whether it is or is not prejudicial to a patient to be seen by a justice. One female patient, who was served with the notice of right, was confused and worried about it for a week. Another patient, a general paralytic, was very much worse after the interview with the justice. In one case the notice of desire to see a justice remained unopened in its registered envelope for two weeks at the office of the justices' clerk of the petty sessional division in consequence of his absence from town. The justice subsequently made two visits to the patient at intervals of about three weeks. All this time the patient was annoyed by the delay, and the question was kept unsettled in his mind as to whether he was rightly detained.

Clause 9 (1).—Jurisdiction of judicial authority limited to place where the patient is.

Cases where difficulty has arisen under this limited jurisdiction will be mentioned in the consideration of Clause 35.

Clause 9 (2).—Power of judicial authority to summon and examine witnesses.

Case of A. S. (admitted to Bethlem Hospital, 23/9/90).—The sitting magistrate at a Police Court had refused to sign the reception order unless the medical men were present *to be put on oath*. This hardly seems to be a legitimate reason for refusing to sign, as by Clause 28 (4) every medical certificate for the purposes of the Act is equivalent to evidence on oath.

There appears to be nothing in the Act except perhaps the last phrase of this section, to justify a charge being made before the signature is obtained, or in connection with the process, yet in the cases of—

(1) C. F. T., reception order made at Bow Street, 19/8/90, the petitioner was made to pay 2s. for a stamp ;

(2) S. E. C., reception order signed 28/8/90, at North London Police Court, the same thing occurred ;

(3) A. M. D., reception order signed at Croydon, 13/9/90. Petitioner was asked by the justices' clerk if he was prepared to pay 11s. The order was signed on his promising to send the money.

These facts were communicated to the Lord Chancellor and his opinion asked on the legality of the charges, and since then a letter has been received from the Home Secretary saying :—
“ As regards the first and second cases mentioned in your letter that the reception order in these cases was properly chargeable with a fee of 2s. as being ‘an order directed by Statute’ under the schedule of fees to be taken at the Metropolitan Police Courts, which was authorized by the Secretary of State in 1874. As to the third case, it is presumed that the charge was made under the table of fees approved in April last, and now in force in the Borough of Croydon, though the Secretary of State has no information as to the particular items making up the sum of 11s. charged.”

A similar charge of 11s. has been made at Croydon in a subsequent case.

These new charges may be added to the burdens laid on the relatives of private patients by the working of the Act.

Clause 10.—Appointment of justices to make reception orders.

The number of justices specially appointed appears to be quite inadequate. It is almost impossible to properly represent the serious loss of time and additional worry caused to the relatives of patients and officers of the hospital by the almost

complete absence from town of justices of the peace during the holiday season. It requires to be seen by those who have the management of a hospital, constantly admitting a large number of acute cases, to be properly comprehended.

It would perhaps diminish the difficulty if all justices were allowed to act and not only a specially selected number. The new list of justices specially appointed for London for the ensuing year was not printed, or at least not circulated, till ten or twelve days after the appointment, at least one invalid order being signed in consequence. This will be referred to under Clause 35.

Clause 11 (6).

“An urgency order shall remain in force for seven days from its date, or if a petition for a reception order is pending, then until the petition is finally disposed of.”

In August considerable difficulty arose in getting proper justices' orders in the case of patients who had been first admitted on urgency orders.

Case of J. W. (admitted on urgency order 2/8/90).—The reception order was signed by a justice not specially appointed, and was therefore invalid. The friends could not find another justice to act, and the urgency order expired. Dr. Hyslop wrote to the Commissioners in Lunacy saying the patient was not in a physical condition for removal, and asking for advice. They replied that the patient must be at once discharged, but allowed that in the interim, before a fresh petition and two certificates could be presented, she might be admitted on a fresh urgency order and certificate.

This was done, the patient, who had cellulitis of the neck and was expected to need tracheotomy, being examined for certification in the hospital. In all, *six* certificates, two urgency and four others, were signed about this patient, and she died.

In the case of H. C. (admitted first on an urgency order 11/8/90), and S. W. (admitted first on an urgency order 15/8/90), the same difficulty arose. No specially-appointed justices could be got to look at the petition within seven days, and the Commissioners informed Dr. Hyslop (in my absence) that a petition cannot be said to be pending unless actually presented to a judicial authority. The original urgency orders, therefore, expired, and fresh ones were obtained, six certificates having been signed in each case. The Commissioners then apparently saw that to sanction a constant succession of urgency orders and certificates might defeat the object of the Act as to

the necessity for a judicial intervention in each case, and so they wrote to Dr. Hyslop:—

“Sept. 3rd, 1890.

“SIR,—

“With reference to the case of H. C. and the other recent cases of difficulty concerning which the Commissioners in Lunacy have corresponded with you, I am desired to impress upon you that their suggestions for the employment of second urgency orders were only made because of the peculiar and pressing nature of the cases. This mode of dealing with a difficulty is not one which should be allowed to become an ordinary practice. I am further to say that they consider, if this course should ever in future be necessary, that the person signing the urgency order should see the patient, and the medical certifier should examine the patient outside the walls of the institution. The patient, in fact, should be actually discharged and replaced in the care of his friends before the order and certificates are signed.

“I am, sir,

“Your obedient servant,

“CHAS. DEANS,

“For the Secretary.

“T. B. Hyslop, Esq.”

It is satisfactory to find that the Commissioners recognized that there were “peculiar and pressing” occasions, such as, for instance, the serious physical condition of the patient J. W., which justified breaking the letter of this Act; but that they should be driven by the law to say that in future, whatever be the condition of the patient, he or she must be taken out of the institution, shows the inhumanity of the Statute. That a medical man should be compelled to turn a dying person into the street because no justice of the peace or magistrate can be found to do his duty is a satire on our civilization. If there is the same absence of justices from town next summer, and there are similar cases admitted to Bethlem, it will be difficult to avoid breaking the law without doing violence to all humane feelings.

Clause 35.—“A reception order, if the same appears to be in conformity with this Act, shall be sufficient authority,” etc.

The Commissioners in Lunacy say that it is our business to see that all the papers on which a patient is admitted are in order and valid, and apparently the fact of a justice signing an

order which appears on the face of it to be properly signed is no protection to the medical superintendent.

The following are examples of difficulties experienced here from justices signing improperly and not in conformity with the Act. Many justices of the peace do not seem to have the inclination to examine properly the documents submitted to them or to be able to fill up a legal document with the care required in lunacy cases. The enormous amount of worry added to the relatives of insane people, and to the officers of the institution, has become almost unbearable, and one cannot see that it is ever likely to be less if the present clauses remain in force.

Case 1.—S. E. E. (admitted 19/6/90, under an urgency order).—The justice's reception order was imperfect, he having omitted the name of the signer of the second medical certificate, and it had to be sent back to him for correction.

Case 2.—A. M. H. (admitted 18/7/90).—The justice, a medical one, I regret to say, signed the order without the petition being filled in at all, and the papers had to be sent back for this addition, it being necessary for the justice to redate and initial his order; several days' delay in the admission of a maniacal case being the result.

Case 3.—H. T. T. D. (admitted 2/8/90).—The reception order was signed by a justice without the petition being filled in, and the paper had to be sent back to be corrected in the same way as in the last case.

Case 4.—J. W. (admitted 2/8/90, under an urgency order).—A justice who was not specially appointed subsequently signed, "on his own responsibility," on one medical certificate, and no petition. This case was referred to under the heading of Clause 11 (6) as having needed a second urgency certificate.

Case 5.—S. W. (admitted 15/8/90, under an urgency order).—The reception order was signed on his own responsibility by a justice not specially appointed, and was, therefore, invalid, and fresh certificates became necessary. This case was referred to under the same clause as the last one, a second urgency order and certificate having been signed.

Case 6.—F. W. (admitted 23/9/90).—The justice signed the reception order, although he had presented to him an unsigned petition, an unsigned statement, and only one medical certificate. This involved most serious delay in the admission of a maniacal case.

Case 7.—A. E. C. (admitted 22/9/90).—The justice signed the reception order, though there was no date given in the petition when the patient was last seen by the petitioner, and no address.

Case 8.—A. B. A. (admitted under an urgency order 2/7/90).—The justice signed the reception order, though the undertaking to visit the patient once in six months was not completed by the insertion of the patient's name.

Case 9.—A. W. (admitted 21/10/90).—The reception order was signed by a justice, though the petition was not filled in, and had to be sent back for correction, causing delay in the patient's admission.

Case 10.—H. W. L. was admitted first as a voluntary boarder, but becoming suddenly maniacal an urgency order and certificate were obtained on 27/9/90. The petition and two other certificates were then put in order, and the friends, after applying in vain to two London justices, went to one whose only official address for the purposes of this Act was given as being in the heart of London, but who, nevertheless, was specially appointed only for Surrey. He believed that, Bethlem Hospital being situated geographically in Surrey, he had a right to sign a reception order for a patient in Bethlem Hospital, and did so accordingly. The Commissioners in Lunacy refused to allow that the order was valid, unless he were also a justice for the County of London. On my writing to ask the justice if he had power to act for London as well as for Surrey, he said he had, and added the words "and London" to the order. The Commissioners then wrote to ask me if he were appointed for London before the date of his original signature, to which I replied that I had not been informed on this point, and I requested to know whether the Commissioners thought it a part of my duty to thus question the action of a justice. To this the reply came that it was my duty to see that the patient was admitted on a valid order. I then sent again to the justice, and asked if he had been appointed to act for London before the date of his signature, and he replied: "I have not before me the exact date of my original appointment, but I have no doubt that it was prior to the day on which I signed the enclosed order." A copy of this was sent to the Commissioners, and I said that I could not see it was part of my duty to question the justice further, and referred them to him if they wished more information. However, they wrote to ask if he were appointed for London under the Act of 1889, or that of 1890, and to settle the matter I went over myself to see the justice.

My surprise, annoyance, and, at the same time, amusement, may be imagined when I say that a little conversation revealed the fact that he had never been appointed for London at all. He said he was very sorry for his mistake, and he thought Bethlem Hospital was in Surrey. The Commissioners directed me that my only course was to discharge the patient, but as by this time a month had elapsed from the urgency order and the patient had recovered from his maniacal excitement, he was discharged "recovered." He was told that he was free from certificates, and he remained as a voluntary boarder in order to go to our Convalescent Hospital. It is hardly necessary to ask whether the work thus involved is at all necessary or desirable in the interest of the patient, and whether it is right that a medical man should be taken from his proper duties in this way.

Case 11.—R. R. (admitted under an urgency order, 23/10/90).—The patient lived in Sussex, and was maniacal. The petition had been duly presented to a justice for Sussex, who signed the reception order, but kept the petition, contrary to the wording of the second part of the clause. The patient was brought up to London on October 23rd, and being taken to Peckham House, to which institution she was destined, admission was, of course, refused, the papers not being in order. The husband signed a fresh petition, and then went to find a justice of the peace to make a fresh order. After driving about, and finding all the J.P.'s to whom he was sent were out, he came in despair to Bethlem. The patient having been travelling since 11 a.m., and it being now 6.30 p.m., it would have been a serious matter to have sent the petitioner off to another justice and then back to Peckham, as the patient was much exhausted from want of food and from struggling with excitement, so I got an urgency order signed by the husband, and had the patient examined in the cab at the gate of the Hospital by a medical man, who signed an urgency certificate. The husband was nearly out of his mind with anxiety and worry, and one cannot think otherwise than that the justice was by his action entirely responsible for the needless delay, worry, and harm to the patient.

Case 12.—H. B. L. (admitted 21/10/90), living previously at Twickenham.—The petitioner had driven about for three hours trying to find a Middlesex justice, and having at last found one, the latter refused to sign, and sent the petitioner over to a Surrey one, who signed a reception order in the fullest confidence that he was doing right. After admission it was found

that the order ought really to have been signed by a Middlesex justice, and was therefore invalid. The only thing to be done was, in accordance with the Commissioners' letter of September 3rd, previously quoted, to send the patient (a homicidal and suicidal one) out of the hospital in the care of his friends to St. Thomas's Hospital, where an urgency order and certificate were signed, and he was then re-admitted. Two more certificates and a petition were prepared and presented to a justice, whose name was in the original list of those appointed for London (the patient now being in the county of London). The justices' clerk did his best to persuade the friends that a Middlesex magistrate should sign, but I had informed them that the patient was now in a different jurisdiction, and that a London justice must act. To this they adhered, and the justice signed. It will hardly be credited that this gentleman signed, though he no longer had power to do so, his name not being in the new list for the ensuing year. This we were at the time quite unable to tell as the new list was not sent to us till twelve days after the new appointments were made, and it is abominable that this delay should have led us to give a wrong justice's name to the petitioner, and that the justice should act when no longer specially appointed. The only thing, however, to do, as soon as the second order was found to be invalid, was to go myself to another London justice, after seeing the Commissioners on the matter, and get a third order, the second group of certificates being still just within date. In all five certificates and three reception orders were signed in this case.

This dividing up of the country for the purposes of private lunacy cases into a number of little foreign states, no justice having any power to sign for a patient in any county but his own, even if he has every opportunity of investigating the case or seeing the patient, renders the working of the Act exceedingly difficult in cases such as this, and imposes very unnecessary delay and anxiety on the friends. It is worthy of note that the first mistake in this case was made by the very justice who was the proper one to make the order, and who declined to exercise his judicial functions.

Case 13.—E. H. (admitted 21/10/90).—The petitioner went by previous arrangement, so he tells me, at a definite hour (two p.m.) to a Police Court. The magistrates' clerk, however, came out and said there were thirty summonses, and he could not attend to the matter, and that there must have been a misapprehension. No certificate was given to the effect that the

matter would interfere with the ordinary work of the court, and no time was fixed for the consideration of the petition. The addresses of two J.P.'s were then given to the petitioner, but both were out. At the residence of the second one another address was given, and this third J.P. signed his name merely to the reception order, but did not fill it up. His name was not in the list specially appointed for London. The patient was then brought here with the order in this imperfect state, and of course she could not be admitted.

As she had been 2½ hours in a cab, and was getting exhausted and worried at the meaning of all this travelling, I had to recommend her husband to take her home again—fortunately not far off—while he went to find another justice.

In this case the patient, in addition to being insane, had chronic Bright's disease, and delay and exposure to cold were detrimental. The petitioner was also nearly driven mad.

Case 14.—F. M. W. (admitted under an urgency order, 22/10/90).—The justice merely signed the reception order without filling it up, and it had to be refused till put in order by him.

Case 15.—A. C. (admitted 5/11/90).—The justice signed, though the petition was not signed, and there was no undertaking to visit the patient. In his order he omitted the names of the medical men, and inserted that the petitioner was the wife of the patient's husband. It had all to be sent back, and the errors corrected, thus involving considerable delay in the admission of a suicidal patient. Surely such a mistake as was made in this order should not be made by a justice of the peace.

Case 16.—E. S. C. (admitted on an urgency order, 1/11/90).—The justice signed the reception order, though the petitioner had not seen the patient for three months, and it had to be sent back to be re-dated after the petitioner had been to see the patient. The justice does not appear to have examined the petition.

If medical superintendents were to make such mistakes as these with regard to the dates in forms, they would be very properly censured by the Commissioners. Who is, however, to censure the justices of the peace and see that *they* do their work properly?

Case 17.—M. E. F. (admitted 7/11/90).—The order was signed originally by a justice for Surrey. On referring to our list for the ensuing year I could not find his name, and refused to accept the forms. I afterwards heard that this estimable

justice "forgot" he was not on the list, and signed. The certificates ran out of date, and had to be re-dated. Another justice refused to sign because of the alterations, and because of the erasure of the name of the first J.P., and because the medical men were not present to swear to their signatures. Eventually a third justice was prevailed on to act, much utterly unnecessary delay being caused.

I think I have said enough to show that the Act has caused in many cases the most unjustifiable delay, that many justices of the peace seem utterly incompetent to perform the duties required of them by the Act, and that there has been a great deal of worry and annoyance in consequence.

Fortunately, however, for our own sanity, we have found a few justices who have done all they could to make the Act work smoothly for us, and without whose help we should often have been in great difficulty.

It appears to me to be advisable:—

1. That all justices should be allowed to sign in order to avoid the constant mistakes of signature by those who have no right to sign, and on account of the impossibility of finding out satisfactorily who is and who is not specially appointed.

2. That the jurisdiction of a justice for private lunacy cases should not necessarily be limited to the place "where the lunatic is" (Clause 9).

3. That in some way or other justices and magistrates should be informed clearly as to their duties and responsibilities under the Act, and be made to carry them out.

4. Provision should be made that a sufficient number of justices should be on duty during the holiday months in order to prevent the difficulties of the past summer.

5. Arrangements ought to be made by which the list of justices specially appointed should be printed and circulated within twenty-four hours of the appointment in order to prevent mistakes in the admission of patients on the orders of justices who may have "forgotten" they are no longer entitled to act. If special justices are still to act, there ought to be a recognized official register of them.

Since writing the above the following additional facts have come to light:—

1. Case of J. S., (admitted 5/9/90.)—The petition was taken to a Police Court by the patient's daughter-in-law. She was put to sit among a number of rough people and was extremely annoyed and hurt at this. She was subsequently

allowed to go into the Clerk's Office, and her papers were looked over. She was not allowed to see the magistrate, but the clerk said to her "Do you suppose we have nothing else to do but send people to lunatic asylums?" and gave her the papers back. There was no statement by the magistrate to her that the signing would interfere with the work of the court, and no date was fixed for the consideration of the petition. She speaks of the treatment she received as being "most insulting," and is prepared to swear to it if necessary. She had to go to a justice to get the order signed. Can such treatment as this be considered necessary in the interest of liberty of the subject?

2. Case of H. H. (admitted 21/11/90, on an urgency order).—The petitioner subsequently went to two justices whose addresses had been given her; both were out, but at the residence of the second one the name of another J.P. was given her, and he signed. When the order was brought his name could not be found in the list specially appointed for London, and another justice had to sign. As this was the second occasion on which this particular justice had illegally signed, the Lord Chancellor was written to on the subject.

3. Case of J. P. T. P. (admitted 26/11/90).—The date of the justice's order was Nov. 21st, the date of one of the certificates was Nov. 22; if these dates were correct the justice could not have had the two certificates before him when he signed. As the patient, however, came from Buckinghamshire it would have been impossible to send him back, and the wrong date was regarded as a clerical error which might be corrected within fourteen days, and the patient was admitted.

4. Case of K. S. F. (admitted 25/11/90).—The patient was brought on Nov. 25 with the justice's order dated Nov. 27, and admission had to be refused till it was corrected.

5. Case of G. F. W. (admitted 27/11/90).—The petitioner went to a justice, who looked at the papers, and although the case was very clearly described in the certificates, and the petitioner had someone with him to give corroborative evidence, he refused at first to sign, and said the matter ought to have been brought before the justices in the morning. He objected to sign unless the papers were all duly filled up by the clerk, and objected to the petitioner filling up the petition himself. He eventually signed the reception order in blank, though the petition was not filled in, on condition that the petitioner should go subsequently to the

office of the justices' clerk to get the particulars inserted. On going there the clerk was away, but a junior made the petitioner fill in the details in the petition, and he himself filled in the blanks in the justice's order. He then handed the papers to the petitioner, and said "Five shillings, please," which was paid.

A good deal of time was wasted in the admission of a serious case by the action, or rather inaction, of the justice. The visit to the clerk would have been totally unnecessary if the justice had taken the trouble to sign the papers properly. The only reason for it seems to have been that the petitioner might pay five shillings.

R. P. S.

CLINICAL NOTES AND CASES.

Stuporose Insanity Consecutive to Induced Hypnotism. By M. J. NOLAN, L. and L.M.K.Q.C.P.I., L.R.C.S.I., M.P.C., Fellow Roy. Acad. Med., Senior Assistant Medical Superintendent Richmond (Dublin District) Asylum.

"Je n'ai jamais rien vu survenir de grave"* wrote M. Richet to Professor Heidenhain, giving the results of the experiments he had made in hypnotism; and no doubt he was fully justified in doing so, since only one individual tested by him suffered any inconvenience, and that in a very slight and passing degree. Putting this evidence with his own observations, Heidenhain not unnaturally asserts that "there is no ground whatever for objection to hypnotic experiments,"† and again he says "it must be remembered that the necessity for precaution has not arisen as the result of unfavourable experience, but merely because it is our duty, for the sake of the person experimented on, to be over careful rather than not careful enough."‡ The case under present consideration is, however, calculated to shake our confidence in such assurances of complete immunity from danger in hypnotic experiments, especially when conducted by unskilled persons; and indicates, moreover, that Professors Richet and Heidenhain owe their happy results as much to good fortune as to the

* "Hypnotism," Heidenhain, p. 100.

† "Hypnotism," Heidenhain, p. 101.

‡ "Hypnotism," Heidenhain, p. 102-3.

perfect freedom from risk they calculate on with so much certainty. Still further, it confirms the remarks of Binet and Féré, who say "with respect to the performance of such experiments in public, it should be condemned just as we condemn public dissections of the dead body, and vivisection in public."* But this note of warning, though important, is perhaps the least interesting of the many considerations to which a study of this case gave rise, since it was particularly rich in the various psychological and physiological manifestations appertaining to the hypnotic and stuporose states. For this reason I desire to bring it under notice, and, owing to the kindness of my chief, Dr. Conolly Norman, who placed the man under my immediate charge for observations and treatment, I am enabled to do so. My grateful acknowledgments are also due to Surgeon-Major Martin, A.M.S., who kindly furnished me with the notes made by him on the patient's condition during his period of treatment at the Royal Infirmary, Dublin, prior to his removal to this asylum.

Previous History.—Patient is one of a large family, all healthy. Two of his sisters were "nervous;" no exact history of any family neuroses can be obtained. He was taken from school at an early age to help his father at the stone-cutting trade; but he grew tired, after a few years, of the monotony and fatigue this occupation involved, and consequently abandoned it to enlist. His life so far had been quiet, and his character moral and temperate; nor did it change for some time after his enlistment. Scarcely, however, had he been promoted to the rank of lance-corporal when his troubles commenced. His habits became irregular, and he found he had not even the mental capacity to properly discharge the duties of his position. This sense of unfitness daily increased with his misconduct, until at length he was reduced. He now became unhappy, led an intemperate and licentious life, indulging in excesses as far as his opportunities and means permitted. In the October of 1888, when physically unstrung by dissipation of the grossest kind, and when at the same time he was in a state of extreme nervous tension, he attended an entertainment, at which a lady undertook to perform some experiments in hypnotism. He presented himself as a subject, feeling highly excited, "his nerves all tingling." The mode of producing hypnosis was the common one of stimulating the sense of sight by causing him to gaze fixedly at a brilliant object. To this he quickly succumbed. Within a few minutes he was dead to his surroundings, and at no time afterwards had he the slightest recollection of any event that took place during his trance—as is usual in cases of profound hypnosis. Of

* "Animal Magnetism," p. 378.

what happened immediately afterwards we have no means of learning, but he has an indistinct recollection of leaving the stage; his first conscious feeling being an intense frontal headache. This was followed by a sense of extreme languor, which increased to such a degree that he had to lie up for some days. He was all this time "confused and queer," but recovered so far as to be discharged "improved" from the hospital. Yet he did not feel well—"his head all wrong;" could not grasp orders given to him; "tried to steady himself;" heard people call him "stupid;" had a distinct vision of a woman threatening him. He now felt impelled to drink heavily, committed various breaches of discipline; was put under arrest, but his physical state being low he was sent to the infirmary on the 4th of October, when Surgeon-Major Martin notes:—

"Patient was under treatment a short time since for peculiar pains in his head, apparently of a neuralgic character. States that some time ago he was mesmerized by a woman who gave a performance in the Richmond Barracks, and that since then he has been more or less affected. He improved considerably; was discharged to duty, but shortly after going out became very peculiar in manner, refused to go on parade, absented himself from duty for three days, at the expiration of which time he was apprehended near Beggar's Bush Barracks, having wandered about in the interval, and threatened to commit suicide by drowning himself. He was consequently sent here to-day for observation for insanity.

"*Present State.*—He has a peculiar staring expression; eyebrows raised; eyelids twitching; is very restless, and when spoken to replies in a vacant and irrational manner. He does not complain of frontal pain, and his general health is good.

"Oct. 10, 1888.—Same state. Is very restless in his sleep, constantly tossing about and rambling. Says he is married to three women. Complains of being visited at night by an ugly fat old woman, who tells him to wash clothes.

"Oct. 20, 1888.—Condition unchanged. Says he would like to fight, but so far has been quiet and docile.

"Oct. 28, 1888.—Same state. Makes foolish remarks; is restless at night, talking in his sleep. His health keeps very good. Prescribed bromide of potassium.

"Dec. 6, 1888.—Mental condition unaltered. Continues to talk in a foolish way, and looks very silly. He is perfectly quiet and tractable. His habits are cleanly, and he gives no trouble to the attendants.

"Dec. 12, 1888.—No change to note in habit or demeanour.

Jan. 3, 1889.—Passed Invaliding Board, which recommends his transfer to Richmond District Asylum for further observation and treatment.

"Jan. 14, 1889.—Transferred to Richmond Asylum."

Jan. 14, 1889 (on admission to Richmond Asylum).—Stands erect

and rigid; expression vacant; eyelids drooping, and affected with intermittent blinking movements; eyeballs rolled upwards and slightly inwards; pupils widely dilated, sluggish reaction to light and accommodation. Nostrils expanded and sniffing; lips pursed and tremulous. His arms hang flaccidly, the hands, with out-stretched palms, beating the sides of the thighs with a regular rhythmical movement. He is silent, dull of comprehension, responding to questions only when interrogated on the same point repeatedly. When shaken and spoken sternly to there is a very gradual awakening to a condition akin to "expectant attention." When unnoticed there is an increase in the frequency and intensity of the automatic movements, and a relapse to the stuporose state. Memory defective; does not recollect circumstances of recent occurrence. When questioned, replies, if given at all, are monosyllabic and incoherent. The reflexes are to a slight degree exalted.

Jan. 16, 1889.—Condition noted above remains unchanged. More detailed examination reveals the presence of the condition designated by Charcot "*l'hyper-excitabilité neuro-musculaire*," well marked in the facial, less pronounced in the muscles of the limbs. Westphal's "paradoxical contraction," or, as Erlenmeyer prefers to call it, "contracted by antagonistic distention" (*i.e.*, flexion maintained by stimulation of the extensor muscles of a limb already flexed) was looked for, but could not be demonstrated, though later, when the stuporose state gave way to a hysteroid condition, it was fairly-well marked. There is a noticeable want of accord between the thoracic and abdominal respiration—the former quick and shallow; the latter slow and unusually full. There is also well-marked vaso-motor disturbance—rapid alternating flushing and paling of the face. Owing to the position of the pupil and the disturbing effect of light on the eye, the condition of the fundus oculi could not be ascertained.

Jan. 23, 1889.—Very little change has taken place in his mental state since last note. He has been very quiet, never speaking except when spoken to; and then answering very slowly "Yes," "No," or "I don't know." He eats fairly; he is reported as "restless" at night, tossing in his bed with half-closed eyes; now and again starting up in fright. Movement is slow and clumsy. When spoken to he does not seem to grasp the meaning for some time, even when the question put is in reference to his own recent actions, he repeats the latter words of the query in a dull, echo-like tone—as, for instance, "Have you combed your hair to-day?" is answered by "Combed your hair to-day." He rarely sits down, standing slapping his hands gently to and from his sides, all the while looking vacantly before him. On this date he is sent to the School Division.

Feb. 1, 1889.—Since last note he has grown gradually brighter. There is a marked decrease in the stupor during the day, with a relative increase of sleep during the night, the hypnogenic zones evidently recovering their normal balance. The movements of the

eyelids and arms have become less frequent, and more irregular and intermittent; the pulse slower and fuller; the pupils less dilated; the reaction period reduced. The psychological faculties are also more acute—a false accusation excites a blush; a word of encouragement brings a pleased expression to his face, which, when in repose, is vacuous. The tendency to neuro-muscular hyperexcitability has almost entirely disappeared, and the phenomena of antagonistic contracture can be induced, but not in a very marked degree. The normal harmony between the thoracic and abdominal respiration has been restored. He takes part in an automatic manner in the various school exercises, enforced musical drills, associated singing classes, but does not voluntarily engage in any work.

Feb. 7, 1889.—Since last date the stuporose condition has steadily cleared away. There has been a gradual lifting of the veil, and each day gave evidence that all mental operations—volitional, emotional, and intellectual—were asserting their powers over the abnormal condition that clogged the due performance of their functions. With the re-awakening has come a sense of resistance to the suspending influences; he now seeks to throw off the dreaminess, and is gratified with the success that attends his efforts. He yawns very often, stretches his legs and arms, rubs his eyelids; now and again gives his whole body a shake. He answers more readily. He complains that a woman comes to his bedside at night to threaten him. He has come to a knowledge of his confinement here; has an indistinct recollection of the events immediately antecedent to his removal to the Royal Infirmary; and is unable by any effort of his memory to fill the blank dating from the moment he was hypnotized to his committal to the military prison. He feels acutely that he is a “lunatic,” knowing that it precludes him from further service.

Feb. 17, 1889.—Depression, and hysterical and emotional manifestations, are now the prominent features of the case. He regrets deeply that his mind gave way, he weeps at the thought of the sorrow his misfortune must have caused his parents, and sobs at the reflection that he cannot join his regiment again. A general feeling of nervousness, and *globus hystericus* are complained of, as well as a want of interest in life. Yet when reminded that very recently he attempted suicide he states he has no recollection whatever of it, and that even in his present sad state he is not by any means inclined to end his troubles by that method. On the contrary, he is anxious to return home to prove himself recovered, and to start on some new path of life. He feels restless; is unable to employ himself indoors; is losing sleep and appetite. He is now sent from the school to the farm division.

Feb. 27, 1889.—Mental and physical improvement to note. He eats and sleeps well, has in a great measure thrown off his depression, being buoyed up by the hope of speedy discharge. There is little to indicate the prolonged stupor and subsequent depression

through which he has passed. He has touched his normal mental level, which is of a comparatively low type, with a strong neurotic colouring. He is apprehensive, when spoken to, of hearing evil news, and when one day asked as a test to submit to a hypnotic experiment, he betrayed abject terror, and begs that he should not be urged to go through such an ordeal; at the same time he confessed his inability to resist the order should it be insisted on. He adds, moreover, that even looking at a gas light now confuses him, and that he is unable to sleep with uncovered head in a room where there is one burning. There is still a very marked vaso-motor disturbance manifested by flushing, paling, copious secretion of pale urine, and facial perspiration after mental strain.

March 7, 1889.—The past week has confirmed his convalescence, and much of the nervousness has been subdued by tonic treatment. He has now come to look on his attack of stupor as a misfortune of the past, not to be thought of again. He now looks forward, and is of good cheer. The pulse is firm, skin cool, physique robust, and spirits excellent. His expression, naturally dull, is to-day bright, in anticipation of his removal this afternoon by the military authorities. He is discharged recovered, five months from the date of the onset of his attack.

Remarks.—The foregoing history at once eliminates any suspicion one might be inclined to entertain of malingering, so common in persons of this class. The physical manifestations were of a type too unusual to be simulated by one of such low mental calibre. Putting, therefore, that consideration aside, we find in the individual under notice the typical subject required by hypnotic experimenters for the production of the most remarkable phenomena. On the one hand the bout of excess plunged into immediately before he submitted himself to the hypnotic influence, furnished more than the degree of susceptibility which “depends on a greater or less degree of sensory irritability.”* On the other, we have this psychical hot-bed, centred in an “active muscular individual,”† to whom Mr. Hansen gives his preference. In a word, we have a subject made, as it were, to order for the exemplification of the hypnotic phenomena. His mind all on tension with curious expectation, vibrating with a sense of conscious distinction, this individual gazed earnestly and steadily at the bright object held by the operator, seeing it as a distinct luminous point, until gradually it was lost in an ever-widening golden nebula, which shut out all else. The sensorium hyperexcited for

* Heidenhain, p. 30.

† *Ibid.*

many days and nights preceding is lulled to rest by the withdrawal of all stimuli, save one, which demanding for its reception the residual nerve force, exercises a lethal influence on consciousness—the last spark is taken from the well-nigh exhausted battery—the last flash is followed by profound darkness. Here it is that this case becomes of peculiar interest to the alienist. Before, however, proceeding to discuss the very extraordinary phases of mental disturbance that closely followed the experiment, I desire to touch briefly on the condition of a brain so rapidly and thoroughly deprived of its highest functions, and destined before its complete restoration to its normal state to be subjected to the suggestions of disordered senses, to the atrophic influence of prolonged stupor, and the ranges of emotional outbursts.

It has long since been remarked that * “if the supply of arterial blood be altogether withdrawn the brain ceases to act, sensibility becomes extinct, and the mental powers are no longer manifested;” and again, that when perfectly oxygenated blood is sent to the head “dark and venous, exactly as received by the lungs, but being unfit to excite or support the action of the brain, the cerebral functions become impaired, and ere long a cessation of all the functions of sense, thought, and feeling may take place.” Very recently a careful observer has pointed out that a vast number of cases of stupor are due to cerebral malnutrition, the result of organic lesion—“a steartic condition of the arterial system of the brain”†—the remainder originating in malnutrition due to functional derangement of the vascular supply. For many years Heidenhain held that the allied condition of hypnosis might be explained by the theory of cerebral anæmia, but has now discarded it for the hypothesis of “inhibition of the ganglion cells of the cerebral cortex.”‡ Now in the case under notice there is a rare combination of psychical disturbances—lethargic, stuporose, and explosive—consequently for an explanation of such opposite conditions we must seek a complex cause; “anæmia” on the one hand, and “ganglionic inhibition” on the other, fail to satisfy us, nor does the union of the two solve the difficulty. Where then are we to turn for

* Combe, “On Mental Derangement,” edited by Sir Arthur Mitchell, K.C.B., p. 46.

† “A Study of Stupor,” Dr. Whitwell, “*Journ. Ment. Sci.*,” Oct., 1889.

‡ “*Animal Magnetism*,” Heidenhain, p. 46.

help? Might I presume to venture on an opinion I would suggest that a chain of effects is worked out somewhat after this fashion:—

(a.) *Primary* impaired nutrition of the nerve cells composing the ganglionic centres, increasing their irritability and susceptibility to inhibition, such malnutrition being the result of excesses (alcohol and sexual), whereby there has been an undue strain on the nervous system.

(b.) *Psychical* phenomena—(Lethargy-stupor-delusions; Hallucinations; Suicidal impulse; Emotional and Hysteroid outbursts)—started by stimulation of the optic nerve.

(c.) *Vaso-motor* disturbances due to the deranged functional activity of the nerve centres, affecting and maintaining the various abnormal psychical phenomena.

In support of this view it may be remarked that (as is well known) the results of excesses in the first instance are manifested through the nervous system long before any coarse physiological change has taken place in the organ which has been ill-treated. Here the overstrain lowered the inherent vitality of the nerve-centres, and rendered them more than usually susceptible to inhibition. Let us see how the hypnotic strain is borne. The optic nerve being stimulated, "the luminous vibrations directly transformed into nervous vibrations by the peculiar action of the retina, are all at first concentrated in the grey centres in the optic thalamus, and radiated thence chiefly into the antero-lateral regions of the cerebral cortex."* Now, bearing in mind that the cerebrum itself has a very marked influence over the vaso-motor centre, as is evidenced by the phenomena of blushing,† it may be assumed that the "nervous vibrations" having found their way into the cortical substance at length reach the chief vaso-motor centre. This *complex-composite* centre is situated in close proximity to, and intimately connected with many other important centres in the locality, the result being that their functions are thrown out of gear in consequence of their diminished blood supply—stimulation of the vaso-motor centres causing contraction of the cerebral vessels. Thus we have the centres not alone affected in their nutrition in *quality*, but also in *quantity*, at a time, too, when they have to bear up against the exhaustion consequent to the induction of hypnosis. Deprived of their intrinsic support, and overcome by external influences, the cerebral functions are at first

* "The Brain and its Functions," Luys, p. 261.

† Landois and Stirling's "Physiology," p. 677.

rendered dormant. With improved nutrition a struggle for reinstatement is entered on, but the subjugation of the will has been so complete that the period of stupefaction is prolonged unduly, until at length, after violent emotional oscillations, the equilibrium is once again restored. Having thus ventured to form some idea of the psychical changes and their *modus operandi*, it will be interesting to note some of the more uncommon characters of the case.

(1.) *The undue length of the period of stupefaction during which volition and consciousness were partially dormant, and the patient was altogether irresponsible for his actions.*—Maudsley has pointed out that in a minor degree all hypnotic states are followed by mental enfeeblement, and says in this connection, "after coming out of this trance a little time must elapse before the will resumes its power; for a while he remains unduly susceptible to the suggestions of others, and too easily influenced by commands."* Here, however, the suppression of the will was so absolute, and exercised such an undue effect, that it re-established itself with difficulty, for a time imperfectly, and as far as observation went, permanently weakened. Under certain circumstances the subject could at this earlier period be so manipulated that as a passive agent he would perpetrate crime and outrage. It is needless to dwell on the medico-legal importance of this fact; and Krafft-Ebing has very recently shown that the danger is none the less when the ideas are auto-suggestive, or post-hypnotic, than when suggested by a third person. This condition in the patient lasted nearly four months.

(2.) *The uncommon character of the Hallucination.*—Associated with the usual visionary disturbances of an ill-defined and intermittent kind, was the constantly-recurring image of a threatening old hag—a picture so vivid that it inspired terror long after its unreal nature was fully understood. The persistence of the hallucination intensified at every repetition is very striking, and may possibly have originated in the distorted visual image of some movement of the lady operator at the moment he was emerging from the profound hypnotic trance. It is to be remarked that the hallucination recurred at periods when the patient was between waking and sleeping, and that it persisted long after the delusion associated with it had passed away. In this latter respect it differed from Hack Tuke's experience of like conditions, for he states that "this cerebral impression may persist for

* "Pathology of Mind," p. 60.

some time, but it is gradually effaced. It disappears with the delusion with which it was associated."* In few recorded cases has the hallucination taken so complete and distinct a nature. Stirling and Landois † are of opinion that "hallucinations occur only in some individuals, when they awaken from the deep sleep (usually consisting of sparks of fire and odours) being very strong and well pronounced," but here we have one of a more distinct and distressing type. No "sparks of fire or odours" were complained of, but "flashes of light and floating, dark objects" caused some distress at the earlier part of the disorder. The old hag's features were described as "cruel and awful," her clothes as "bright and white," her features as "threatening." She always seemed first to rush at him and then come to a standstill a little distance from him. In connection with this hallucination it is also interesting to note the various mental conditions which influenced it. At first we have a delusion which creates a belief in the material existence of the imaginary assailant. Then we have (during the period of the re-establishment of the higher psychical functions) terror still inspired by what has been recognized as a delusion and despised as such. A feeling of fear and helplessness springing from what is known and felt at the same moment to be the production of a morbid mental state (a state which Pierre Janet terms "*misère psychique*") is a condition which beautifully illustrates a mental state in which "the compact consciousness of the supreme centres has been broken up, a disordinate tendency fostered, and the disassociated centres are prone to continue their abnormal and independent action."‡ This state, the same observer asserts, frequently follows too oft-repeated hypnotic experiments in the same individual, and he concludes by saying "and assuredly that way madness lies."§ Tuke coincides with this opinion, differing from Charcot, who, he says, repels the notion that persons suffer any inconvenience in consequence of hypnotism. Still less does he admit its effects are dangerous. It may be that the higher sensory organizations of our Gallic neighbours are more easily restored to their equilibrium owing to their inherent versatility than those of the stolid Briton, but certain it is that very varied experiences have been gained on different sides of the Channel.

* "Sleep-walking and Hypnotism," p. 89.

† "Physiology," p. 686.

‡ Mandesley, "Pathology of Mind," p. 61.

§ "Sleep-walking and Hypnotism," p. 119.

(3). *The Suicidal Impulse.*—We have noted that the condition of the patient was to a certain extent dangerous to others; we have now to consider the suicidal impulse which might have proved fatal to himself. At a time when active mental depression had ceased, and volition was practically dormant, he is found to make a determined and apparently deliberate effort to cut short his life. Self-destruction springs up when self-preservation is sleeping, and external influences alone avert a catastrophe of a fatal character. Since at no time prior to the hypnotic trance did mental depression give rise to any such idea, its occurrence immediately afterwards may be considered an outburst of melancholic despair, availing itself of the lethargy of all counteracting influences, and which would have never reached so grave a climax had not the normal functions of the brain been partially suspended. Not even in the dark days of despondency which overshadowed him when emerging from his stupor, and during which all the fruits of his misfortune dawned upon him, did he for one instant contemplate such a loop-hole from his troubles. When informed of his attempt at self-destruction he was horrified to think of its possible results, and could scarcely believe that he was at any time so deranged. For an explanation of this phase in his history, I am inclined to think that during the period of stupefaction there was superimposed a transient acute depression of a nature described by Bevan Lewis. "Occasionally," he says, "as the *outcome of alcoholic intemperance* we meet with a form of melancholic hypochondriasis which once recognized will not be readily overlooked, *associated with extreme mental enfeeblement of will*, and *desperate impulsive conduct* as its miserable accompaniment. Such cases are highly *neurotic by heritage*.* The italics are mine, to indicate that the patient had in a very pronounced degree the conditions requisite for the production of this mental state. It is of course possible that this impulse might have been the result of suggestion, but there is no evidence that such was the case.

(4.) *Sleeplessness* was in this, as it is in so many other cases of mental disorder, the *bête noire* of the physicians. With its amelioration a gradual return to the normal condition was noted, consequently it was evident that a complete regulation of the hypogenic zones was the best means to recovery. Every effort was therefore made to convert the light hypnotic

* "Mental Diseases," p. 147.

state into one of deep natural sleep; various drugs were tried with varying results, the best effect being obtained from sulphonal. This drug (the action of which was very thoroughly investigated by my chief, Dr. Conolly Norman, to whose favourable reports on it its present extended use in this country is mainly due) was given for one prolonged period in thirty-grain doses at supper, and at no time did it produce disagreeable symptoms. Its use was interrupted now and again, with the result that sleep became disturbed, appetite fell off; and there was an increased disquietude during the stage of depression. I have little doubt that it very materially affected the favourable result in this case.

It may, perhaps, be considered that too much has been said on this isolated case, but the writer's desire is very great that a mental condition so complex may be discussed by competent judges. Hypnotism is fast taking its place as a science, and anything touching it should be carefully considered, and though asylum physicians may not hope for very much from it as a therapeutic measure, it cannot fail to be of the highest interest to them as psychologists. Dr. Moll,* of Berlin, says "it is a mine for psychological investigation," and confidently expresses the hope "that the study of it will help to clear up the hitherto dim field of mental life, and will help to free us from the mountain of superstition instead of increasing it." He is supported in this view by Kraft-Ebing, Max Dessoir, and Beaunis, the latter being of opinion that "hypnotism is to psychologists what vivisection is to physiologists."

A Case of Homicidal and Suicidal Insanity.† By FRANK ASHBY ELKINS, M.B., C.M., M.P.C., Assistant Physician, Royal Edinburgh Asylum; late Assistant Medical Officer, Greenock Parochial Asylum and Poorhouse.

William W., aged 33, a married man, who had lately been employed as a hall-porter, having made a homicidal attack upon a citizen of Edinburgh, was, by a warrant of the Sheriff, admitted from the Calton Jail to the Royal Edinburgh Asylum, on April 26th, 1890.

Disposition.—He was sensitive, cheerful, very excitable, rather proud, and sometimes quarrelsome.

Habits.—Although alcoholic, he had led a fairly steady and industrious life until two years ago.

* "Hypnotism," Albert Moll, p. 333.

† Reprinted, with some alterations and additions, from the "Edinburgh Medical Journal" for September, 1890.

Previous Attacks.—These had been four, and all of them had occurred since November, 1888. He had been treated at Londonderry, Perth, Greenock, and Edinburgh Asylums, having been discharged “recovered” from each asylum, after an average residence of three months’ duration.

Hereditary History.—A great aunt was insane, a brother was alcoholic and died of kidney disease, and a sister died of phthisis.

History.—He was the youngest child of his parents. As far as can be ascertained, his childhood and youth appear to have been normal. When a lad he had two severe falls from scaffolding, and in one of them he injured his back, and is said to have been unconscious for a few minutes. In 1874 he came to Edinburgh, and was employed as porter and “boots” in various hotels. For the long period of eight years (1880 to 1888) he was hall-porter at the Liberal Club in Edinburgh, a position of some trust, and requiring a good deal of intelligence. The manager of this club says that he did his work well, but that he was very excitable and inclined to quarrel and fight when off duty, especially after taking a little drink, which “went to his head” and made him quite unreasonable and unmanageable. The members of the club speak highly of him, as having been obliging, attentive, and of agreeable manners, and he was very popular among his own acquaintances.

In 1885 W. consulted Dr. John Playfair for “fainting fits,” one of which seized him in the doctor’s consulting room. Dr. Playfair knew W. well, and has some indistinct recollection of his becoming faint in the consulting room, but thinks he must have regarded the faint as a slight temporary heart weakness and nothing more.

During the general election of 1886 it was part of W.’s duty to receive and post up a great many telegrams, and taking the keenest interest in politics, he became greatly excited, and behaved “crazy like.” He was at last dismissed for drunkenness, but on account of his long service he was taken back at reduced wages. However, a short time after he left the club of his own accord, and was then idle and drunken for several months, until at last, deciding to try his fortunes in the New World, he left Glasgow by the s.s. “Ethiopia” on the 8th November, 1888. Before leaving Glasgow he had a drinking bout with some old friends, and during his first night on board he was sleepless and suspicious of his companions. He was afraid they wished to torture and otherwise maltreat him. Labouring under these delusions, next morning, when off the coast of Ireland, he deliberately attempted suicide by throwing himself overboard. By a splendid act of heroism, Dr. D. Scott Moncrieff, a passenger on board, jumped over the side of the vessel and kept him afloat until both were rescued. W. was then taken to Londonderry Prison, and ultimately to the asylum. Dr. Hetherington has kindly supplied me with notes as to W.’s condition at that time. He was depressed, strongly suicidal, rather excited and restless, and fancied that he

heard his wife's voice ; but his memory was good, his speech was quite coherent, and he could answer questions. He had a furred tongue, his heart's action was very quick, and the patellar reflexes were exaggerated. He was discharged quite well on 27th December, 1888. W. himself says :—" Whilst I was at Londonderry Asylum I thought I was being drugged, and I believed I was being watched by Orangemen,"—the latter delusion, taking into account that he was a fervid Liberal, that he was in a disordered mental state, and that he had been landed unexpectedly on the north coast of Ireland, was certainly not very extraordinary. Leaving Londonderry, he went to live with his wife in Perthshire, and for a time did not drink at all, but nevertheless suffered from "queer thoughts." One day he came into Edinburgh, took a good deal of drink, and returning to Perthshire, attempted to cut his throat. At that time he imagined that his wife was urging him to cut their child's throat ; and he became so greatly afraid he might commit an act of violence upon it that he was most anxious to be sent to an asylum. He was then, in consequence, admitted to Perth Asylum. From the notes of the case, placed at my service by Dr. Campbell's kindness, it appears that W. was then depressed, had hallucinations of sight and hearing, and delusions of electrical agencies ; he confessed to past suicidal impulses, and showed partial forgetfulness of the more marked maniacal outbursts. Dr. Campbell, from his observation of the case, gathered the suspicion that while under the influence of drink he had epileptiform seizures. Otherwise he appeared an ordinary *Munia a Potu* case. After being in Perth Asylum for two months he was dismissed well, but soon became ill again, entertaining suspicions of his wife without cause, and particularly imagining that she never told him the truth. In consequence of these symptoms he was sent to stay with his brother in the Forfarshire hills, and was there employed in felling trees. He did not drink whilst there, but presently getting depressed and unsettled, he left and became for a short time hall-porter at a hotel in Inverness. The manager says he was quiet and unassuming, but rather absent-minded. One morning W. asked the manager if he might leave, as he was insane. He said he felt depressed, and as if he were being hunted down. Getting work next at St. Rollox Station, Glasgow, he attempted suicide by placing his head upon the rails before an approaching engine, but was rescued by his fellow-workmen, and taken to Greenock Asylum. By Dr. Wallace's kind permission, I am able to say that W. was then depressed, strongly suicidal, and had delusions that people were following him, and that everything was against him. Dr. Wallace writes :—" Though unquestionably suicidal when brought to Smithston, it is remarkable that when affected with strangulated hernia, for which I had to operate on him, he showed the greatest eagerness to get well, and as a surgical patient I could not have had a better." Leaving Greenock Asylum after four months' treatment, he went to

Glasgow, and again falling a prey to drink, and having once more attempted suicide by throwing himself in front of a heavy van, he was admitted, four days after leaving Greenock, to the Royal Edinburgh Asylum. At the time of admission he was depressed, suicidal, and with delusions that people were following him, and that he was going to be killed. He also stated that just before making the suicidal attempt he had a "fainting fit" similar to those for which he consulted Dr. Playfair four years ago. His left forearm and hand were much bruised in his attempt to commit suicide. A few days after admission he volunteered the statement that his muscles were urging him to do things that he knew were wrong. He made steady progress towards recovery, his delusions left him, and only for a day occasionally would he show any lowness of spirits. Ultimately, after all signs of depression were gone, and as he was cheerful and working well, he was dismissed. He had been in the asylum three months; he had been kept in a much longer time than would have been the case but for his history; his wife was urgent for his dismissal, and he himself thought it "very hard lines" to be kept in so long. Seven days after, he was re-admitted, having, in the interval, made the homicidal attack. His wife, who fetched him from the asylum, noticed that he was strange in manner immediately after leaving. He was absent-minded, and did not seem to notice her speaking to him. After a walk together, she was obliged to return to her work, and left him with sufficient money for immediate use. This money has been accounted for, and was not spent in drink. That night he went to the theatre, but says he did not enjoy himself, as he had the old suicidal longings, and the old idea of being hunted. At the lodging-house where he stayed, he was very uncommunicative, and the following day he appears to have done little else but walk about in an aimless manner. He met his wife, who noticed he was worse and more depressed. He told her to go away and leave him to his fate, and when she left him he said, "This is the last time you will see me." Being conscious of his state, and wishing to be re-admitted, he came twice on the next day to the asylum gate, and asked to see Dr. Clouston, who was unfortunately out. Meeting Mr. N., whom he knew and whom he afterwards assaulted, W. conceived the idea of killing him, and bought an ordinary clasp pocket-knife for the purpose. He had absolutely no ill-will towards Mr. N.—indeed, ten years previously Mr. N. had been instrumental to some extent in getting W. his post in the Liberal Club. He walked about all that night and all the next day with the homicidal feeling uppermost in his mind, and quite supplanting his suicidal desires. There is little doubt that W. dogged Mr. N.'s steps, until, at about midday, finding him alone and in Lover's Loan, a sequestered narrow lane in the city, he rushed upon him from behind, threw him over, and stabbed him twice.

W.'s account is:—"I had queer thoughts; I thought everything

was coming to an end ; I felt I could not leave the city, and dogs kept me from getting work. When I looked towards Mr. N. and determined to kill him, I felt happier and more satisfied, and as if I were doing right ; the rain seemed to stop, and the sun got brighter ; but when I turned away, and was frightened to do the act, the sky seemed to darken and it rained."

During the attack W. never spoke a word, he appeared very confused, and had a determined, fixed, fierce look. After he had inflicted the injuries and had been disarmed, he sauntered quietly away without giving any explanation of his conduct. When arrested he was just going to the infirmary to have his hand dressed, as it had received some slight cuts in the struggle, owing to the clasp knife closing upon him. To the police he gave a wrong name and was very reticent, but when taxed with the assault he admitted it. In the evening he told a detective that "Jesus Christ made him do it," and "when the electricity which comes in at my toes and runs up my body gets to my head, then I do these things."

State on Admission.—He was depressed and nervous, and laboured under the delusions that dogs kept him from leaving the city, that he was being hunted down for crime, that electric shocks were going through his body, and that some evil-disposed persons had marked him (showing some slight marks upon his skin). He was coherent in his speech, his memory was good, and he could answer questions. He was quite conscious of his insanity, and deplored his suicidal and homicidal tendencies. In appearance he was a well-developed, muscular man, with a fine open countenance, which the accompanying portrait, admirably sketched by Mr. Williamson from a photograph, will show. He had a left internal squint, the eyes were placed rather near to each other, and as the outer orbital angles were directed a little upwards, he had a slightly Japanese expression. The eyebrows were continuous in the middle line, and the beard was very sparse and patchy. All the tendon reflexes were exaggerated, and he complained of numb and "electric" sensations. There were two scars upon the head, one upon the chin, and another over the seat of the strangulated hernia. The bodily health and condition appeared to be excellent.

Tried for the offence before the Sheriff, W. was sent to the Lunatic Department of Perth Prison during Her Majesty's pleasure.

Causation.—His hereditary predisposition, his previous mental illnesses, his former alcoholic habits, and the falls in his youth, all may have tended to produce the attack ; but there is also the question as to whether he is an epileptic. The history of "fainting fits," the distinct "electric" *aura* which preceded the homicidal attack, together with Dr. Campbell's suspicions as to his having had epileptiform seizures, all point in the direction of epilepsy. No doubt the alcoholic habits had much to do with the production of the first three attacks, but the last was certainly not so induced, and was probably the result of being sent away from the controlling influence of



TO ILLUSTRATE DR ELKINS' CASE.

asylum life, when he had no home to go to, and no work to occupy his mind. To him the asylum was indeed a refuge, and he was fully conscious of its steadying effect upon him, as is abundantly proved by his two separate attempts to gain readmittance when labouring under the recurrence of morbid feelings, and by his frequent observation, during his last attack, that he felt "safe" in the asylum.

Notes on the Case.—This is the case of a once respectable man who, owing to his mental disease, has now become a criminal lunatic; but it is impossible to regard him as, in any proper sense, an ordinary criminal. Yet one is disposed to ask whether there be not much in common between the case of this man and those cases which are constantly brought under notice in the pages of the daily press, as for example where a parent, after a drinking bout, suddenly murders his or her children and then attempts or commits suicide. In W.'s case, as we have seen, the mental storm soon spent itself, so soon indeed that, after being in the asylum but for a short time, it would have been extremely difficult for a medical man to have certified that he was insane, except for the light thrown on the case by the man's previous history and by his own acknowledged feeling, that when he at any time took a little drink he habitually lost all self-control.

Dr. Clouston, in his book on "Mental Diseases," writes:—"Homicidal impulse is often spoken of by lawyers, publicists, and ignorant persons, as if it were a thing that did not really exist, but had been set up by the doctors to enable real criminals to escape justice." No better example than this case could be brought forward in proof of the real entity of the homicidal impulse.

One of the latest published books dealing with insanity from its legal aspects,* says:—"The criminal premeditates his plan and of necessity selects his victim. The impulse has no premeditation, and has not of necessity a selection." Yet W. selected his victim, bought a knife, chose a quiet place for the assault, and gave a wrong name when arrested.

Such an attempt upon life is of course naturally so alarming, and so calculated to excite the keenest interest in the public mind, that it was to be expected extreme views on the subject would find expression in the press. One daily paper,† after asking how it was W. came to be at large, goes on to say that the fact of his having attempted suicide so

* "Williams' "Unsoundness of Mind," 1890, p. 211.

† "Scottish Leader," June 7th, 1890.

frequently surely rendered him a case for detention. It is almost unnecessary to say that asylum officials have no right to keep a sane man in detention because of his having an attack of insanity consequent on a drinking bout, even if during the course of it he had attempted suicide. That a person is liable to become insane is no argument for continuous detention in an asylum. It would be interesting to know for how long the writer of the article here referred to would, under the above circumstances, take away the liberty of the subject. According to statistics taken in Morning-side Asylum,* four-fifths of all cases of melancholia have the suicidal impulse, and thirty-nine per cent. have actually attempted suicide, many of the latter more than once, so that, if all these people are to be detained after recovery, the size, or the number of our asylums, must be vastly increased.

Glasgow Royal Infirmary : Case of Acute Dementia. Treatment by heat and cold to head, electricity, general massage, etc. : Recovery. By ALEX. ROBERTSON, M.D.

Dr. Robertson stated that the patient had been admitted under his care on the 10th of January last, when she had been ill for about seven weeks. She was a girl of 24 years of age, and her occupation was a linen-dresser. There was no known cause, and her family history was good, except that her father had been subject to some sort of "fits." She had become gradually weaker, both in body and mind. At first there had been hallucinations both of sight and hearing, and she had complained of headache; but it appeared that these had passed away or been superseded by the advancing stupor. Menstruation had been quite regular, but on the last occasion her mental state had been worse while it continued. When admitted she had a vacant expression of countenance and seemed unable to understand any remark, however simple. She was of filthy habits and required to be fed by the nurse. She was quite passive in every respect. There was marked emaciation; the heart's action was very weak, the pulse was very feeble, and there was coldness and blueness of the extremities. The tongue was coated and brown, the lips were blackish, and there were sordes about them and the teeth. The bowels were constipated, but had been acted on by medicine before admission.

The treatment, in the first instance, was chiefly directed to stimulation and support of the general system. Fluid food and brandy were administered at short intervals night and day. Care was taken to keep the bowels free, both by stimulating enemata and laxatives by

* Clouston's "Mental Diseases," p. 117.

the mouth. She improved a little under this treatment, but this improvement was so slight that the propriety of sending her to a lunatic asylum was carefully considered about three weeks after admission. However, it was determined, first, to try the effect of direct stimulating applications to the brain. So, on 1st February, heat was ordered to be applied to the patient's head by the cap for an hour daily at 110° and occasionally 115° Fahr. The application was continued for about a fortnight, and then the temperature of the water was gradually reduced during the second half of the hour, till only ice-water was circulated for the last twenty minutes. On the 20th February there was distinct improvement; she took her food herself, and showed a little more mental activity in other respects. From an early stage of the treatment friction to the surface was employed, but now systematic massage, for three-quarters of an hour morning and evening, was commenced, the heat and cold to the head being discontinued. After three weeks of the treatment by massage she had further improved in every way, but even then she had not become quite cleanly in her habits. At this time she gave slow, but correct answers to two or three simple questions—such as telling her name and residence. The massage was now stopped, and the continuous current to the head was begun and continued during the next month, till 21st April. The strength of the current was about four milliamperes generally, but only two for the first two days. The positive pole was applied to the lower part of the spine, and the negative was slowly moved over the head. In about a fortnight she had become perfectly correct in her habits and was talking intelligently, as well as assisting in the ward work. Her mind, however, seemed a little slow, though this appearance might be due to her natural diffidence. She had gained 2st. 4lbs. in weight on the 14th May, the date of her dismissal from the infirmary. She was again seen at a demonstration of diseases of the nervous system in a post-graduate course, at the end of September, and was then in excellent health, both of body and mind.

In reviewing the case, Dr. Robertson said that there was no distinct improvement under general stimulation of the system, and that this did not clearly begin till after the local applications to the head. The case, he remarked, corresponded, so far as treatment and its results were concerned, with one of catalepsy he had submitted to a former meeting of the Association. Heat and cold, followed by electricity, had been used in the treatment.

Dr. Robertson also mentioned that he was at present treating a case of resistive melancholia of about three years' standing, and apparently confirmed, with heat and cold to the head. There was distinct improvement since the treat-

ment was begun about three weeks since. The temperature of the warm water circulated was 120° Fahr. The hair had not been removed from the head of this patient, as had been done in the other case.

Case of Sexual Perversion. By Dr. URQUHART, Murray Asylum, Perth.

I present notes on a case of sexual perversion with some diffidence in entering on particulars which are specially disgusting. It is one of a class which has been described at great length in a special treatise by Krafft-Ebing, and which is of interest from a medico-legal point of view.

The common sot destroys his mental functions by his inveterate habit, which might well have been kept in check at the beginning of his vicious career, and similarly, no doubt, the person about to be described could have kept in a decent course of life but for the domination of his vice daily reiterated and flourishing apace by reason of his congenital and accidental defects and injuries.

The young man (No. 666) referred to had a bad heredity. His father was dissipated, and, in consequence, died young. His mother acquired venereal disease from his father while pregnant with him. The only sister was most immoral, but the only brother remains respectable.

In boyhood the patient fell over a staircase and injured his skull. He was picked up unconscious and bleeding at the ears. Since that time his mother noticed a change in his conduct. At school he was a confirmed masturbator, and he early showed a preference for the society of male children, to the disgust of his brother. He had an easy occupation in London, which caused him to be out a great deal in the open air.

Some years ago he began indecent habits towards boys, but denies sodomy. He latterly felt that no boy was safe in his company, and the "fearful joy" of his indecency became overmastering. He consulted a doctor for sexual weakness, and got tonics which increased his misery. His feelings towards women were perverted, and attempts at sexual connection were fruitless. Improper advances made by a woman filled him with disgust. His misery was increased when he heard that the police were making inquiries about him, and he eventually obtained poison to kill himself. In despair he went to a London physician and told him part of his story. The immediate result was his admission to Murray's Asylum as a voluntary patient.

He was then found to be in a fairly good physical condition ; small, but comparatively well-developed ; height, 5ft. 6in. ; weight, 9st. 7lb. ; age 26 ; complexion sallow, with a smooth, soft skin ; beard moderate ; expression anxious and effeminate. The cardiac sounds were somewhat enfeebled, and the left optic disc slightly congested. His manner was nauseous and unmanly. He said that he felt better since arrival, because he had someone to lean on ; that he had decided not to destroy the temple of God by committing suicide, and so on. His life was detailed at great length and with disgusting fidelity. In a few days a detective arrived from London, and removed him to stand his trial for indecent practices.

After removal to London his solicitor asked me for a report on the case, with the view of doing the best for his client. Now, on reference to Krafft-Ebing's monograph, it is laid down as fundamental that in such cases of sexual perversion the normal feelings are either abrogated or minimized. In this case he was decided in his abhorrence of women, and thus presented this leading feature in the thesis of the Austrian author.

But if we consider the case from the point of view of the offender, who is to undergo punishment for his misdeeds, we find that the plea of insanity would in effect carry a more serious retribution than the ordinary award of the law. Broad-moor for at least five years is certainly less endurable than the maximum of two years' hard labour.

The legal mind, therefore, advised the plea of "guilty" with extenuating circumstances. These circumstances have been detailed already—the hereditary influence, the injured skull, and so on. On the one side my report was urged on the Judge as a document worthy of consideration ; on the other side the Crown prosecutor contented himself with asking if I could certify and detain the patient as being "insane." Of course, a reply in the affirmative in the strictly legal sense was out of the question, and the most that could be urged by the patient's counsel was a remark on the difference between the legal and the medical view of insanity. The Judge thereupon asked, "But what is to be done with him? If he is discharged from this court and cannot be detained as a lunatic he will be here again shortly with another filthy experience."

So the rough and ready "justice" of the law courts awarded this man a year's imprisonment with hard labour.

If we accept Benedikt's idea of "proved dangerousness," and retain such a case in custody while his habit is likely to continue dangerous to society, there will be much work for architects and doctors and their subordinates. The ratepayer

would groan under the burden of many corrective establishments. But, on the other hand, it can hardly be maintained that penal servitude for a year is the best course of treatment for a man of depraved and weakly constitution, who has acquired habits of evil tendency which will, under the present circumstances, gather strength and ultimately destroy him.

*On Certain Defects of Articulation in Children, with Cases Illustrating the Results of Education on the Oral System.**
By W. B. HADDEN, M.D.Lond., F.R.C.P., Assistant Physician to St. Thomas's Hospital and to the Hospital for Sick Children.

CASE I.—The patient was a boy, aged eleven, who came under my care in August, 1889. His father died in Colney Hatch Asylum ten years previously, but the form of insanity was doubtful. The mother was alive and healthy. There was only one other child, a girl, aged fifteen; she was healthy, intelligent, articulated perfectly, and was right-handed.

As a baby, the patient was healthy, and was not backward in teething or in walking. He had had no illnesses, except measles and whooping cough, which occurred when he was between two and three years old. The mother noticed that the child was left-handed when he was about four years of age. He did not speak at all until he was between three and four years old, when he began to make sounds. Up to that age he seemed to have had no words at all, expressing his wants by nodding or shaking the head or by pointing. It was stated that at the age of six he said a few words, such as "mamma" and "no"; but it was his habit to be silent up to two years ago, when he began to talk in the manner to be described. No defect of articulation was present in any relatives or in any person with whom he was in contact. On August 20th he was admitted into St. Thomas's Hospital. He was a bright, healthy boy, somewhat under-sized, but free from organic disease. He was noticed to have frequent grimaces and sniffings, chiefly when excited or watched, but there were no movements of any other part of the body. The head was well formed; and the palate was slightly arched, but otherwise the fauces were natural, and the tongue could be moved freely. He was left-handed for all purposes, although he could use his right hand as well, or nearly as well, as his left.

* I have to express my great indebtedness to Miss Masson (the ward sister at St. Thomas's Hospital) for the greater part of the notes of the first two cases. I have also to state that this lady superintended the instruction given to the patients, and that the result achieved was largely due to her unremitting attention and to her thorough appreciation of the nature of these cases.

His speech was quite unintelligible to every one except his sister, who professed to understand it. She certainly could make out what he meant, but I am not clear if she understood the details of his speech. He could not pronounce his own name properly, and even the simplest words, such as "cat," could not be rendered so as to be recognized by others. When he talked or read it was evident that he was dividing off into syllables, although the sounds were unintelligible gibberish. He only stammered in saying the word *dedorch*, his rendering of *w* (see alphabet). He usually pronounced the elementary sounds and the letters of the alphabet in the same manner when tested on different occasions. Sometimes, however, there were slight variations both in saying them and in repeating the Lord's Prayer. This was his alphabet on admission:—

A	B	C	D	E	F	G	H	I	J	K	L	M	N
ah	be	ve	te	ee	fish	te	vatch	ah	dah	vah	ve	ve	ve
O	P	Q	R	S	T	U	W	X	Y	Z			
vah	pe	ve	ah	fish	te	ve	dedorch	fitch	vah	ve			

The following was his Lord's Prayer:—

THE LORD'S PRAYER.
VI Vēē Bēē.

Our Father which art in heaven,

Ā Fāhēē vitch vē ē vēē

Hallowed be Thy name

Ā-ānā bē vā nā

Thy kingdom come,

Vā vē-ī vā

Thy will be done in earth as it is in heaven.

Vā vē bī dā ē vēē vās īt īs ē vēē

Give us this day our daily bread,

Bē ūs īsh dā ā dā bēē

And forgive us our trespasses

Vā fāwvēē ūs vā tēsvāvēē

As we forgive them that trespass against us ;

Vāsh vē ē vē vā tīsh ā vā vā

And lead us not into temptation,

Vā nēā nā īt īt tā sā

But deliver us from evil,

Būt dē vā ūs vā ēē vē

For Thine is the kingdom,

Fāw vā īs ī vēē

The power and the glory,

Ā pā vā vēē

For ever and ever. Amen.

Fāw vē vēē. Amee.

On analysing the various elementary sounds it was found that he was able to produce the following :—

\bar{a} (as in ah), \bar{e} and \bar{e} (as in bet, be), \bar{f} (as in fish), *aw* (as in fawvee in the Lord's Prayer), \bar{u} (as in ush), and the diphthong *ea* (as in near). He could not pronounce *o* short or *o* long, *oo*, the *u* (as in fur), and the diphthongs *ae*, *ie*, *ew*. He was unable to produce the consonants *j*, *k*, *l*, *r*, *w*, *y*, *z*. He could pronounce *b*, *d*, *f*, *m*, *n*, *p*, *s*, *t*, *sh*, *ch*, and *ch* (as in the Scotch loch). These latter, however, although existing in his code, were not always produced.

On referring to the alphabet it will be seen, for example, that he made the sound of *d* in *dedorch* (his rendering of *w*), and yet he called *d* *te*. Again, in the Lord's Prayer, he gave the sound of *n* and *m* in *a-ana* and *amee*, and yet the *m* and *n* of his alphabet are both *ve*.

He could write with both the right and the left hand; with the latter he readily produced "mirror writing," as well as writing of the ordinary hand, but he could not read mirror writing.

When asked to copy or write at dictation short and simple sentences he would transcribe the first two or three words correctly, and then he would seem puzzled, the remaining words being represented either by unmeaning up and down strokes or by combinations of letters like *ve*, *va*, etc., which recalled his spoken language. He soon became hopelessly confused and unable to proceed. He could not understand his own language when I spoke it (taking, for instance, a sentence out of his Lord's Prayer), nor could he make out the meaning of words or sentences written according to his pronunciation. When reading aloud, the words, like his spontaneous utterances, were unintelligible; but it was clear that he was dividing roughly into syllables, and from questioning there was no doubt that he understood the meaning of both printed and written characters.

He remained in the large ward for about seven weeks, and soon learned some of the elementary sounds. He was taught first to pronounce the vowel sounds: *o* by copying the lips, *a* by combining the sounds \bar{a} -*ee*, *i* by combining \bar{a} -*ee*, *u* by combining *ee*-*o*.

The method adopted was really identical with that used for teaching deaf-mutes to speak. He was made to watch and then imitate the action of the lips, tongue, or teeth required for the production of the various elementary sounds; but it was often necessary actually to adjust the parts by the fingers or by forceps. After a time he succeeded in saying most of the alphabet straight through. He did not learn to roll the *r* or to say the soft *z* sound; *l* was apt to be *n*, though he could say it in one or two conjunctions; *s* was generally *sh*; *th* was produced readily.

He had great difficulty in joining consonants and vowels to make even such simple words as "boy, or "cat." At the end of seven weeks he could produce separately all the elementary sounds, except *z* and *r*, and the vowel sounds in *bird* and *pearl*, but the vowel sounds in *hat*, *pear*, and *fair* were still doubtful. He could say with tolerable correctness a few simple words and phrases, such as "cat," "dog," "sister," "good-morning," "I have done it," "my rabbit is nice." His

Lord's Prayer was somewhat changed, and it was noticed that he seemed to try to rectify his mistakes. Although he had made distinct progress during the seven weeks he was under instruction, and could produce with an effort nearly all the sounds necessary for articulate language, his spontaneous utterances were but little altered. It was impossible to prevent him talking his gibberish to the patients, so at last the conclusion was inevitable that permanent amelioration would probably not be attained unless he was completely isolated. Accordingly on October 12th he was placed in a small ward, and put in charge of a special nurse, who proved herself particularly well adapted for the work. The sister of the ward (Miss Masson) succeeded in making him not only contented, but happy. He was supplied with a rabbit and a kitten for his amusement, and had his regular exercise and games out of doors. He was allowed to look at pictures, but reading to himself and conversation in his own language were forbidden. His friends agreed not to see him without special permission being granted, and the boy himself cheerfully fell in with our proposal. I think a feeling of *amour propre* on his part lent zest to his efforts, as he was anxious when he left the hospital to show off before some boys, who laughed at him and called him "fish" (see his alphabet). During the two months he was in a separate ward he had regular lessons in reading, in spelling aloud, and in writing at dictation. He was gradually taught to join syllables so as to form words, and then to combine words into sentences. He was made to speak very slowly, as any attempt at haste resulted in a relapse to his faulty pronunciation. In his endeavours to be correct, his speech acquired a slow, *staccato* character, and the words were mouthed, so that at the end of two months, when he returned to the large ward, those patients who did not know his history thought he was a foreigner, but they could understand him readily.

When he left the hospital on January 15th, 1890, he talked quite well enough to be intelligible, and fairly quickly. He could read such easy literature as the first primer; but he was still faulty in reading longer words, and was apt to be slovenly in ending them, saying, for instance, "I have been wead," meaning, "I have been reading." The following was his Lord's Prayer:—

Auë Fathë, wheech art in hevven,
 Hallo-ed be Thy name,
 Thy kingdom come,
 Thy will be done in earth as it is in hevven.
 Geeve us this day auë da-aly bed,
 And forgive us auë trespases
 As we forgive them that tesmus against us,
 And lead us not into temptation,
 But deliver us from evil,
 For Thine is the kingdom,
 The power and the gloy,
 Faw evë and evë. Amen.

After he left the hospital special attention was given to him for a time by the teacher at the Board School. Between January and the present month (November) I have seen him several times. He has not relapsed, nor has he improved to any marked degree, except that he speaks more naturally and the articulation has lost the scanning character which it previously had.

CASE II.—John S., aged seven, came under my care in January, 1890. The parents were not related. There were seven children in the family. There was no history of insanity, stammering, or defect of speech in the parents or children. The second child (a girl aged 17) was said to have six toes on the left foot, and the fifth child (a girl aged nine) was left-handed. The father had a brother who did not speak until he was seven years old, and a daughter of a brother of the mother was said to stammer slightly.

The patient was a healthy, well-nourished, intelligent boy. The mouth, tongue, and teeth were quite normal. His articulation was very defective, though not to such an extreme degree as in the other boy. The impairment of speech was noticed when he began to talk, and the mother told me that the defect was more marked as he became older, and that he showed no signs of "growing out of it," as she expected.

He could pronounce all the vowel sounds. Of the consonants, *c* was miscalled *e*; *h*, *a*; *j*, *a*; *q*, *oo*; *r*, *aa*; *s*, *etch*; *x*, *hef*; *z*, *a*. The other letters were produced correctly in the alphabet, but when he tried to combine sounds into words other defects became apparent. *D* was rendered *t* (as *tie* for *die*), the initial *g* was omitted (as *ive* and *o* for *give* and *go*), *l* was usually and *m* sometimes miscalled *n*, the initial *r* was always *w* (as *wide* for *ride*), *s* was omitted when the initial letter (as *o* for *so* and *ee* for *see*), and the *z* sound in *zee* was also left out. Like the other boy, he was slovenly in the endings of words, *choose* being *choo*, and *child* *chil*. Rarely he transposed a letter, *kite* being *ike*.

The following was his rendering of the Lord's Prayer, very slight variations being noticed on different occasions:—

Anü Favö, which art in en-en,
 Annow be ma name,
 Noy in-dom um,
 Vy will be done in ear va it e in ennung.
 E uh vith day a dai-y be,
 A fogee uh for cheh-ee-ay
 A we foh-eev vem vat cheh-futh a ain uh,
 And ee uh not va tentay-ung,
 Buh denee uh fon evil,
 Foh ine in e ingdom,
 E power an i o-wy,
 Foh ee an ee. Amen.

It is interesting to note some of the defects as seen in his Lord's Prayer.

The *th* sound was usually omitted, as *ine* and *e* for *thine* and *the*, but three times the sound of *v* was substituted (e.g., *vy* for *thy*), and *m* and *n* were substituted each once. Yet he produced *th* in with his pronunciation of *this*. Again, *n* was used for *v* (*ennen*—heaven), or the *v* was omitted, as in *fogee* (*forgive*) and *ee* (*ever*), but pronounced correctly in *foheev* and *vem*. Similar inconsistencies in his rendering of various sounds will be seen on analyzing the Lord's Prayer. The tendency to mispronounce or leave out the terminal sound of a word is obvious in several instances. I determined to pursue the same plan with this boy as in the other case, but my anticipations were by no means sanguine. He was four years younger than the other, and partly, no doubt, on this account, and partly because of his natural disposition, which was stolid and indifferent, the outlook was not very hopeful. The result, however, was more favourable than I expected. At the end of three months, during about a month of which time he was isolated, he had made considerable improvement, and his articulation became quite intelligible.

Relatively he made less progress than the other boy, although the number of elementary sounds which he was capable of producing with an effort was greater. When first seen he could pronounce many sounds quite well when he set himself deliberately to the task, but when he tried to combine these sounds so as to form words and sentences, he frequently failed. This difficulty, although obvious enough in Charles M., was comparatively greater in John S., and was overcome less readily. I see the boy from time to time; he makes slow but distinct improvement, although he now receives no special guidance beyond what he may get at home and at school.

About the time when John S. first came under my notice, another boy, aged four, was brought to me with defect of articulation. It was probable that two of the father's brothers had died insane. Neither the patient nor any of the family were left-handed or the subjects of malformation.

All the children were said to be backward in talking, though not backward in other respects. There was no history of stammering or other defect of articulation in any of his relations, near or distant. The patient began to speak at the age of two, but it was not until fifteen months later that he tried to put words together. He was an intelligent boy in every way. His hearing was not affected. The palate and mouth generally were well formed. He did not stammer. He could produce all the vowel sounds, and could repeat correctly the alphabet, except the letters *c*, *d*, *g*, *j*, *k*, *l*, *q*, *t* and *w*. His power, however, to combine the elementary sounds in ordinary articulate language was very defective, and his speech accordingly was practically unintelligible. I gave the mother instructions for teaching him by the oral system, and also sent her to St. Thomas's Hospital to watch the method adopted with John S. I did not anticipate an encouraging result from isolation in so young a boy, and I therefore determined, at any rate for the present, not to resort to this measure.

At the present time, nine months after I first saw him, he has acquired more elementary sounds, and his speech, though still very imperfect, is more intelligible.

In order to appreciate thoroughly the nature of the defect in these boys, it is essential to recall the acquirement of speech in the infant. Speech is looked upon almost as an instinctive act. Nevertheless all, or nearly all, infants receive some education in the mechanism of speech. The mother or nurse, sitting facing the child, and repeating, or rather mouthing, such simple words as "baby" or "ta-ta," is familiar to everybody. At first the infant, by watching the lip movements of the mother or nurse, succeeds in reproducing the sounds by sheer mimicry, though it is not until still later that it utters them spontaneously. The earliest acquired sounds are those of the labials *b*, *p*, and *m* (e.g., *baby*, *papa*, *mama*), and the linguals *d* and *t* (as in *dada*, *ta-ta*). It is very probable that these sounds are acquired with comparative facility, because the mechanism on which they depend is simple and visible. The mechanism for the production of the consonantal sounds, *g*, *h*, *j*, *q*, and *w*, is more complicated and less manifest, and hence they are often mispronounced by young children. Again *s* is often mis-called *sh* or *th*, or when the initial letter is omitted altogether, and the sound *r*, at the commencement of a word, very frequently represented by *w* (*wun* for *run*). This latter defect indeed not uncommonly persists through life, and may occur in several members of the same family, possibly from imitation, or it may be from some inherent defect. All our efforts to teach these boys to roll the *r* were quite ineffectual, and at the present time they substitute for the initial *r* the sound of *w*. It may be taken that, at any rate at first, the young child requires some education in acquiring certain elementary sounds, but later on the more complicated sounds are reproduced, as it were, automatically, and require no special education. It would appear that when the co-ordinating centre, which presides over the mechanism of the elementary sounds concerned in speech, has received a start, its further development proceeds without special guidance, and that its evolution depends on the integrity of the auditory perceptive centres. That variations occur in the rate and degree of development of this centre is clear from the differences which are found in the facility of acquirement of speech, and also from the fact that in some instances the blundering efforts of the child sometimes

persist to a period when all elementary sounds are normally acquired. It may be, as pointed out just now, that certain defects are never remedied. There is no doubt that minor degrees of defective speech in children, not due to local conditions in the mouth, commonly disappear without special treatment. The acquirement of speech, like the acquirement of walking, is of slow growth, and in both the special muscular co-ordination is liable to variations in its rate of progress, and in its permanent fixation. It is well, perhaps, that I should emphasize the fact that the cases to which I call attention are characterized by extreme defects of articulation in children of good mental capacity, which are associated neither with mechanical conditions in the mouth nor with disease of the auditory apparatus, but are almost certainly dependent on some fault in the central nervous system.

That there is a special centre regulating the combined movements necessary for the production of speech cannot be doubted. On this point some pertinent remarks of Dr. Bristowe (*"Theory and Practice of Medicine,"* 7th ed., pp. 991-992), are worth quoting: "Looking to the extreme complexity of these movements, it seems certain that that part of the brain in which words are transformed into ideas, and are revived in thought, acts, in the process of transforming them again into articulate speech, upon the centres of origin of the various nerves of speech through the intermediate agency of a special co-ordinating centre. . . . Words are practically innumerable. The elementary sounds, however, which by their combinations produce articulate language, are probably less than fifty in number, and this comparatively small number therefore also represents all the groups of simultaneous combined movements which the tongue and lips can be called upon to execute. It seems probable—partly on these grounds, partly from the consideration that language (apart from the mere mechanism by which it is uttered) is a mental function, and partly from the consideration that the function of a co-ordinating motorcentre is to regulate or combine groups of movements—that the duty of the assumed co-ordinating centre of speech must simply be to preside over that essential, but comparatively subordinate department of speech which consists in the production of the elementary articulate sounds."

Dr. Bristowe alludes to the possibility of a lesion affecting

this centre resulting in dumbness, and he remarks that a patient, by copying the mechanical arrangements of speech, might be taught to speak like deaf-mutes are taught. Such a case, indeed, has been published by Dr. Bristowe ("Transactions of the Clinical Society," Vol. iii., reproduced in his "Clinical Lectures and Essays on Diseases of the Nervous System," p. 93). I may briefly state about this patient that in addition to paralysis, which at the onset was rather widespread, there was inability to utter a single articulate sound, although for all other forms of voluntary movements the tongue, lips and cheeks were unaffected. The man was quite intelligent, understood everything that was said to him, could comprehend all that he read, and could maintain a conversation in writing, his interlocutor speaking. Dr. Bristowe's view was "that his inability to speak was most probably due to his having forgotten how to combine automatically the movements of these organs so as to obtain from them the elementary sounds which, in combination, constitute articulate speech. . . ." The man was made to copy the mechanical arrangements of the parts concerned in the production of articulate sounds, the principle, indeed, used in the instruction of deaf-mutes, and at the end of two weeks his speech was entirely restored.

This case, which comes under the class named "aphemia" by Dr. Bastian, has some affinity with the condition which is illustrated by my patients.

In the latter it would appear that there was a faulty development of that part of the brain which in Dr. Bristowe's case was profoundly paralysed. Thus may be explained the clinical differences between the two conditions—defective speech in the one, dumbness in the other.

There are a few points which are significant, and may possibly throw light on these cases, to which I will make brief allusion.

In the case of Charles M., I was originally inclined to attach some value as a means of explanation to the fact that he was left-handed. The use of the right hand in the great majority of persons is, in all probability, due to a higher development of the left hemisphere, which, "like an elder brother, takes and keeps the lead through life." Putting aside cases of mechanical interference with the right hand—such cases, for instance, as paralysis occurring in early

life—left-handedness is no mere accident, but probably dependent on what might be called “transposition of the hemispheres.” The occurrence of aphasia with left hemiplegia in left-handed people points to this. In the boy Charles M., who was left-handed, I was inclined to the belief that the speech centre, being presumably in the right hemisphere, had not only been transposed, but had been arrested in its development. John S., however, was not left-handed, although he has a sister who is so. In the third case which I mentioned there is no left-handedness either in the patient or in any member of the family. The conclusion is inevitable that there is no necessary association between these speech defects and the use of the left hand. The facts within my own knowledge warrant no decided inference; but I believe investigation in this direction may prove of value.

The history of insanity in the family in two of my cases may be of some import. I merely call attention to the fact. It is well to note the slight stammering observed in the first case, and also the fact that a cousin in the second case stammered. In the third patient there was no history of such defect.

Dr. Harrington Sainsbury* has described a case which agrees in essential points with those given in this paper. In his patient the right little toe was double, and on this point I gather that he inclined to lay some stress as indicating a tendency to malformation. This deformity was not present in my cases, but a sister of John S. was said to have six toes on the left foot.

In dealing with these cases of extreme defects of articulation, I am inclined to consider isolation a very important element. I am sure that the results of education were far more speedy, more effective, and more permanent than they would have been had the patients not been isolated.

* Case of Difficulty of Speech, “The Journal of Mental Science,” January, 1889.

OCCASIONAL NOTES OF THE QUARTER.

Lunacy Act, 1890.

We draw the special attention of our readers to the paper by Dr. Percy Smith, read at the November Meeting of the Association, on the defective working in practice of the Lunacy Act, 1890. It will be found among the "Original Articles," and the discussion upon it in "Notes and News." The article is at once so forcible from its array of indisputable facts, and so temperate in tone, that it can hardly fail to convince those who introduced and sanctioned this legislation that the result has, in some respects at least, proved cumbrous, mischievously complex, and unworkable, except at the expense of endless worry, waste of time, and wearisomeness of the flesh to the friends of patients, and injurious to the best interests of the latter, in consequence of the delay, alarm, and in some instances dangerous exposure to the weather while being carried hither and thither, from pillar to post, in order to discover a qualified justice, and, if qualified, willing and able to sign the reception order. It is not necessary, however, to discuss the Act in this place; it must suffice to refer the readers of the Journal to the above-mentioned articles and discussion.

The Value of the Evidence of the Insane.

A case which has recently been tried before the Recorder of Dublin and a jury forms a subject for the serious consideration, not only of the members of the Medico-Psychological Association, but of all those who are associated with the care and control of the insane. Hitherto we have always considered that if the medical superintendent of an asylum was satisfied by the evidence of patients upon whose word he knew he could rely, that an attendant had been guilty of undue harshness or cruelty towards a patient, he would be perfectly justified in suspending that attendant and bringing the matter under the notice of his committee, who would either make the attendant's discharge absolute, or reinstate him if upon investigation the circumstances of the case were found to warrant it.

The case, however, to which we wish to draw especial attention at once and in no uncertain fashion, at any rate as far as

Ireland is concerned, upsets any such reasonable proposition as this, and it is because we consider the matter of the utmost importance in its bearing upon the management of asylums and similar institutions that we feel it our duty to give full publicity to it.

Briefly, the facts as reported in the "Freeman's Journal" for October 8th, 1890, are as follows:—A man named Hayes was an attendant in the Richmond Asylum, Dublin, under the medical superintendence of Dr. Conolly Norman. A patient who had been under Hayes' care died, and at the post-mortem examination it was found that six of his ribs were broken, four on one side and two on the other. An inquest was held and the medical witnesses stated that these injuries could not very well have been caused by the patient falling out of bed, and must have required considerable violence to inflict them. The immediate cause of death was stated to be an abscess of the lung resulting from the broken ribs. The inquest was held on July 4th, and the jury returned a verdict that the patient's death was due to violence, but they were unable to say how the violence had been received. Dr. Conolly Norman was examined at the inquest, and no charge was then made against any attendant. On the 20th of July, however, three inmates of the asylum made a statement to Dr. Conolly Norman, in consequence of which he suspended Hayes. On July 22nd the Board of Governors held an inquiry, at which the patients were examined, and the result was that Hayes was informed immediately after the inquiry that he was dismissed. Hayes now brought an action against the Board of Governors for wrongful dismissal. He claimed £45 damages and obtained a verdict.

It would appear from the statement of his counsel that the patient O'Connor, whose death was the cause of Hayes' dismissal, was removed from the Dundrum Criminal Lunatic Asylum, where he was a warder, to the Richmond Asylum as a patient. He was very violent, and had to be manacled by the attendants while he was being removed. He was admitted into the Richmond Asylum on June 3rd. On June 15th he was removed to the hospital to which Hayes had not access, and on July 1st (that is sixteen days after) he died. Counsel therefore contended that from June 15th to July 1st Hayes had nothing whatsoever to do with O'Connor, and whatever injuries he received he must have received in the hospital.

Hayes was called, and in his evidence he stated that from June 3rd to June 14th O'Connor was very refractory and

violent, that he had charge of him from time to time, and that necessary force had to be used towards him to keep him quiet, but he used no violence whatever towards him.

We do not gather from the newspaper report that any other evidence was called on Hayes' side.

The case for the Board of Governors was stated by counsel to be that O'Connor met his death by violence, and he would prove what happened on June 12th by producing the unfortunate men who were present. In fact, the three lunatics were in the precincts of the court, ready to be called if necessary, and it was eventually decided to call them.

Bryan Manning was the first witness. He stated that on the 12th June he was in the corridor near the day-room when he saw O'Connor knocked down and kicked in a brutal manner by Hayes, and he said also that the reason he did not give evidence at the inquest, and did not report the matter earlier, was because he did not want to make it bad for himself.

John Boyle, the next witness, said he saw O'Connor and Hayes wrangling, and he saw Hayes strike O'Connor three or four times. He gave a somewhat similar reason as the last witness for not mentioning the matter earlier.

The calling of the third lunatic led to a painful scene, he became greatly excited, and had to be taken out of court.

We have thought it right to give the above facts of the case so as to put the point we desire to emphasize as clearly as possible before our readers. We have here two patients produced by the medical superintendent of an asylum as reliable witnesses, and we take it, if he had not been certain that their evidence was reliable, he would not have brought them forward, and they were called and permitted to give evidence on oath. The third patient, as was explained by the medical superintendent, had had a relapse since the inquiry by the Board of Governors, and, as we have seen, he could not be sworn.

The Recorder, in summing up, commented upon the evidence of the lunatics, and put it thus to the jury (we are here dealing purely with the evidence of the patients): "He did not see why Hayes was to be ruined for life on the evidence of three lunatics unless they were coerced to believe them, and he held that they could not be coerced to believe them under all the circumstances;" and he added, "there was no evidence whatever to show that Hayes had been guilty of violence, nor any evidence to show that the injuries to O'Connor were caused on the 12th of June."

Now, the only conclusion we can arrive at after such a dictum as this is, that the Recorder permitted the evidence of the two patients to be given upon oath in open court, and after having done so he told the jury the law held their evidence to be valueless. We submit that such a state of the law as laid down by the learned Recorder is intolerable and contrary to English precedent. We have it on the word of a reliable witness of the proceedings that the Recorder said the patients had given their evidence in an admirable manner, and that he had never heard better witnesses, but they were insane!

It would appear, therefore, according to this ruling, that the evidence of a lunatic, however truthful, straightforward, unshaken by cross-examination, and however perfect a statement of facts it might be, simply and solely because the witness is insane, it cannot be accepted in an Irish court of law, and, this being the law, the Governors or Committees of Management of Asylums cannot interfere to protect their poor patients from the violence of brutal attendants if the only evidence against them is that of eye-witnesses who are themselves insane. We submit that although a witness may be insane he may be labouring under a form of insanity which will not invalidate his evidence if it is outside the range of any delusions he may have. In a paper upon "Complaints by Insane Patients,"* Dr. J. A. Campbell called attention to a case where an attendant was fined in a Scotch Sheriff's Court for assaulting a patient on the sole evidence of the patient, who was stated to be labouring under delusions. The medical evidence was "that though the patient was the subject of delusions, they had no reference to the injuries he had sustained, and that his statement as to how he had come by his fractured rib could be implicitly relied on."

If the law of Ireland as laid down by the learned Recorder were allowed to stand, it would mean that the evidence of all persons who are insane (be their insanity ever so slight), and consequently the bulk of the inmates of institutions for the treatment of mental diseases, would be inadmissible in a court of justice, and as Lord Shaftesbury said in his evidence before the Select Committee in 1859, "those persons would be left to the mercy of their attendants, against whom an act of violence or crime could with the utmost difficulty be established, and the penalties imposed by the Legislature upon such acts would be useless."

* "Journal of Mental Science," Oct., 1881.

In dealing with the evidence of insane persons, there are two points which must be primarily considered. First, is the patient in such a condition mentally as to know that he ought to speak the truth to the best of his ability? and, secondly, is he able to report the facts? In Pope's "Law of Lunacy" it is stated that "the English law, refusing in this particular to be bound by the specific limitations of the civil law, makes the capacity to understand the sanctity of an oath, the test that the witness knows he ought to speak the truth to the best of his ability. This is the part of the judge to ascertain; if he is satisfied that the witness understands the nature and obligation of an oath the witness may be examined. It is for the jury to determine what value is to be assigned to his testimony, and in order to diminish the assignable value of that testimony, evidence as to the insanity of the witness may be adduced by the other side."

That this is the English law of the subject, we have the most important case of "Regina v. Hill" as proof. It was the case of a pauper lunatic in an asylum, who, in consequence of the violence of his attendant (a man named Hill), had his arm and four ribs broken, and he died from the injuries he had received. The attendant was prosecuted, and found guilty of manslaughter, mainly upon the evidence of one lunatic, named Donelly, and judgment was postponed in order that the opinion of the judges might be taken as to the admissibility of his evidence. The case was argued at great length as a Crown case reserved before five judges, namely: Lord Chief Justice Campbell, Baron Alderson, Baron Platt, Mr. Justice Coleridge, and Mr. Justice Talfourd, who held *unanimously* that Donelly's evidence was properly admitted. It appeared in the course of the trial that Donelly laboured under a delusion that he had spirits in his head, but that he was quite capable of giving a rational account of any transaction that passed before his eyes, and that except as respected his delusion he was always rational. Lord Campbell said the proper test must always be, does the lunatic understand what he is saying, and does he understand the obligation of an oath? The lunatic may be examined himself, that his state of mind may be discovered, and witnesses may be adduced to show in what state of sanity or insanity he actually is. Still, if he can stand the test proposed, the jury must determine all the rest. In a lunatic asylum the patients are often the only witnesses to outrages upon themselves and others, and there would be impunity for offences committed in such places if the only

persons who could give information were not to be heard. Mr. Baron Alderson, in concurring, said: I quite agree that it is for the judge to say whether the person called as a witness understands the sanctity of an oath, and for the jury to say whether they believe his evidence. Here the account of the lunatic himself, and the evidence of the medical witnesses show that he was properly received as a witness. In citing authorities having reference to the point in argument, an unreported case ("Rex v. Morley") was quoted, in which Mr. Baron Parke admitted a witness proved to be, to a certain extent, insane, and also another in which Mr. Baron Hullock admitted as a witness a surgeon who had been acquitted of a crime on the ground of insanity and was then in confinement.

The prosecution in this case of "Regina v. Hill" was undertaken at the instigation of the English Commissioners in Lunacy, and the account we have given of it is taken from their sixth annual report, published in 1851. Ever since that time it has been a rule for our guidance as to the admissibility of lunatics as witnesses in a court of law, and as the Commissioners said at the time, "The point may now be considered as finally settled."

We should like to know what the Irish Inspectors of Lunatics have to say upon the subject. We are given to understand they "have the power to hold sworn investigations at asylums on any subject connected with discipline and management," and we cannot understand why such a case as that of O'Connor's death should have been allowed by them to pass over without thoroughly investigating it.

Again, have they not the same power to investigate cases of assault upon insane patients by attendants in asylums under their jurisdiction as the English Commissioners have? Under the Lunacy Act, 1890, proceedings may be taken against any person for offences under this Act by the Secretary of the Commissioners upon their order, and by section 322 ill-treatment of a patient is an offence punishable by fine or imprisonment, or both.

If the Irish Commissioners are not empowered by legal enactment to investigate such cases, the sooner the law is amended to give them the power, not only to investigate them, but also to bring about the punishment of the offenders, the better for the poor lunatics over whose welfare they are appointed to watch, and the better also for the proper administration of the institutions in which they are detained, whilst with regard to the law of Ireland,

which counts as valueless the evidence of a witness because he is insane, it is to be hoped immediate steps will be taken to amend it upon the lines of the English law which we have referred to in our *résumé* of the subject.

Since writing the above, the Governors of the Richmond Asylum have appealed against the judgment of the Recorder's Court. The appeal was heard on November 18, before Mr. Justice Holmes in the Queen's Bench Division of the High Court of Justice, and resulted in the judgment of the Recorder's Court being quashed. On the proposal of the appellant's counsel to call one of the inmates of the asylum as a witness, Mr. Justice Holmes said—

“ This raises two important points in respect to the evidence of a person of unsound mind—first, I must be satisfied that the person understands the nature of an oath, and next that he understands and appreciates the evidence he is giving. But,” said his Lordship, “ if I were counsel in the case, I don't think I would call the witness. I don't see any necessity for it.”

Counsel then submitted that the Board of Governors were perfectly within their right in dispensing with the services of Hayes as they did.

When the case was before the Recorder, it was conducted in the most extraordinary way by his Worship. Why, the Recorder absolutely required the Governors to satisfy a jury that Hayes was guilty of manslaughter, and he left a question on the point to the jury when there was really no question in the case for a jury at all! In giving judgment his Lordship concurred in the view that the question in the case was outside the province of a jury to decide.

“ We all know,” said his Lordship, “ that in these lunatic asylums, which are such very useful institutions, there is a resident medical superintendent, and there are officers and servants. Well, there are statutes under which these institutions are governed, and there are rules made under these statutes regulating the tenure under which the various officers and servants hold their positions. . . . As far as regards the servants they may be removed at the absolute will and discretion of the Governors, without the approbation of any person being required. It would be absolutely impossible to conduct a lunatic asylum if the Board of Governors did not possess this power of dismissal without cause being shown, or if some other person or persons did not possess that power. The servants and officers of a lunatic asylum have immense power over persons who are unable, not merely to defend themselves, but who cannot give an account of the

transactions afterwards. Therefore if a dismissal could not take place without good cause being shown by the tribunal that had the power of dismissal, it would be almost impossible that good cause could be shown at all. The reason of that is obvious. The person who may have been illtreated by the officer or servant of a lunatic asylum may be a lunatic, who could give no proper account of the transaction at all, and the lunatic may be a witness of such a transaction, and yet may not be able to give a proper account of it. . . . What, under these circumstances, was the Board of Governors to do? The Board is bound to inquire into the matter as well as it possibly can; and not merely is the Board justified in inquiring from the various officers, but they were bound also to inquire from the various lunatics, and if they did not do so they would be guilty of the greatest dereliction of duty. Well, the result of the inquiry was that the Governors determined, in the exercise of their discretion, to dispense with the services of this particular servant—Hayes; and what I am deciding here is that they were justified in doing so, and discharging him without giving any reason of any kind."

It will be seen from the dictum of Mr. Justice Holmes (which is widely different from that of the learned Recorder of Dublin), that the charge of assaulting the patient was not the question to be tried, although the Recorder seemed to lay particular stress upon that point. The case really hinged upon a question of law as to the right of the Board to dismiss their servants without giving any cause for so doing, and Mr. Justice Holmes's clear exposition of the law upon this point will prove a great boon to the Irish asylum authorities in future. Upon the other part of the question, which relates to the admissibility of the evidence of lunatics, Mr. Justice Holmes' ruling will be found to follow the lines laid down by the case of "*Regina v. Hill*," to which we have referred.

Suicide in St. Paul's Cathedral.

The Service of Reconciliation in St. Paul's Cathedral on October 13th, 1890, is so remarkable an event in psychological and ecclesiastical history that it ought not to pass unrecorded in this Journal. During the previous month, Edward Easton attended the Sunday service, committed suicide by shooting himself, and died in the consecrated edifice. At the inquest the jury found a verdict of suicide "whilst temporarily insane," which to the illegal and uncanonical mind would seem to divest the circumstances of

the taint of crime as much as if the man had broken a blood vessel. It cannot be the blood in itself that renders reconsecration, or rather reconciliation necessary; it must be the supposition that there had been some infraction of the moral law. However, after the careful consideration of precedents, the Dean and Chapter presented a petition, in which it is stated that they had been advised that the cathedral had been, "by such act of self-murder, and by the blood-shedding consequent thereupon, polluted and defiled." To this petition the Bishop of London replied, and by virtue of his episcopal authority declared "the said Cathedral Church to be exempt and reconciled from all canonical impediment, and from every profanation contracted and incurred by, or through, the aforesaid acts of suicide and blood-letting for ever." In this quaint phraseology it is curious to note the event is recognized as involving two acts. The Bishop acted under the advice of the Chancellor, Dr. Tristram. In justification of his advice he makes a very singular observation: "The evidence at the inquest established a case of partial insanity or suicidal mania; there was none to show that he was otherwise of unsound mind." It is to be regretted that the Chancellor should express an opinion on a subject he knows nothing about. As well might a physician pronounce an opinion upon an obscure point of law. But this is the way with the lawyers. They are as much at home in the philosophy of the human mind and its pathology as if they had studied medical psychology for a lifetime. The service consisted of an anthem, a short address from the Bishop, followed by his direction to the Registrar to read the petition of the Dean and Chapter. Then the Litany and 51st Psalm were next read, and the latter portion of the Communion Service was read. When the prayers were concluded the Registrar read out the Sentence of Reconciliation. While it is admitted that in the Canon Law of both the Eastern and Latin Churches an obligation to pursue this course existed, and was therefore in force up to the time of the Reformation, it would seem that it was not imperative upon the Bishop to act as he did. Since the Reformation there is no mention of a single instance of the performance of this remarkable service. Dr. Tristram believed that the public desired to have the ceremony performed. *The Times* was of opinion that there was no general wish for such a service. On the contrary, their correspondence supported the belief that the Bishop, Dean, and Chapter would have

exhibited more prudence if they had ignored the suicide and allowed the services to go on in the usual way.

The *Times* makes the following very sensible remarks on the whole case:—"Whatever view may be taken of the necessity or otherwise of a Reconciliation Service and an episcopal sentence under the circumstances, it remains clear that the action of the Cathedral Authorities is logically indefensible. The church either was, or was not, technically 'polluted' the moment Easton killed himself within its walls. The cause of the pollution is not for the moment important. It may be in the eye of the Canon Law the physical act of bloodshed, as suggested by our correspondent 'E. A. A.' It may be the sin, *coram Deo*, of self-murder—a thesis, by the way, which Dr. Tristram seems disposed to adopt in the face of the verdict at the inquest that Easton committed suicide when of unsound mind. If the cathedral was not polluted and profaned, why trouble the church with a contentious service and ceremony at all? If it was polluted and profaned, why continue to use it for Divine worship and for the celebration of the eucharist for nearly a month in its unreconciled condition? As 'A Country Rector' pointed out in a letter we published shortly after the ceremony, the clergy in the cathedral when the suicide was committed were bound, on the pollution theory, to stop the unfinished service, strip the altar, and close the church until the reconciliation was effected. Immediate action of the kind is implied in the whole theory of the Eastern 'Opening,' and the Latin 'Reconciliation,' of a desecrated edifice. They did none of these things. They waited to be advised, and meanwhile they carried on the daily services of the cathedral as if nothing had occurred. Then, when the general feeling of horror and perturbation caused by the unhappy man's death had nearly subsided, they again fixed public attention on his terrible end by springing a novel rite upon their congregation, under circumstances which go far to make it wholly unmeaning. The compromise is not a happy one. The old function had its significance, but we are by no means assured that English Churchmen are in these days prepared to accept the doctrines it would seem to import. In default of clear legal obligation, which apparently did not in the present case exist, it seems of doubtful expediency to celebrate a ceremony practically obsolete, impregnated with pre-Reformation principles, and which has in all likelihood been suffered to survive only

because it was unknown. But, in any event, it was absurd to thrust it prominently before the public after first pursuing a line of conduct which manifestly deprived the rite of the only meaning and justification it could ever have possessed."

PART II.—REVIEWS.

Thirty-second Annual Report of the General Board of Commissioners in Lunacy for Scotland. Edinburgh, 1890.

The total number of lunatics under the official cognizance of the Commissioners in Scotland on 1st January, 1890, was 12,302. This is an increase during the year 1889 of 348, an increase which has taken place entirely among pauper patients, private patients having diminished by two. The increase of *registered* lunatics (*i.e.*, not including inmates of training schools or the lunatic department of the General Prison at Perth) is 334. In Royal and District Asylums there is an increase of three private and 172 pauper patients; in Private Asylums a decrease of two private patients; in Parochial Asylums an increase of 18, and in the lunatic wards of poorhouses a decrease of two pauper patients; in the Perth Prison an increase of one; in imbecile training schools an increase of 11 private and two pauper patients; and in private dwellings a decrease of three private and an increase of 148 pauper patients.

As regards Establishments, the number of private patients admitted during the year, excluding transfers, was 479, or 40 less than during the preceding year; and the number of pauper admissions was 2,161, 60 more than during 1889. The number of voluntary patients admitted was 76, 21 more than the average for the decennium 1880-89, and the number resident on 1st January was 55.

Two hundred and one private patients were discharged *recovered*, being 18 more than during the year 1889, and 17 above the average for the quinquennium 1880-84; and the recoveries among pauper patients amounted to 944, the same as last year. The proportion of recoveries to

admissions, excluding transfers, is shown in the following table:—

CLASSES OF ESTABLISHMENTS.	Recoveries per cent. of Admissions.					
	1880 to 1884.	1885.	1886.	1887.	1888.	1889.
In Royal and District Asylums	41	37	42	40	38	38
In Private Asylums ...	38	50	26	27	25	46
In Parochial Asylums ...	42	41	44	39	45	42
In Lunatic Wards of Poor-houses	6	7	6	6	7	4

The *death-rate* for the year was for private patients 6·4, and for pauper patients 8·1 per cent. of the average number resident. The rate for the last four years, and the quin-quennium 1880-84, is indicated in the following table:—

CLASSES OF PATIENTS.	Death-rates in all Classes of Establishments per cent. of the Number Resident.					
	1880-84.	1885.	1886.	1887.	1888.	1889.
Private Patients	7·0	8·0	6·7	5·8	6·4	6·0
Pauper Patients	8·1	8·1	7·9	8·1	8·1	7·7

and the proportion of deaths in the different classes of establishments is :

Royal and District Asylums	...	...	7·4
Private Asylums	...	...	6·4
Parochial Asylums	...	...	9·1
Lunatic Wards of Workhouses	...	...	4·9

The returns show a progressive diminution of *escapes*

during the last six years, the number per 100 of patients resident being :

1884	...	...	3.2	1887	...	...	2.5
1885	...	...	2.9	1888	...	...	2.3
1886	...	...	2.6	1889	...	...	2.0

One hundred and twenty-four *accidents* were reported during the year, of which nine ended fatally. Three of these were suicidal, two due to strangulation, and one to precipitation from a window. Of the other deaths one was due to drowning in an attempt to escape, two to accidental falls, two to asphyxia in bed during an epileptic fit, and one to extensive internal injuries caused by the patient falling over furniture during a struggle with an attendant. In 45 cases the accidents involved fractures of bones or dislocations of joints, caused in 25 instances by falls, in six by assaults by fellow-patients, and in six by struggling with patients or attendants; in six cases the injury was unintentionally self-inflicted, and in two cases the causes were unascertained.

As regards *lunatics in private dwellings*, the Report again speaks in favourable terms. The number of private patients so provided for on 1st January, 1890, was 128, a decrease of three as compared with the number at the corresponding date of 1889. There is an increase of 148 pauper patients so accommodated, as compared with 27 in the preceding year. There has been a small increase in most of the counties, and the increase is chiefly among patients boarded with strangers. Those living with strangers are 120 more than last year, while the increase of those living with friends is only 28. The propriety of removing to private dwellings such patients as have ceased to require detention or are unlikely to benefit by further asylum treatment, according to the report, is, with the exception of some few districts, becoming more and more recognized by parochial authorities. Dr. Lawson observes in his Report that "the insane in private dwellings are now more commonly provided for amongst people who are well off than used to be the case; that they are rarely entrusted to the indigent, and that, as a result of their association with a more prosperous class of society, they have undergone social elevation, and are less exposed to the risks of privation to which paupers living in the homes of the indigent are necessarily liable."

Taking into consideration the large number of patients in private dwellings, and the large amount of liberty allowed, casualties, though regrettable, are hardly unexpected, and during the year the following have been reported:—An old woman of 66 fell and fractured the neck of the femur, and died in consequence; another woman of 60, who was hemiplegic and subject to syncopal attacks, fell into the fire and fatally burned herself; a melancholic woman of 73 cut her throat seriously with a pair of scissors, but afterwards recovered, and was removed from the register of the Board; an old man of 75 was reported as being suspected of indecently interfering with little girls, and was removed to the asylum; an imbecile male patient of 17 was alleged to have indecently tampered with certain boys, but the reality of the offence was considered more than doubtful; another imbecile lad of 19, who was held to be sane enough to be responsible for his acts, was sentenced to 60 days' imprisonment for indecently assaulting a girl; a female patient, who had been boarded out since 1886, wandered away from her guardian, became exhausted, and perished in the snow; and another female, boarded out for 25 years, was criminally assaulted by a man, who was sentenced to three months' imprisonment.

The present Report contains a special review of the changes that have taken place in the numbers and distribution of the insane during the quinquennium ending with the past year, and it presents some interesting features. During the past 32 years the number of lunatics has increased 111 per cent., while the general population has only increased 35 per cent.; but it is carefully pointed out that these figures do not justify, as is so widely believed, the conclusion that insanity is rapidly on the increase. The increase in the total number of lunatics is to be explained not by any one cause, but is brought about by the operation of several factors. In the first place the term lunatic is now extended to a larger class than formerly. At different times and in different countries the standard of insanity varies according to the degree and kind of social development, and so the proportion of the population reckoned as of unsound mind likewise varies, and the tendency in Scotland during the past 32 years has been in the direction of "widening the limits of the degree of mental unsoundness needed to constitute insanity." Private patients, allowing for increase of population, have increased

during the past 32 years by 18 per cent., and this is really due to the fact that patients are now permitted to remain for longer periods in asylums, and not to any lowering of the death rate. The increase of 95 per cent. in the number of pauper patients in establishments, on the other hand, has a quite other explanation. Duration of residence is in no way accountable for the increase, for this has varied but little during the last six quinquennia, and a lower death-rate only partially accounts for it. The causes operating in the direction of the increase are many; the poor-law administration, while it has very materially diminished the number of ordinary paupers, has increasingly recognized the necessity for special relief in cases of mental affections; the capitation grant of 1874 has tended largely to augment the numbers of the insane poor; the Lunacy Act of 1857, by directing the attention of the parochial authorities to the duty laid upon them of sending to asylums such pauper lunatics as required asylum treatment, is to a very considerable extent accountable for the increase, and yet another cause is to be found in the improvement of asylums, which has led to their more extensive use.

The statistics as regards pauper lunatics in private dwellings reveal the fact that there has been a steady upward tendency in the number annually removed from asylums to private dwellings during the past 32 years, with the exception of the period immediately following the giving of the parliamentary grant in aid, which, for a certain limited time, tended to the keeping of patients in asylums. In the quinquennium 1860-64 the average annual number of pauper patients transferred from establishments to private dwellings was 36; in the five years 1885-89 this had risen to 231.

In addition to those we have mentioned, the Report contains many other interesting statements regarding the prevalence and distribution of insanity in Scotland, and it bears ample evidence that the interests of all classes of the insane, poor and paying alike, are zealously safeguarded, and that an earnest endeavour is constantly exercised to ensure that provision which is best suited to the requirements of those who come under the jurisdiction of the Board of Commissioners.

The appended table shows the number of lunatics on 1st January, 1890, and the mode in which they are distributed:—

NUMBER OF LUNATICS ON 1ST JANUARY, 1890.

MODE OF DISTRIBUTION.	Mals.	Female.	Total.	PRIVATE.			PAUPER.		
				M.	F.	T.	M.	F.	T.
In Royal and District Asylums	3386	3516	6882	726	755	1481	2640	2761	5401
" Private Asylums	47	109	156	47	109	156	...	...	...
" Parochial Asylums, <i>i.e.</i> , Lunatic Wards of Poorhouses with unrestricted Licences...	711	800	1511	...	...	...	711	800	1511
" Lunatic Wards of Poorhouses with re- stricted Licences	438	438	876	...	...	...	438	438	876
" Private Dwellings	1021	1552	2573	46	82	128	975	1470	2445
	5583	6415	11998	819	946	1765	4764	5469	10283
" Lunatic Department of General Prison ...	46	12	58	...	...	...	...	...	...
" Training Schools	157	89	246	83	54	137	74	35	109
Totals...	5786	6516	12302	902	1000	1902	4838	5504	10842

Thirty-Ninth Report of the District, Criminal, and Private Lunatic Asylums in Ireland; with Appendices. 1890.

This Report marks a new departure. It is not interesting from its bulk, for it is very short, nor from the direct information which it contains, which is very limited; but it presents one remarkable feature hitherto unknown in Irish Lunacy Blue Books. It is a distinct comfort to the critic, whose lot has compelled him year after year to peruse these documents, to be at last able to chronicle that the Irish Inspectors' Report is written in the English language, in a tongue which he who runs may read, in a dialect "to be understood of the vulgar."

The Report begins with the following summary of the number and distribution of the insane under care during the year 1889:—

	On 1st January, 1889.			On 1st January, 1890.			In-crease.
	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.	
In District Asylums	5,898	4,937	10,825	6,037	5,143	11,180	355
„ Private Asylums	243	366	609	260	377	637	26
„ Gaols	—	—	—	1	—	1	1
„ Poor-houses	1,652	2,431	4,083	1,671	2,494	4,165	82
„ Central Asylum, Dundrum ...	140	28	168	146	30	176	8
	7,923	7,762	15,685	8,115	8,044	16,159	474

It would appear that the steady increase in the population of all classes of institutions for the insane, which is elsewhere observed, is taking place in Ireland also.

As the present Inspectors did not hold office during any part of 1889, they wisely decline responsibility for the statistics for that year, and make no deductions from them.

They enumerate briefly, somewhat after the manner of a Queen's Speech, the matters which will occupy their report for 1890.*

These are —

(1.) "The condition of the insane in Ireland, scattered through the various workhouses, or wandering at large,"

* The numbering and lettering of the clauses are ours.

which, we are told, "has never been considered satisfactory."

(a.) It would appear that though most, if not all, workhouses in Ireland contain lunatics, there is, in most cases, no legal power for their detention, and the only plea under which they are detained is that they are destitute persons. "It is, therefore, not to be wondered at that the provision for the proper care and maintenance of harmless lunatics and idiots in these institutions does not meet the requirements of this helpless class."

No, indeed! but it is to be wondered at why this happy-go-lucky state of things has been allowed to continue so long; nor can we help wondering whether our memory deceives us when it seems to recall warm encomiums passed by high officials in former times on the management and care of the insane in Irish workhouses.

(b.) "No provision of any sort exists for the supervision of the insane poor in private dwellings, or wandering at large, as in England under 16th and 17th Vic., cap. 97, sec. 66."

This subject has frequently been under consideration, and two or three still-born Parliamentary Bills have from time to time been brought forth. We may hope that the "neglected lunatic" has at last found advocates who are in earnest.

(2.) The licensed houses.

(a.) The condition of their inmates is said to be, "with some few exceptions, not entirely satisfactory. Many contain but two or three patients, whose contributions toward their support will hardly admit of due provision being made for their proper care."

(b.) "The extension in Ireland of public hospitals supported by public grants, or charitable institutions for the reception of the insane whose friends are able to contribute only a small sum for their support, would appear to be a want urgently felt in this country."

Why the example set in other countries has not been followed in Ireland with reference to lunatic hospitals we have never been able to understand. For so poor a country, and a country in which there is so much proper pride in regard of legal pauperism, we should have supposed that lunatic hospitals would have exactly met the requirements of the population. That no effort has been made of late years to emulate the English hospitals and Scotch Royal

asylums is perhaps due in part to the ignorance or apathy of those whose duty it should have been to draw public attention to this want, in part to the miserable mismanagement and consequent failure of the chartered asylum founded by Dean Swift. It will behove our Irish friends to give prompt consideration to this question. A recent annual report shows that one of the Scotch Royal asylums draws as many as 20 per cent. of its admissions from Ireland, and it is understood that at least two other of these institutions receive Irish patients in greater numbers. Taking these facts, together with the state of affairs revealed in the above extracts from the Inspectors' Report, it is clear that unless something is promptly done there will soon be no private patients left in Ireland.

(c.) The Inspectors are of opinion "that the provisions of the Act with reference to private asylums in Ireland (5th and 6th Vic., c. 123) are not sufficiently strictly carried out, especially as regards the keeping of the various books and the use of restraint, which latter, in some instances, appears to be used continuously, in others without any order from the physician, and without any record of its form and duration."

The Report winds up with a complimentary paragraph regarding Sir John Nugent and the late Dr. George Hatchell, in which we cannot but admire the adroitness with which the present Inspectors allow it to be seen that their predecessors, and not they, are responsible for "the system of rules and regulations for the care and protection of the insane," and for the construction of "almost all the district asylums."

No further reference is made to the latter institutions, but we have no doubt that though the condition of their inmates may not call for such immediate action as some of the other subjects dwelt on by the Inspectors, these gentlemen have given earnest and careful attention to the district asylums, and will soon effect material improvements in their management.

In Ireland it is unfortunately almost impossible, owing to the whole condition and history of the country, to arouse real public interest in anything not directly connected with politics or religion. Hence the state of many great public charities in that country. It is to some degree a compensatory advantage that very much more power and control are vested in the hands of the central authorities than is the

case in England and Scotland. A great deal rests with the Inspectors, who ought to be, and no doubt at present are, the trusted advisers of the Government in lunacy matters. We must again express our confident hope that their conduct will be marked by such honesty of purpose, wisdom in advising, and energy in making their influence felt, as may lead to the thorough reform so much needed in their department.

Among the Appendices to this Report is the Annual Report of the Medical Superintendent of the Irish Criminal Asylum, in the form of a letter addressed to the Inspectors. It contains a very singular statement. After remarking that the sum provided by the Treasury under the sub-head of victualling had been considerably exceeded, and pointing out that this was "due to the large quantity of stimulants and other extras ordered by the Visiting Physician," Dr. Ashe goes on to say :—

I have always willingly ordered extras in any case of enfeebled health, but I do not think that any reasonable fault can be found with the ordinary diet of the Institution for ordinary cases, or that it is desirable to provide stimulants for strong young men able to work on the farm or at other occupations. I had, indeed, some years ago succeeded in abolishing the use of beer altogether, and proposed, in introducing porter, that it should be used only as a strictly medical extra. I called the attention of the Visiting Physician during the year to the fact that the vote for victualling would necessarily be exceeded in consequence of the large amount of extras ordered, but without result. It is obvious that as far as possible I am bound to conform to his wishes in the matter; yet had it not been that very exceptional and unusual savings accrued under other sub-heads, one of which, indeed, cannot possibly accrue again, the total expenditure under the vote would have been exceeded to a large amount, and for this excess I should have been held personally liable by the Treasury.

While we quite recognize how undesirable it is to bring up questions of medical treatment, or medical etiquette, on fiscal grounds, we cannot but think that this remarkable Report throws an instructive light on the advantages that are likely to result from the institution of Visiting Physicians. Dr. Ashe appears to be in a pitiable case. If what he says in the last sentence we have quoted be literally correct, we suppose he is paid on a system resembling result fees, being liable to be mulcted in amounts equivalent to certain excesses which have been brought about contrary to his

wish. This arrangement seems almost incredible. The average cost per head in the Criminal Asylum during the year 1889, for maintenance only, and not including establishment charges, was £39 1s. 1d., and of this sum victualling cost £21 10s. 5d. (Append. B, Table 21).

The remaining Appendices are mainly taken up with statistical and fiscal details; some of great importance, some of the most trivial kind. We are glad that the inspectors disclaim responsibility for the statistics, etc.; and we presume they had not leisure to go into the question of revising the various tables. This portion of the Blue Book cannot be considered creditable, and we speak in no unfriendly spirit towards the inspectors—quite the reverse—when we point out some of its faults, and urge future amendment. This is a branch of their work in which the inspectors have certainly a right, not only to the aid of accurate records from the various asylums, but also, if necessary, to such clerical assistance in their own particular part of the job, as will save them from being compelled to issue documents so much below the ordinary level of official returns.

The table with which the Report begins appears to be incorrect, the number of patients in private asylums being given at page 3 as 637, while the various tables (Appendix F, 1 to 7) dealing specially with private asylum statistics, uniformly show and prove the number to be 631.

In Appendix C, Table 1, the "Limits of Accommodation" in the district asylums are said to be 10,775; yet there seems to be no doubt that these institutions contained at the close of the year 11,180 patients. Were the 405 patients in excess not "accommodated," or what meaning attaches to the word "limits" in Ireland?

We have repeatedly given expression to the hope that the inspectors would do something to try and assimilate their statistical tables to those in use in England and Scotland. Seven years ago we trusted we had at last overcome the official *vis inertiae*. The tables of the Medico-Psychological Association were adopted with slight modifications. The result was not happy. The most important statistics appeared in such a form as to arouse something like the inextinguishable laughter of the gods when Vulcan essayed the office of cup-bearer. After this we were informed that the Treasury declined (who can wonder?) to be at the expense of publishing these tables. But surely such discreditable performances could be avoided. The various tots

and calculations need not be shaken up together in a bag and taken out at random, as appears to have been done in preparing the Report for 1882. Perhaps the Inspectors were right in not attempting any alterations in the routine tables until they can effect the desired change.

In the Report before us seven pages of Appendix C are wasted in giving the usual list of all the members of all the Boards of Governors of the Irish District Asylums. This table is apparently prepared for the sole delectation of James Yellowplush. Its pompous enumeration of lords, spiritual and temporal, in all their glory, of baronets, knights, D.L.'s, and J.P.'s would delight the heart of that honest servitor, and may perhaps cost the Treasury very little; but we fail to see what advantage to the general public, whether medical or lay, can result therefrom. To the Right Hon. the Marquess of Dufferin and Ava, K.P., K.C.B., or the Right Hon. Viscount Templemore, G.C.B., D.L., J.P., it may be a gratification to know that their names figure in this Blue Book, with the added decoration of a duck's egg in the attendance column; but we doubt it, and we cannot think that the eminent services rendered to their country in other walks of life by these distinguished public servants reflect any particular lustre upon the Irish Asylums Department.

For some time after the unlucky year 1882 no table of supposed causes of mental disease in patients admitted was published. A distinguished member of our Association remonstrated with the authorities on this subject. The result was that a table of causes was reintroduced, not the table in use in England, but some antediluvian compilation which no modern has seen anything to resemble. We regret to find this particular form of table retained. We shall have said enough for it when we mention that "Pride" and "Anger" are two headings among the moral causes, and "Abuse of Medicine" and "Sedentary Habits" two among the physical.

If we might presume to advise the inspectors about this, and other, tables, we would say with Hamlet—"Oh! reform it altogether." We are entirely at a loss to conjecture why the late inspectors should have issued annually to the superintendents of asylums the amended tables above referred to, as we are informed they have done, and yet should not have made use of the information thus solicited, which actually some of the asylums continue to print in their annual reports.

Some of the non-medical tables would appear superfluous unless they are inserted for the purpose of enlivening the tedium of officialism by the introduction of the comic element. Appendix C, No. 29, sets forth "Statements of the actual quantities of food, medical stimulants, coal, etc., consumed"—(consumed is good)—in each district asylum during the year. "Et cetera" seems to consist chiefly of washing materials, gas, and straw. The quantity of straw "consumed," presumably for bedding, may serve as some index to the mode of treatment adopted in some asylums; but what interest can it be to anybody (except "Barrington") to know that a certain asylum consumes "976 stones Barrington XX. T.C." soap? The next table (30) details with great minuteness the articles of clothing and bedding made by the patients in district asylums during the year. It may be instructive to note, as showing the progress of culture, that many of the asylums have rejected the nasty old word "shift," and have adopted the elegant indefiniteness of the bisexual "chemise;" but it would really be more to the purpose if we were told how often these necessary, if impolite, garments are changed in the week.

Statistical tables and returns are not subjects of the same importance as much of the other work which is ready for the inspectors to take up, and which they seem rightly to recognize as being their first duty. Still, we trust that in the coming year they may have time and authority to reorganize this part of their business also.

Manual Training in Education. By C. M. WOODWARD,
Director of the Manual Training School of Washington
University, St. Louis, M.O.

*Manual of Instruction for giving Swedish Movement and
Massage Treatment.* By Prof. HARTVIG NISSEN.

The object of the first-named manual is to set "forth the nature and positive value of manual training in a scheme of general education." The author begins by stating what he considers the defects of the present curriculum. One of the chief of these defects is that it is not "general education." The introduction of a new subject into the ordinary school course, to which a certain proportion of time must be given, necessitates an entire revision of the school time-table; but

this is no disadvantage in Mr. Woodward's eyes, for he devotes a large part of his book to showing that the introduction of manual training into a school has most beneficial results on other studies. He finds that in these schools the boys do not leave at so early an age as is otherwise usual; that even those who do not intend to go to the universities, or to enter any of the learned professions, will stay on until the age of seventeen or eighteen instead of leaving at fourteen. This fact he attributes to the great interest taken by the boys in this special subject, and to the increased intelligence they throw into other studies. In speaking of the unsatisfactory and uninteresting nature of the present schools curriculum, Mr. Woodward quotes President Eliot, of Harvard University: "Frequent complaints are made of overpressure in the public schools, but it is not work which causes over-fatigue as much as lack of interest and lack of conscious progress. The sense that, work as he may, he is not accomplishing anything, will tell upon the strongest adult, much more than upon a child. One hour of work in which he can take no intelligent interest will wear him out more than two hours of work in which he cannot help being interested. Now the trouble with much of the work in the present school is that it is performed by, and, inevitably uninteresting to, the childish mind. The best way to diminish strain is to increase interest, attractiveness, and the sense of achievement and growth." The manual training a boy gets in school is not special, as in the technical school; nor is its object industrial. The industrial schools do not aim so much at training the intelligence of the boys, as at producing the greatest quantity of saleable goods, by the teaching of some special trade. The scope of the whole course of manual training may be included in the expression "preparatory to specialities, without being special itself." A boy who has been through one of these schools has a much wider choice of professions than the boy who has been through one of the ordinary high schools, for he has learnt that he has hands as well as brains, and has some idea in which direction his talents and inclinations lie. Without this training a boy, as a rule, knows nothing beyond head work, and it is this one-sidedness which causes so many to become clerks and teachers, thus overstocking these professions. In answer to the question as to what manual labour is, Mr. Woodward says: "Manual training is limited to teaching and learning the use of tools, the methods of

working materials, and the construction and use of shop drawings, where the mastery of tools, materials, and methods is the immediate end in view. The instruction and practice deals with general principles, and the forms used in exercises are as typical as possible. While in hand they are particular, definite, and precise, because every concrete exercise must be particular, however general may be the application of the ideas involved." Drawing is an essential part of the training, for every pupil must learn how to express his own ideas before executing them, and also how to interpret correctly the drawings of others.

The author devotes one chapter to the consideration of the fruits of manual training, to some of which allusion has already been made. He maintains that manual training supplies culture to boys, who from their lack of literary tastes would be uninfluenced by a purely literary course of study; and he quotes Colonel Jacobson, who says: "Manual training means not fewer, but more, ladies and gentlemen to the acre." Fourteen points are enumerated as "fruits"—too many to touch on in detail here. The most interesting from a medical point of view is the testimony produced from the boys themselves, as well as from their parents, of the improved health and spirits of many delicate pupils, as one result of their training. This effect might not be so prominent in England, where outdoor pursuits and games are so much more generally followed, than is apparently the case in America. One extract after another is given from the letters of both boys and parents testifying to the great gain the boys have derived from their training. Besides their increased interest in their school work, they have been able to hold their own in their various professions in a way otherwise impossible. Manual training takes up two hours of the day's school work, five hours are devoted to mathematics, science, and literature (or language), and one hour to drawing. For the description of the work done and of the methods followed in the "shops," we must refer our readers to the book itself.

Corresponding work for girls in the form of classes for needlework, cookery, and laundry work is incidentally mentioned. Mr. Woodward is a thorough enthusiast, and has an answer ready for all objections; and those who wish to study the subject will gain much useful information from this little book, which, as the preface tells us, is written mainly for English readers.

The object of "A Manual of Instruction for giving

Swedish Movement and Massage Treatment," by Professor Hartvig Nissen, is threefold. First, to describe to the physician, or his operator, a certain number of manipulations and movements, which may be applied without specially skilled labour; secondly, to remove the ignorance and prejudices of those who would class the whole treatment as "humbug;" and thirdly, to show that the "Swedish movement cure," to which massage is a valuable adjunct, is a thing apart from active gymnastics. This manual will not be of much use to a person having no previous practical knowledge, but one who has learnt to use his hands without much theoretical training will find a good deal of valuable information and assistance in these pages. The author insists with great earnestness on the fact that "massage" is only a part of the passive movements, and constitutes a very small portion of the Swedish treatment. The term "Passive Movements" sounds at first somewhat anomalous, but the term is explained as including "all movements performed by the physician upon the patient, the latter remaining passive." These movements include rubbings, pressures, vibrations, etc., as well as rotations, bendings, stretchings, and so on of the whole limb or a part. The writer points out the fact that whilst many physicians think that there may be something in it, they do not always take the trouble to find out whether the person they employ is properly qualified, or only "an old auntie" who has rubbed a little and thinks she can rub more without further instruction. Several prescriptions are given, which form a very good guide to the beginner. All the exercises described can be performed without the aid of special apparatus—a great convenience where the treatment has to be carried on in the patient's room. The use of mechanism instead of the human hand is only touched upon. Vibratory movements, being most exhaustive to the operator as well as beneficial to the patient, might be more widely utilized by using a machine such as the one mentioned. Some cases are referred to in detail at the end, the signal success of which should be a great encouragement to those desirous of trying the system on their own persons or on others. Space will not permit us to quote more than one of these. "A gentleman, thirty years old, sprained his right ankle by a fall, and had been on crutches for eight months, when he came to us for treatment, May, 1883. There was no flexibility of the ankle, which was very tender and swollen. After six weeks' treatment once a day the patient was cured."

The Journal of Maria Baskirtseff. Translated by MATHILDE BLIND. Cassell and Co. Two Vols. 1890.

The handsomely got-up and well-edited translation from the original French deserves more than a passing notice from our Journal. The book has been properly called a psychological study, and has made much stir in literary and general society. Nowadays most novels and all poems are what may be called psychological studies, and the great end, we believe, increasing tendency of French novels especially, is to be introspective and self-analytic; the minutest differences of feeling and expression are studied and described with the painful exactness of a hypochondriac.

Whether we take the work under review or one of the so-called psychological novels of Paul Bourget, we find the same exact dissection of feelings. There was a time when the poet and the novelist delighted in portraying nature as it appeared to him, but now it is feeling, passions, and desires which occupy the attention.

This, as we have already noticed, is more frequent and is carried to a further point in France than in England. We do not believe that the tendency is a healthy one, and we recently heard one French critic say that, at present, in France, the artist and the novelist are not content with stripping women of their clothes.

Such studies and analyses are of interest to us, and may, with advantage, be read; the real evil is when no other literary food is taken. We are believers in the unconsciousness of perfectly healthy function; when we run the risk of becoming conscious we become morbid. To know one's self may be a good thing, but to know much of the separate actions of inter-dependent parts of the body or mind leads to evil. The book before us is one of the few fairly successful attempts at a truthful journal. It has been said that Pepys and Rousseau represent the complete diarists; for our part, we believe the former was nearly truthful, because he wrote for himself, but the latter was a *poseur* from first to last, writing a journal in public and for the public. Maria Baskirtseff wrote a journal which stands half-way between that of Pepys and that of Rousseau, for though written avowedly for the public eye, yet it bears the evidence of truthfulness on its face. It is written by a young, ardent, and impulsive girl, who tried hard to represent honestly what she really felt. There is a living human feeling in it which makes it appeal very directly to all careful readers,

and we would warn those who read this review not to be hasty in throwing down the book after the first hundred pages. It is worth while getting over the feeling of disgust caused by the youthful vanity of the author, and to pursue the sad mental developments to the end.

Great differences of opinion have been expressed as to the value of this book—some, like Cardinal Manning, praising it highly, while other men of note look upon it as vapid and much overrated. We have found that elderly men, who have seen much of the world, esteem it highly, while ladies, especially English ladies, condemn the book and speak of it as likely to have an evil influence on the young.

The journal gives the sad life-history of a Russian girl of high social rank, who was gifted with beauty, wealth, and talents, especially of the artistic kind, and yet who felt that she should never live long enough to win distinction by these means, and so determined to gain posthumous fame, at least, by writing a truthful diary, expressing her longings, her feelings, and her desires. The result is the book before us; we need hardly say that it is, after all, only part of the truth; no one, not even Pepys in his cryptogram, could put down all his thoughts without producing a disgusting and repellent result.

We each know worse of ourselves than our worst enemies ever imagined of us, and so, though Maria Baskirtseff does put on record many of her little weaknesses, they are put down with a colouring and surrounding which shades off the crudity of naked truth. The study is, however, worth considering.

The authoress, surrounded by devoted friends and by every luxury which wealth could provide, still feels the vanity of all things and longs for distinction of her own creation. She, in word at least, contemns her surroundings; yet we see that she would have ill-spared the luxuries she professes to hate, but which have become necessities to her. Her character, as displayed before the reader, is consistent. With her ardent, restless longing for power and personal distinction, there is mixed a most inordinate vanity. She is never tired of admiring herself, her dress, and her abilities; she writes of herself as looking charming and pretty; she lusts for power and admiration, differing, however, from most women in placing the lust of power before the desire for man's admiration. She was not indifferent, however, to men.

In the journal there is a most amusing description of her

first love affair. She fell passionately in love with a nobleman to whom she had never spoken, and who was leading a distinctly irregular life; her knowledge of life was in advance of her years; later, she fell in love, or thought she did, with a passionate young Italian, and in this case she did very unconventional things. In the course of this affair she tortured her lover and herself with her uncertainty and doubt; she was always analyzing her feelings toward her lover, and could not satisfy herself that her love was genuine. The description of her doubts is very like that which one so frequently hears from the patients who are morally hypochondriacal. We think her Italian lover was well out of the marriage. The last *affaire de cœur* was sad and pathetic, and perhaps, the most touching scenes in the whole book are those describing the two artists dying of a like disease seeking each other's society, well knowing that their friendship was but one of sorrow and of parting. The two brilliant lives faded out together.

As might have been expected in such a character, the lust for power and for admiration was associated with passionate jealousy, and nothing is more honest and feminine than her expressed hatred of her artistic rival. Loss of voice, probably due to phthisis, drove her to art instead of music, and in this she soon distinguished herself. She was very facile of hand, her taste was good, and her judgment correct, so that, beside her journal, some of her pictures may live to carry on her name.

When working in the studio she strove hard and constantly for pre-eminence, but chiefly with the desire to beat her rival, and her hatred of this rival was fiendish, and one seems to see the Tartar beneath the French veneer. She gloried in her successes, and the acceptance of her picture for the salon gave her very natural pleasure.

Hers was a passionate and refined nature, unhealthy in its feverish development, and, like a hot-house plant, easily nipped and destroyed. With her artistic gifts there was very little real sympathy or love in her nature, and no real greatness could have been developed from such a selfish nature; self was her god, and parents and relations were necessary evils, and were accepted so long as they did not interfere with her life's scheme. We believe she was heartless.

Her religious ideas began with a form of idolatry, as shown by her prayers for toys or for ability to learn

English, and slowly passed through simple religious indifference of the French type to infidelity.

The whole journal, though in two rather large volumes, is worth reading. It is light enough for holiday hours and yet is of sufficient interest to make one think. We believe most readers will leave the book with a feeling of sadness that one so young and so gifted should have had no higher motives and no nobler ideal of life.

Life of Dorothea Lynde Dix. By FRANCIS TIFFANY. Houghton, Mifflin, and Co., Boston, 1890. (With portrait.) (First Notice).

This work has been eagerly looked forward to, and its appearance must be welcome to all the friends of the good woman whose life is here written. Miss Dix has been fortunate in her biographer. Her memory has not been injured by extravagant eulogy, but the great work she accomplished and the nobility of her character have been fully recognized. The discrimination exercised by Mr. Tiffany in the delineation of her character is a model for imitation for other biographers. The author is also to be commended for having restricted his work within moderate limits, the result being one octavo volume containing barely 400 pages. Dorothea Dix was born in the State of Maine, April 4, 1802. She was, however, a Massachusetts woman by ancestry and education. Her father was of unstable character, and led an aimless, wandering life. The child was miserable, and escaped when twelve years old to her grandmother, who resided at Boston, where she enjoyed the advantages of school education, while Madam Dix brought her up in the stern and inexorable fashion so common in the old Puritan days. She appears to have derived her resolute will from this lady, and from her grandfather Dr. Elijah Dix, a physician in Worcester, Mass., and subsequently a resident in Boston, where he established a drug store. He also speculated in land, and became the founder of Dixmont and Dixfield, in Maine. The birth-place of Miss Dix was only a short distance from the former place. We do not find any reference to Miss Dix's mother, except the statement that "her immediate parents were lacking in energetic fibre."

Teaching was her first occupation, and although in her teens, she commanded the respect of her scholars, first at

Worcester and then at Boston. It was not long before she established another school for poor and neglected children, one which proved to be the nucleus of a similar work on a much larger scale. Her health broke down, and she left Boston for a period for Portsmouth, Rhode Island, where she undertook the education of Dr. Channing's children. "Her duties were light, she could be much in the open air, and at last her passion for hero-worship found satisfaction in close intimacy with an actual human being, so exalted in intellect and saintly in character, that the more nearly she came in contact with him, the deeper grew her veneration" (p. 23). In 1830 Miss Dix accompanied Dr. Channing's family to St. Croix, one of the West India Islands, and returned in the spring of the following year to Boston. There she endeavoured to make a livelihood by school keeping, and pursued her work with a lofty ideal, fostered by the preaching of Channing and the eloquence of his colleague, Styles Gannett. After five years' school work, during which she suffered much from ill-health, she became, at the age of thirty-three, unable to perform her duties any longer. "A hectic fever had long been running in her blood, which raised to a perilous intensity the self-sacrificing impulses and the moral and religious ardour of her temperament. . . The mental and moral powers, which, after once they had found their adequate field of action, were to sweep irresistibly before her the legislatures of more than twenty great States of the Union, which were again and again to carry by storm the Senate and House of Representatives of the Federal Congress in Washington, and which, in Europe, were to win a like triumph in the British Parliament, and to revolutionize the lunacy legislation in Scotland,—mental and moral powers of such an order had so far been set only to the petty task of teaching, disciplining, and stimulating twenty or thirty average children" (p. 43). Change of scene was now a necessity for Miss Dix, and she came to England, intending to proceed afterwards to the South of France or Italy. Her prostration, however, demanded rest, and this she fortunately found in the hospitable house of Mr. W. Rathbone, of Liverpool. Lasting friendships were formed, and no doubt she derived a fresh impulse towards benevolent and humane work from the estimable Unitarian family in which her lot was unexpectedly cast, in consequence of an introduction from Channing.

In 1837 Miss Dix returned to New England, but not to resume her teaching. Other work was in store for her.

In our next number we shall resume our notice of this interesting volume, hoping that in the meantime those who are interested in the history of the amelioration of the condition of the insane in the United States, of which movement Miss Dix was the central figure, will possess themselves of the work itself. No British asylum library ought to be without a copy.

Golden Bullets: a story in the days of Akber and Elizabeth.
By W. W. IRELAND. Edinburgh: Bell and Bradfute.
London: Simpkin, Marshall and Co. 1890.

Dr. Ireland may be congratulated on having succeeded where more than one big man before him has failed. It is not given to many, even among the great ones of literature, to write in a way acceptable to men and to boys, to produce work which may be criticized in the smoking room of the "Athenæum" or the "Savile," and which may also be trusted to keep the youngsters out of mischief of a wet afternoon. Charles Kingsley, in his "Water Babies," did not succeed in interesting the playroom, while on the other hand, who remembers anything, except through "Robinson Crusoe," of Daniel Defoe? The work now before us has, however, one material disadvantage in its very excellencies, inevitably suggesting as it does comparison with the tales of Louis Stevenson and the romances of Walter Scott. It is no small praise to say that without being less readable, its tone is healthier than that of the "Master of Ballantrae," while the description of Akber in his son's camp has something of the ring of the "Talisman" about it, recalling indeed one of Scott's finest passages about the great Saladin. Dr. Ireland has the characteristic defect of his great predecessor. Stephen Ashbourne, the hero of "Golden Bullets," is about as colourless a person as Ivanhoe, and just as we rise from Scott with memories of Di Vernon and of Rebecca, of Effie Deans, or of Lucy, rather than of his titular heroes, so, on closing "Golden Bullets," we recall not so much Stephen Ashbourne or Benedict de Goës, or even Akber himself as the heroic Sultana, the Circassian bride of the Emperor, and the two Eastern wives of Ashbourne, all of them sketches full of vivacity and insight, pleasant and piquant withal. With respect to incident, the tale is by no means deficient. Stephen Ashbourne, the grandson of an

old city goldsmith, brought up largely in solitude and accustomed to brooding thoughts, becomes profoundly dissatisfied with "England as she is governed" under the Gloriana of Spenser. We almost fear that we are committed to an "introspective" novel, that we shall either have to support the insufferable prosiness of a Robert Elsmere or to study the inner emotions of "a pushing young particle" as described by an imitator of those linen drapers of literature, Howells and James. Dr. Ireland, however, understands himself and his readers too well for this, he understands too "the spacious times of great Elizabeth," and accordingly we find restrained dissatisfaction with "the home life," finding its natural and healthy outlet in foreign adventure, adventure which begins in mercantile enterprise and ends on the battlefield. Those were days when each man had to be something of everything, when there was a touch of the statesman about the "man on 'change," and more than a touch of the warrior about the officers and seamen of our mercantile marine. It is not too much to say that Dr. Ireland makes these stirring days re-live for us in his pages, nor will the veriest schoolboy fail to catch some just idea of everyday life in a century which knew not in India of the English *raj*.

How Stephen comes to Surat, and how from Surat he came to the court and presence of the Great Mogul we must leave our readers to find out for themselves; it will be enough to remark that the tale proceeds by easy stages and is constructed with that highest art in story telling, the art which, like that of the mole and the miner, advances steadily but always by concealed ways. Dr. Ireland certainly deserves to be congratulated on the manner in which he tells us of a time of bloodshed and much cruelty without any unseemly dwelling over details better left undetailed; in this respect his literary "betters," as Mr. Stevenson and Mr. Rider Haggard might possibly consider themselves, might well take a lesson from the kindly Edinburgh physician, whose calling brings him too often into the presence of suffering for him to treat it lightly, still less to linger over it unnecessarily. The fighting, however, is "well done"; there is all the rapidity, excitement, and confusion of a night skirmish in the account of the rescue of Irene by Ashbourne, while there is also "more than a bit" of "the genuine Marryatt" in the opening seafight where the English merchantman does battle with the Portuguese carrack.

It is hardly saying more than is just to express an opinion that history itself will be enriched by Dr. Ireland's masterly portraiture of the great Akber, who is, of course, a historical personage, treated of at length in most Indian histories and sketched with considerable ability by an unknown writer in the "Oriental Annual" (London: Bentley, 1838), to which we would refer those who may be interested to follow the Mogul's career beyond the bounds which Dr. Ireland assigns himself in the work under notice. Of Akber he remarks very justly that while it might have been said of the great statesmen and soldiers of Europe that from their mental energy they were the undeniable products of the age, with the Mogul Emperor this was not so. "In spite of the Mogul traditions of his family he was humane and beneficent. Though a warrior and a conqueror he was a just ruler and a mild and wise legislator. Though brought up in tents, he was polished and urbane. Excelling in athletic sports, he was yet fond of literary pursuits. Reared in a fanatical religion, he was the most tolerant of rulers. Continually successful, he was ever moderate, and preserved an even temper under contradiction. His mental energy was astonishing. He took little sleep—according to one of the Jesuits—only three hours out of the twenty-four. He only ate once a day. He abstained from animal food for months at a time, living on milk, rice, and sweetmeats. He was most attentive to business, and listened to reports which were made to him from different parts of the empire. He was accessible to all his subjects and heard causes every day. He was particularly gracious in receiving the presents of poor people, sometimes putting their gifts in his bosom. He delighted in music and painting, and was fond of the society of men of letters. He got translations made from the sacred books, philosophy, and poetry of India. In everything he undertook he entered heart and soul" (p. 59). Abul Fazl, Chand Bibi the Hindoo Joan of Arc, and the savage Jehangir are all historical characters and are well introduced. The character of the last-named is limned with something of indecision, but Jehangir is a historical problem, one of those rulers whose virtues and vices operated in somewhat unexpected directions, and who gave themselves, before coming to the throne, a more evil name than they afterwards deserved.

Although the present work is full of "plot" and incident, we do not fail to get important glimpses into some of the more vital causes underlying the surface of things. While

in England "the poorer classes were destined by providence for a low condition, and it was the duty of their betters to keep them in it, in India, save the Emperor, everyone was equal." His favour raised the lowest to the highest offices. "He was the owner of all the land in his dominions, and the estates he granted, on the death of the life-occupant reverted to the Sovereign" (p. 87).

Among the "side views" which this admirable romance affords us we get a fine sketch of Agra in the days of its splendour (p. 91), of life within a court seraglio (p. 201), and, above all, a most interesting attempt to realize for us the daily routine of an Eastern home. Occasionally we feel the meaning of being "dark with excess of light," Dr. Ireland, from his own stores of knowledge, assuming a rapidity of conception in the minds of his readers such as we can only say he will be luckier than most authors if he succeeds in awaking. What was the point of the turpitude of the Jesuit Nobili who "baptized low caste Hindus through a straw?" (p. 93). A little thought will reveal that such a procedure was a gross violation of those principles of equality which form the basis of the Christian religion. To pretend that it was beneath his "caste" to touch the lower grade of native was to ingratiate himself with the Brahmin and high caste Hindus at the cost of all that Christianity is as a gospel which the poor "have preached unto them." But the gifted author dashes in his fact in the most casual manner, and is off to another and lighter subject without a word of interpretation. Sometimes this brevity is very telling, however, as on p. 164, where the pious idol worshipper offers a startling *apologia*, which is left unrefuted.

Dr. Ireland will, we are sure, forgive us one word of remonstrance in conclusion. Accuracy is the soul of science, and Dr. Ireland bears a name honoured among the professors of "exact" learning. But accuracy is not the soul of story-telling, nor is a high-spirited tale of adventure the place to inculcate reformed notions of spelling Sanskrit, Persian, or Hindi. Dr. Ireland's "munchi" is hardly recognizable as older storytellers' "moonshee," while we do not suppose that there exists a schoolboy who will even have grasped that our good old fireworshipping friend, the Parsee, is intended when in "Golden Bullets" we read of the "farsi." It might even be easy to find adult readers who have been baffled by this "Eastern spelling reform."

Chronic Intoxication by Morphine. By Dr. L. R. RÉGNIER.
Paris, 1890. Publications du Progrès Médical.

Dr. Régnier makes the important distinction, among morphia or opium *habitues*, of those who use the drug for the sole purpose of combatting some sensory trouble, and of those who take the drug for the pleasurable sensations which it imparts, and subsequently for the purpose of removing the terrible state of depression which occurs after the above effects have worn off. The former class of patients he terms the morphinized (morphinisés), the latter the morphino-maniacs (morphinomanes). The distinction is an essential one, for whilst those patients who employ morphia to relieve pain, and for no other purpose, may suffer from the signs of chronic poisoning, yet they do not suffer to anything like the same extent, and the peculiar nervous symptoms which belong to the morphia habit are not witnessed. It is true that in the latter case the habit starts as a rule in the use of morphia to allay pain, but the habit is not acquired till the drug is taken for its own sake.

First as to the morphinized; those who use opium or morphia as a palliative, Dr. Régnier points out that pain causes a marked tolerance for the drug, and he says that the bone pains of syphilis exhibit this more especially. Next he asserts that there is marked tolerance in mental disease, especially when there is excitement, and he refers to the practice of some doctors, amongst them A. Voisin, of giving very large doses of morphia to the extent even of 18 grains per diem. In spite of these doses the great majority of patients are said to show no signs of poisoning even after protracted treatment, but, on the contrary, an improved appetite, and a gain in embonpoint; nor, on the withdrawal of the treatment, do any of the grave symptoms appear such as are witnessed in the case of morphino-maniacs. It must not, however, be concluded that the insane are proof against the morphia habit; there are not a few who become victims to it.

Leaving this upper limit of insusceptibility, can we determine the lower limit, *i.e.*, discover that dose which can be given with safety during a long period, *e.g.*, not less than six months without producing any symptoms of chronic poisoning, but which may not be overstepped without risk in the long run? Such limiting dose can be determined, and

is stated by the author to be 0.05 gramme or $\frac{1}{4}$ grain of morphia: this dose refers to the subcutaneous injection. Given by the mouth, Dr. Régnier admits the probability of a lessened activity, but he says we do not possess sufficient facts to determine the limiting dose—for laudanum he puts it at about two to three drachms. In the case of infants, the dose which leads to chronic poisoning is very small.

Among the symptoms of chronic poisoning by hypodermic injection, Régnier lays great stress on the tendency to the formation of abscesses, and he discusses their pathology; the occurrence of albuminuria and glycosuria is adverted to as, however, rare occurrences. It is not necessary to refer to the disturbances of the alimentary tract, and the marasmic state which sooner or later appears, but there are some nerve troubles which merit attention. Amongst these we find: the occasional occurrence of dilated pupils, and more rarely of unequal pupils—disturbances of sensation, such as zones of anæsthesia or hyperæsthesia, perverted or lessened tactile sensibility, diminished acuteness of vision—lessened reflex action, *e.g.*, abolished patellar tendon reflex, this latter may be present, according to Régnier, along with a tendency to ankle clonus. Tremblings of the limbs are described, but are said to be easily distinguishable from the tremor of alcoholic delirium and from that of paralysis agitans. Accompanying these symptoms the cerebrum may fail—memory, judgment, will being impaired; in some patients the picture presented may be that of true dementia. Delirium with hallucinations may set in, or hallucinations, in particular of vision, exist alone. It appears, however, that hallucinations form a rare symptom. Certain alienists have been unwilling to admit the occurrence of hallucinations during the waking stage as an effect of morphia, but since Laehr first described such cases, other undoubted instances have been put on record in which no other neurotic element, *e.g.*, hysteria, could be detected, nor any other poison, *e.g.*, alcohol. No new light is thrown upon the pathology of morphia poisoning.

Morphino-mania is next described, and amongst the curious facts relating to this disease we learn that in Paris there are actual institutions for the hypodermic injection of morphia—a revelation which needs no comment! The statistics and the symptomatic features of the disease are described. It is in the chronic poisoning of morphinomania that the nervous symptoms above-mentioned figure more especially—in addition, moral perversion amounting to

a moral insanity must be recorded. The medico-legal aspects of the actions of morphino-maniacs are considered towards the end of the chapter. Dr. Régnier teaches that each case must be dealt with on its merits after careful examination of the patient, but he insists that an essential point to be determined is whether the patient was in a condition of temporary abstinence from morphia or not—the responsibility is less if in such state, and especially if the privation from morphia has lasted some hours. Criminal acts committed in such state have in view mostly the obtaining of the drug; if, therefore, the accused should have been in possession of the drug before the commission of the act, this act would bear another complexion as to its motive.

In detecting the disease the cunning of the patient may completely outwit the medical man; it is therefore necessary to remember that the examination of the urine for morphia may yield conclusive proof of the habit, but precautions must be taken to ensure that the urine is really the patient's.

Lastly, the interesting phenomena of abstinence are detailed, and the several modes of treatment considered. The records of a large number of cases complete the work. We have much pleasure in recommending Dr. Régnier's treatise as a carefully-executed work.

Mad Doctors, by one of them: Being a Defence of asylum physicians against recent aspersions cast upon them, and an examination into the functions of the Lunacy Commission, together with a scheme of Lunacy Reform.

This is the scope of the pamphlet published anonymously by Messrs. Swan and Sonnenschein, and sold for one shilling.

We can vouch for the stimulating shilling's worth, and feel sure that those of our readers who buy and read it will have their fun for their money, and will certainly be impressed with the directness and aim of the writer and the unflinching character of his criticisms.

As we have said, the name is concealed, and we have no clue as to the writer, and we should prefer not to discover it, for though vigorous, the paper is, to our thinking, too personal, so that it is in danger of giving the idea, however unjustly, that personal antipathy had something to do with its origin. It attacks undoubted abuses, and suggests

remedies, and as a piece of strong writing we welcome it, not overlooking its faults of taste.

The pamphlet is divided into five chapters, consisting of an introduction, a chapter on lunatics at large, one on lunatics under key, another on remedial proposals, and finally a summary of the whole. The author shows himself in the introduction to be a medical agnostic and one who would not give very blind faith to his professional brethren, unless he were ill. He ranges himself among the *practical* men as against the more scientific, though for the life of us we cannot see the advantage of a man who is only practical over one who, besides that, uses the experience of others as recorded in books and papers. Doubtless there are a large number of useful practical men in our branch of the profession, men whom it would be hard to equal and impossible to beat in the amount of practical good work they do in the world; but with all their virtues we believe their power dies with them and does not in the end lead to such good results for the race as will follow on good scientific work. But to our task of reviewing. We quite agree with the author that the golden rule of medicine is to avert the tendency to death and to place the patient in the best possible conditions for recovery. The reason given in the introduction for the appearance of the *brochure* is that "an insignificant clique in the London County Council has issued a quasi-medical report which deals with the treatment of lunatics, and is absolutely unique in the number of feeble commonplaces it contains." This is the text, and our author sticks pretty closely to it. As to the taste of the personal part of the paper we will not inquire, but men who feel strongly act at times hastily, or with an appearance of temper, which is not altogether without use when grave social questions are at stake. And what more grave can a man feel to be at stake than the honour of himself, and of his friends and fellow-workers? No one will deny that for the treatment of the insane practical experience is worth a ton of theory, and that he makes the best Commissioner who has had the most experience of the insane in all their relationships. We cannot agree with the author in all he says as to the inspection of asylums and of the insane, though we do feel that the Commissioners, as at present constituted, are not a body numerous and strong enough to do all that is required of them. They do their work as well as they can, but they are over-burdened.

We will summarize the chapter on remedial proposals, as this shows the scope of the work. Proposal 1 is that there should be more special reception wards for the acute, presumably curable cases; 2, That the Commissioners should be done away with, as, according to the writer, they have a number of general fads, and a good many particular ones, and are quite unable to be of service to the insane; 3, Instead of the Commissioners there should be district inspectors appointed for each division of the country; these inspectors are to be numerous, and are to have personal knowledge of lunacy and of asylums (we wonder where they are to be found?); 4, these inspectors would have also frequently to visit the wards of the workhouses in which insane patients are detained. Proposal 5 is that the present mode of asylum management should continue, but that medical officers should be increased so that none has more than 300 under his care at a time; other changes are suggested, such as having an assistant superintendent, under such conditions as will develop the clinical work of asylums. 6, There should be in every large town receiving hospitals for all acute nervous mental patients outside certification.

The whole plan may be regarded as a practical substitution of the scheme of the County Council, with the essential difference that it is arranged by a man with daily experience of the requirements and with a just appreciation of what can and what cannot be done by the means suggested. The pamphlet must be read to be appreciated, and is so vigorous that it gives one quite a healthy stimulus to go on in the path of duty, however toilful it may be just now.

Locke. By ALEXANDER CAMPBELL FRASER, Hon. D.C.L. Oxford, Professor of Logic and Metaphysics, University of Edinburgh. William Blackwood and Sons: Edinburgh and London. 1890. (With portrait.)

One more admirable addition to the series of the "Philosophical Classics for English Readers," edited by Professor William Knight, whose selection of writers has been most fortunate. It is a great quality in an editor to know and to choose the best men for the special work assigned them. Few characters appeal more powerfully to the intelligence and even the affection of British thinkers than John Locke. He was a philosopher, a psychologist, a hard thinker;

but he was something more. He was not a cold stoic, but a man of deep feeling and a lover of his kind. He studied chemistry and medicine, and *materia medica*. "And so it came about that before 1666 he was more or less engaged in a sort of amateur medical practice in Oxford, in partnership with his old friend Dr. Thomas. Though he never graduated as a doctor, nor even as a bachelor in medicine till 1674, he was now and afterwards known among his friends as 'Doctor Locke.' But his professional connection with the faculty was always rather loose and uncertain. It may have been that the philosophic temperament made professional trammels and routine irksome, and that he instinctively preferred the hazards of freedom to submission to rules which might compromise the development of his individual genius. His health, even now, was constitutionally indifferent. He inherited a delicacy which ended in chronic consumption with periodical attacks of asthma, against all of which he contended through life with characteristic forethought and contrivance. To the end he was an amateur medical inquirer, and was ready, upon occasion, to advise his friends about their health long after he had abandoned the idea of living by the practice of medicine" (p. 20).

Locke accidentally met with Lord Ashley (first Lord Shaftesbury), and a friendship was formed between them which exercised a mutual influence in the direction of freedom of intellect and the love of civil and religious liberty. In 1667 he resided in the Strand, and was the medical adviser and agent of this nobleman, and was also tutor to his son. Few, probably, are aware that for 15 years "he shared fortune and home with the most remarkable man in affairs in Charles the Second's reign, and was confidential friend of the most sagacious and powerful statesman in England." Locke was introduced to Sydenham, and was intimate with him during the remaining twenty years of the latter's life. It is very interesting to read what Sydenham wrote about his friend in his dedication of "*Fever*" to Mapletoft. "You know how thoroughly my method is approved of by an intimate and common friend of ours, and one who has closely and exhaustively examined the subject—I mean Mr. John Locke—a man whom, in the acuteness of his judgment, and in the simplicity, that is, in the excellence of his manners, I confidently declare to have amongst the men of our time few equals and no superior" (p. 30).

In 1668 Locke was elected F.R.S., but he does not appear

to have interested himself in the proceedings of the society. At a friendly meeting in his own house in 1670-71 he "was led to devote himself to that enterprise which directed the main current of his thoughts during the remainder of his life. . . . For it inaugurated the philosophy that was to remain dominant in Britain for more than a century after his death, and which, through further developments and by reaction against it, has so affected the thought of the world ever since that the last two centuries might be termed the Lockian epoch in the intellectual history of Europe." The result of this meeting was the "Essay concerning Human Understanding," which, however, did not see the light till nearly twenty years had elapsed. It is strange that the author, when he commenced his celebrated work, fancied that "all he should have to say on the matter would be contained in one sheet of paper."

This is not the place to analyse or criticize the psychology of Locke. As might be expected, the word "idea" occurs in his essay more frequently than any other. "The new way of *ideas* and the old way of *speaking intelligibly* was always and ever will be the same" (p. 111). As everyone knows, Locke strove to demonstrate that the mind is in the first instance a *tabula rasa*. Professor Fraser thus remarks on Locke's opposition to innateness: "The drift of this famous argument has been overlooked by critics. It has been read as if it were an abstract discussion as to universality and necessity in knowledge, like that now at issue between empiricism and intellectualism. In arguing against innateness of principles and ideas he explains that he does not mean to deny that some truths come to be seen by human understanding as demonstrably necessary, and others as self-evidently true. On the contrary, he reports as a fact found by reflection, that in some cases the intellect becomes able to perceive a truth as the eye doth light, only by being directed to it by bare intuition, which kind of knowledge is the clearest and most certain that human frailty is capable of" (p. 115).

The personal references to the philosopher are of great interest. When 57 he had written his work on Toleration, and his Treatises on Government, in addition to his Essay on Human Understanding. The home of his old age was in Essex, at Oats, the seat of Sir Francis Masham, M.P. It was just 200 years ago that this retired life commenced. The place lies between Ongar and Harlow, not far from

Stamford Rivers, a locality recalling the name of a remarkable man of the last generation—Isaac Taylor—the author of “The Natural History of Enthusiasm,” etc. We are told that he was often seen in the Parish Church of High Laver, and that riding was his favourite exercise. “His spare, diminutive figure must have been familiar to the cottagers who were used to see Dr. Locke, the studious gentleman who lived with Sir Francis, pass on horseback on the rough roads towards Harlow, or Ongar, or Epping. . . . Sometimes the afternoon exercise was in the old-fashioned garden at the manor house, where, on warm summer days of the closing years of that far-off seventeenth century, he enjoyed the shade of the yew trees in company with Esther Masham or her mother, or basked in the sun on the sheltered walks. This routine was relieved by visits to town, or by occasional visits at Oats of illustrious friends—Isaac Newton, from Cambridge, or the Lord Shaftesbury of the ‘Characteristics,’ who, in former days, was Locke’s pupil,” etc., etc.

Locke’s declining days were soothed by the kind attention of the family in which he lived. He died in 1704, Oct. 28th, “in perfect charity with all men, and in sincere communion with the whole Church of Christ, by whatever names his followers pleased to call themselves.” He was buried “on the sunny side in the Parish Church of High Laver, where, almost two centuries ago, that serene and pensive face, pale and tinged with sadness, which Kneller has made familiar to us all, was often seen.” It is said that Sir Isaac Newton was among the first to visit his tomb.

To the book itself, however, admirably edited as it is by Dr. Fraser, we must refer the reader.

Sanity and Insanity. By Dr. MERCIER. The Contemporary Science Series. Walter Scott, London, 1890.

This volume is one of the series edited by Havelock Ellis, containing “Physiognomy and Expression,” by Mantegazza, and Moll on “Hypnotism,” among other valuable scientific or semi-scientific contributions.

We say scientific or semi-scientific, because though the subjects are in a way specially scientific, yet the treatment is such as to make them acceptable to the ordinarily educated reading public.

From time to time popular books on insanity appear, and

these are eagerly sought after by the public. Nearly everyone has read Maudsley's "Responsibility," and we fancy a very large number will read Mercier's book.

Being only partially addressed to the medical profession, it will not be necessary to give an exhaustive review of the book and of its scope here.

It is written with great and loving care, and is full of poetry and metaphor. It seems to us that the writer on insanity—for popular taste—always tends to poetry. In former days quotations from Shakespeare were necessary; now these are less common, but the poetical imagination is allowed free play.

Doubtless the poet and the scientific man have more in common than they themselves are willing to admit, the former seeing at a glance likeness in diversity, while the latter is toilsomely bringing the unlike together by slow steps. We therefore accept with gratitude the many happy metaphors suggested by Dr. Mercier.

It is well to have a devout follower of Hughlings Jackson and Herbert Spencer, or perhaps one ought rather to have said a follower of Darwin and of Evolution, giving his views on mental order and disorder.

We ourselves are, perhaps, not quite such believers in the definite and the absolute as he is. We are still inclined to believe in the unknowable. Dr. Mercier has a happy assurance in his style which for the time, at all events, carries you away, and makes you believe that his interpretations are the only ones. His description of the streams of nervous force arising from within the organism, and the streams arising from without, adjusting and re-adjusting themselves according to various conditions, is very satisfying and reasonable. He certainly is never at a loss for an explanation.

The book is chiefly an introduction to nervous physiological action, and to its perversions.

The bulk of the book consists of a careful examination into the Causation of Insanity.

Instead of predisposing and exciting causes, we have brought before us as the foundations of insanity, Heredity and Stress. These subjects are clearly and, in many places, brilliantly discussed.

Later, there is a brief consideration of the forms of mental disorder. This part of the work is not intended to take the place of a clinical text-book, and is more suggestive than exhaustive. We recommend it to our readers as being full

of fresh and poetical thought. We would only observe before leaving the book that it is a pity that in one for general reading, sexual matters are so freely discussed.

Les Epilepsies et les Epileptiques. Par Ch. FÉRÉ, Médecin du Bicêtre. Félix Alcan, Paris, 1890.

This is an exhaustive treatise, to which it is not possible for us to do justice; it occupies some 600 pages, and is illustrated by 12 plates, besides numerous engravings, illustrating for the most part muscle curves.

In a preamble M. Féré speaks of idiopathic epilepsy as a vanishing quantity; symptomatic epilepsy growing *pari passu*. Four principal groups of symptoms compose the epileptic syndrome: 1, motor symptoms; 2, sensory symptoms; 3, visceral symptoms; 4, psychic symptoms. Rarely do these groups occur singly without any admixture of symptoms from one of the other groups; when, however, they do so occur their nature may be masked, and it is only by studying their mode of origin and the occurrence either in the individual or in the family of affections allied to epilepsy that the true nature of the group of symptoms in question is revealed.

Under the heading "partial epilepsy" we find described the affection we are more familiar with, in this country, as Jacksonian epilepsy. M. Féré, however, does not omit to give due honour to Hughlings Jackson. Partial epilepsy is also made to apply to attacks of sensory disturbance, *e.g.*, various forms of migraine, and in particular to ophthalmic migraine. This affection in its isolation may constitute a veritable epileptic attack, showing, as it does, a stage of excitement by the presence of scintillating scotoma, to be followed by a stage of exhaustion with hemiopia, this itself being sometimes followed by somnolence.

A chapter on the various forms of aura which may precede an ordinary epileptic attack comes next. Here we find mentioned Hughlings Jackson's intellectual aura, which consists of a reminiscence of past events. In a later chapter the relation between epilepsy and certain visceral affections is considered, *e.g.*, the relation of certain cases of angina pectoris and of asthma to epilepsy, and likewise of certain cases of laryngismus.

Psychical paroxysms—sudden moral impulsive seizures—

are dealt with as the psychical equivalents of motor convulsions; also the sudden mental confusions, amnesias or blottings out of the senses.

M. Féré devotes much attention to the phenomena of exhaustion which follow the paroxysmal seizures of epilepsy. Diagnosis, prognosis, treatment, and the medico-legal aspects of epilepsy complete a work which we have not been able even to trace in outline, but which deserves careful study. The plates are excellent.

Annual of the Universal Medical Sciences. Edited by CHARLES E. SAJOUS, M.D. 1890; F. A. Davis, Philadelphia, New York, and London.

The section devoted to psychological medicines is again written by Dr. Brush, of the Pennsylvania Hospital for the Insane, Philadelphia. Once more we have nothing but praise for the manner in which the contribution is prepared by him. To the editor, Dr. Sajous, we offer our congratulations for the continued able editing of this laborious annual.

The action of the London County Council is mentioned and commented upon. In connection with this subject the address to the American Association by the President, Dr. Chapin, is spoken of as touching upon the discussion respecting the separate care of acute and chronic cases, a subject so freely discussed in past years by American alienists. Dr. Chapin, above all others, has a right to deliver an opinion on the question by the work he did at the Willard Asylum. "One of the most important topics in this address has reference to distinct wards, or rather a distinct hospital structure, in connection with the institutions already in existence, and Chapin calls attention to the fact that in his annual reports of 1887 and 1888 he advocated the construction of a hospital building, limited in extent to the requirements for acute cases and those needing, for any reason, special observation distinct from the other hospital buildings." The whole address deserves careful attention, and is replete with suggestions in the line of improvement upon present methods of asylum care, and the tenor of it all may be expressed in this quotation:—"The advance would be in the direct line of recent tendencies—the individualization of classes—which principle should be further extended so as to include persons."

Under hypnotics Dr. Brush observes that sulphonal takes

the lead. He refers to the employal by Jastrowitz of the combination of chloral and morphia, and he observes upon this that "with all due deference to his authority, and that of other writers who have suggested the same combination, I cannot forbear calling attention to the danger of employing such a combination. After an extended experience in the use of chloral, the only cases in which fatal or even alarming results have followed have been cases in which the combination of these two drugs have been employed, and I have for years made it a rule not to permit their use either in combination or the administration of the one to a patient to whom the other has been given within at least four hours."

From Wetherill he quotes the statement "that from extended experiments he finds, that of hyoscyamine, hyoscine, paraldehyde, urethane, the most certain in its action is sulphonal, while the least dependable is urethane." Obersteiner is greatly in favour of sulphonal, of which he does not think it necessary to give more than 30 grains, while less than 15 is generally sufficient. If there is pain as well as insomnia, he combines it with morphia. On the other hand, Marandon de Montyel is of opinion that 46 to 56 grains should be administered in order to produce the best effect. Garnier regards sulphonal as "a hypnotic of most remarkable value in cases of insanity. . . . The phenomena attending its use are few and of little consequence." It must not be forgotten, however, that it occasionally produces vomiting and diarrhoea.

There is so much more concentrated information in this section that it is tempting to transfer much more than we have done; but our space forbids, and we must content ourselves with referring the reader to this work, which ought to be within reach of every physician. It would be a disgrace to the medical profession if Dr. Sajous's most useful work were to fail to receive the support which it so thoroughly deserves.

Psychopathia Sexualis. By Dr. R. von KRAFFT-EBING. 5th edition. Ferdinand Enke, Stuttgart, 1890.

The author styles his book a clinical-forensic study, but from the scope and detail of the work a more ambitious description would not have been inappropriate.

The repute of the author is well sustained by the extent and copiousness of the references and quotations, as well as

by the systematic sub-division and classification of the various abnormal manifestations. Indeed, the author lays himself open to the criticism that he unduly exalts mere symptoms or phases of sexual irregularities into groups and classes.

The two first divisions on the psychological and physiological aspects of sexuality afford little ground for comment.

Parts four and five treat of the relation of these disorders to insanity and crime, systematically but not exhaustively.

Much of the book is occupied by reports of cases, the details of which seem unnecessary in a scientific aspect, and are to be deprecated in view of the probability of the book falling into the hands of lay readers. That this happens is shown by the fact that several of the cases are stated to have come to the doctor from reading his book, and is rendered probable, from the rapidity with which this has reached the fifth edition.

The greater part of the third division is devoted to "Urnings," individuals physically normal, whose sexual inclinations are to members of their own sex.

One physician is said to have met with 600 of these "Urnings"; what proportion of these were congenital is not stated. Assuming that the congenital cases constituted only a small proportion, yet even this would suggest that these sexual psychopathic monsters were much more numerous in the Austrian population than in other countries; this is peculiar, the occurrence of monstrosities not usually favouring special localities. Most of the cases recorded as dependent on innuity might as well be accounted for by the earliest associations of the abnormal sexual excitations with individuals of the same sex, and some of the mental manifestations on which the author relies, if submitted to strict psychological analysis, would be found not to support his contention. That these "Urnings" are to be pitied, as the author insists, is true, but that they are to be held irresponsible for their acts is not so easily conceded.

The results of treatment are also somewhat contradictory of the theory of innuity; these are so astonishing as to provoke the paraphrase, magna est — no, magnus est hypnotismus. Cases of both acquired and congenital sexual perversion are recorded in which after a few hypnotic *séances* and suggestions extending from a few weeks to three months, not only were normal sexual inclinations re-established, but normal vigour. The patients, after short periods, marry, and it is to be presumed "live happily ever afterwards."

On the whole we are driven to the conclusion that at the present day the medical profession is in danger of pandering to the morbid tastes of men, and women also, by the minute details and hair-splitting dissection of loathsome mental states and acts, a record of which increases the evil it is intended to lessen. Walt Whitman has done his best to defile the pure streams of poesy by what is euphemistically called Realism, but has no justification in reason. Medical writers stand on very different ground, and are justified in writing many things which are realistic, but this does not grant a licence to supply an unlimited quantity of coprophagic literature.

H. R.

Der Hypnotismus: Vorlesungen gehalten an der K. Friedrich-Wilhelm's-Universität zu Berlin. Von W. PREYER. Vienna and Leipzig, 1890.

Prof. Preyer's treatise on hypnotism is a reprint with some additions of a series of lectures on the physiology of hypnotism delivered at Berlin in 1889-90. They aroused much interest at the time, and attracted considerable attention in and out of physiological circles, and we are very glad to see their publication in a more permanent form, as they present, besides a short but comprehensive history of hypnotism, a very complete exposition of the present state of knowledge and opinion on the physiology of this state from a physiologist of high standing, well known in other branches of this subject. Prof. Preyer begins by urging on physiologists especially the necessity of a study of hypnotism, since even should it prove of less therapeutic value than is honestly believed at present in some quarters, he considers it to offer undoubtedly a very valuable means of gaining knowledge which we could not otherwise gain of the alterations and functions of the nervous system and of the modes of interdependence of physical and psychical processes. He does not pretend to give an opinion on the large question of its usefulness in the healing of the sane or the insane, or, on the other side, of its power of throwing new light on old questions of psychology, such as the unity of personality and the limits of automatism, but more than ten years of attention have made him very sure of its importance to the full comprehension of the physiology of the nervous system.

He has made a special study of the work of Braid, whose chief book on Neurypnology, published in 1843, he translated himself into German in 1882, and we doubt if any critical review and *résumé* of Braid's life and writings, so minute or so appreciative of their physiological value, could be found in English, as is given in the chapter "Der Braidismus," with its catalogue of all his writings, small and large, and the MSS. remaining in the family. One of these, "On the Difference between Nervous and Normal Sleep," written in 1845, which has never before been published, Prof. Preyer has translated into German and added as an important appendix 35 closely-printed pages to his book. It is a sufficiently plain hint that some English inquirers might pay a little more attention to what they have considered too anomalous and too absurd to be worth notice. Naturally enough, Preyer does not forget to mention, with thorough appreciation, Dr. Hack Tuke's book on "The Influence of the Mind on the Body," which has furnished much food for thought since its publication in 1872, and has kept alive the interest in not a few medico-psychological questions. Some of the later work in England, dealing with the psychological questions involved in hypnotism, he treated very lightly in the *Deutsche Rundschau* of Jan., 1886, with insufficient knowledge of complicated detail, and after receiving a careful answer in German from an English critic he has not cared to revert to this part of the subject. After a careful description, with illustrations, of Czermak's experiments on animals, he draws the conclusion that the cataplectic and hypnotic states in both men and animals are distinct from each other, the cataplexy being, in fact, induced only by sudden and violent stimulus, *e.g.*, by a sudden blaze of light or sudden stroke on a gong, in some of Charcot's cases, and not having the most characteristic of all diagnostic points in hypnotism, *viz.*, suggestibility. He admits, however, that such a state of cataplexy may pass gradually into a true hypnotism.

In treating of the symptoms of hypnotism in general, he explains that their immense variety renders it impossible to give an exact survey of them. No two hypnoses run exactly the same course; they vary with the experiments and the subject, and with the same experiments and subject at different times, in different moods, and state of health. None the less, there are many physical symptoms, of which catalepsy is one of the most prominent. It may last as long

as 17 hours (Charles Richet) ; it is not a matter that can be simulated even to an observer of moderate common sense. If the arm of a cataleptic is stretched out at right angles to the shoulder it will stay there for half-an-hour at least, and then sink slowly. A well-trained imitator may keep his arm out for perhaps a quarter of an hour, but before it begins to sink there will be obvious to even the *tactus non eruditus* the tremor of strain ; and the sinking, if not sudden, will at least be jerky.

Of the theoretical explanation of hypnotism Preyer speaks with that caution which shows wide experience and good judgment. It is not yet, he says, possible, for we do not know enough of the phenomena. That is a good contrast to the conclusion of many observers, who have felt confident after six months' experience. The evidence given by the ophthalmoscope on the cerebral circulation is purely neutral. It shows no change in the blood-vessels of the retina (Kaane). Still, he is inclined to express the hypothesis which seems to him the least improbable. He would presuppose, for all who are hypnotizable, a weakened nutrition of some part or parts of the cerebral cortex from fatigue or accumulation of their waste products, and would regard hypnotism along with hysteria, as included in the large class of cortical neuroses, inasmuch as both are disturbances either by increase or inhibition of the functions of the grey matter. By no means all hysterical subjects can be hypnotized, as he seems to think would be natural ; but this may be explained by the incapacity of many of them to attend sufficiently carefully to any process of hypnotization that may be used. In many points he takes up a position midway between that of the schools of Charcot and of Nancy, recognizing the immense scope and importance of suggestion, but holding the view that the whole series of phenomena are not to be explained by it. Prof. Preyer did not attend the *Congrès de Psychologie Physiologique* at Paris, in 1889, where many of the points to which he has given close attention were carefully discussed by his brother physiologists. It would be a compliment gratefully appreciated by the countrymen of his hero, Braid, if he found time to attend the Congress of Experimental Psychology, which is to be held in England in 1892.

A. T. M.

Erster Nachtrag zur Bibliographie des Modernen Hypnotismus.
VON MAX DESSOIR. Berlin, 1890, pp. 44.

This pamphlet is an excellent specimen of the German determination to arrive at the truth and the whole truth—at least so far as it can be learnt from books. It is the first supplement to a “Bibliography of Modern Hypnotism” published two years previously (1888), a very accurate and comprehensive catalogue of the very widely scattered books, pamphlets, and articles on a very difficult subject which especially needs such a help to its study, for the information on which the ultimate judgments must be based is in part imperfect as yet, and singularly conflicting in some particulars, owing, in a large part, to want of intercommunication between the observers. The canons of observation and experiment are far from being universally accepted; the matter is sometimes treated as a part of physiology and sometimes as a curious corner of psychology. The text books, which are all of foreign origin, are almost all based on short experience; the opinions on this side and that of any question in debate are often expressed with a confidence which would probably be very much qualified if there were more known of other people’s results. The first part was dated April, 1888, and included 812 entries from the writings of 481 authors comprising many books and pamphlets, and also some articles from 207 periodicals published all over the world from Naples to Norway, from Athens to Japan. And to these in the first supplement, which is only two years later in date, it has been found necessary to add 382 more books and articles, to include 186 new authors (making in all a total of 667 men, mostly of the medical profession, writing seriously upon it), and to give references to 47 periodicals besides those that had been mentioned before.

The mass of references in this first supplement is to the publications of the years 1888 and 1889, which, in all, amount to 213 and 174 respectively; and these dry facts and patient records offer a substantial and solid basis for the statement often made and sometimes contradicted that the European, and to a less extent the English world, both scientific and medical, is beginning to take some serious interest in hypnotism and the allied phenomena. Of all the entries, both in the original list and in this supplement, viz., 1,194, rather more than half are in the French language (612), a

small proportion of which are written in Belgium, Switzerland, Russia, etc.; in German, 172; in English, 148 (of which 57 are American); in Italian, 120. The book is singularly accurate and painstaking, there is hardly a misprint to be found in the thirteen languages in which its references are made. Still it would be almost incredible if in such a task there were not one or two trifles more to add, such as an article by Senator (1880), by Bengier (1880), Kaane (1885), Gamgee (1878), and Gasquet (1887). All the works of Braid (1843-50), and all but one of Esdaile (1843-56) have apparently been deliberately omitted along with Elliotson's as belonging to a hypnotism that was not modern enough; but as the case of amputation of the leg under hypnotism by Topham and Ward, which dates from 1842, is quoted, we should have thought it wiser to have inserted the remarkable publications of some of the best known pioneers along with these works of 667 of their followers.

A. T. MYERS.

Flushing and Morbid Blushing. By HARRY CAMPBELL, M.D.
Published by H. K. Lewis, London, 1890, p. 270.

This monograph has the justification that no other has appeared on this subject since that of Burgess in 1824.

The author lays stress on the assertion that the dermic papillæ, sebaceous glands, sweat glands, and hair follicles have each a distinct vaso-motor system capable of being "independently affected." He also points out the close relation of the "flush storm" to the epileptic and hysteric aura.

The morbid phenomena of flushing and blushing the author very correctly regards as merely symptoms of general nervous defect, and bases his treatment on this.

His records of these abnormal manifestations are very numerous, bear evidence of very careful observation, and are very systematically arranged.

The work is characterized by its thoughtfulness, suggestiveness, and evidence of much acquaintance with medical literature. It is a valuable addition to symptomatic medicine.

Klinische und Anatomische Beiträge zur Pathologie des Gehirns.
VON DR. SALOMON EBERHARD HENSCHEN, Prof. der Klin.
Med., Director der Med. Klin., An der Universität-
Upsala. Ersten Teil, mit 36 Tafeln und 3 Karten. 1890.

This book, the first volume of which has been published, is a thick quarto of 215 pages, and is a work of most valuable matter—one which must have cost the author a great expenditure of time and labour. The work is most useful, not only for the very full way in which the clinical history and the condition of the patient is described, but also for the minuteness in which the post-mortem conditions, both macroscopical and microscopical, are recorded, and not least for the magnificent way in which these conditions are illustrated by a series of illustrations. This last feature in the work will be better appreciated when it is said that there are no less than 36 full-sized lithographic plates, and two pages giving the perimeter charts of cases of hemianopsia, and one page in which are reproduced the fac-simile attempts in writing of a case of aphasia.

The present volume has been devoted to cases in which some part of the visual tract in the brain was affected, and the intimate relations between the clinical condition of the patient, and the anatomical changes causing that condition, are maintained throughout, as in every case, except six, here described death ensued, and the post-mortem changes could be accurately ascertained.

In a notice of an extensive work like this it would be quite impossible to give even a brief account of each case, of which there are 36 described. It will, therefore, be advisable to give a list of the different subjects dealt with, and then to take one or two cases and detail more fully the methods employed.

The first subject is on the secondary changes of the optic tract in a case of bilateral atrophy of both eyeballs.

The first patient was a case of leprosy, which had destroyed both eyeballs, and had ulcerated through the back of the orbits into the optic chiasma. The case is described as one which exhibits the changes produced in the visual apparatus by long-standing atrophy of the eye-balls. The man was blind for 42 years, and on examining the brain, changes were found in the corpus geniculatum externum, the pulvinar of the optic thalamus, the anterior corpora quadrigemina, the optic radiations of Gratiolet, and in the occipital lobe.

The clinical history and condition of the patient is first given, and then the various changes found in the brain are described, both macroscopically and microscopically.

The whole of the occipital lobes were atrophied, and the convolutions were smaller than in other parts of the brain, and this is very well shown by two full-sized lithographic drawings of the median and lateral aspect of one hemisphere. The median surface of the occipital lobe was sunk to a level below the adjacent parietal. The part of the occipital most affected on the surface was the cuneus and the posterior part of the lobulus lingualis, but the greatest atrophy was found in the convolutions bounding the calcarine fissure, where it sinks into the occipital lobe, and especially in the grey matter forming the bottom of the fissure. Here on microscopical examination the cortex was 2-4 mm. thinner, containing less neuroglia; the nerve cells were atrophied close together, and with distended pericellular spaces, and there was a complete absence of pyramidal cells; the fourth and fifth layers of the cortex were most affected. This atrophied part reaches on the surface backwards along the calcarine fissure to the tip of the occipital lobe, and forwards to the internal parieto-occipital fissure, upwards to about the middle of the cuneus, and downwards a few millimetres on to the lobus lingualis. The central white matter of the occipital region was not well stained by hæmatoxylin, and the optic radiations of Gratiolet were atrophied, but the part of this tract most affected was the median portion, *i.e.*, that which ends in the cortex at the bottom of the calcarine fissure. The author, therefore, thinks it highly probable that this cortex is the most important part of the visual centre, and that the rest of the occipital cortex is the seat of visual thought and registration. Contrary to what would be expected from the results of experimental research on animals, the author did not find that the gyrus angularis was appreciably diminished in size, though a few of its cells were atrophied, but generally they were well formed. The corpora quadrigemina anteriora were rather flattened, and the corpus geniculatum externum of either side was wasted, while the corp. gen. internum was normal.

The appearance and position of the atrophied optic radiations is well shown in the lithographic drawings of seven frontal sections of the occipital lobe, taken at distances of from 1 cm. to 7 cm. from the posterior end. The size of the atrophied pulvinar and corpus geniculatum is shown in a

drawing of them taken from behind and from below. The microscopical appearances of these ganglia are fully described, both as regards the cells and the different fibre tracts, and the changes are beautifully illustrated by six drawings of sections obtained by Weigert's hæmatoxylin process, and magnified two to four times. It would take up too much space to enumerate the changes there found, but it will be sufficient to state that they are most minutely described.

The condition of the optic chiasma with Von Gudden's and Meynert's commissures are described and illustrated by five drawings.

It will thus be seen from the above case, which is taken as an example, that both the clinical condition and the pathological changes are described with great minuteness of detail, and the latter are most fully illustrated by drawings.

The second subject, "On the optic tract in a person with one eye," is represented by seven different cases in which this condition existed. The first case is illustrated by a drawing of the optic chiasma, tract, and basal ganglia, and by ten microscopical drawings of frontal sections of these parts, extending from the optic nerves successively backwards to the corpus geniculatum externum, and stained by Weigert's hæmatoxylin. This case had the right eye atrophied, and in the right half of the tract the atrophied direct fibres were at the upper surface, while in the left tract the atrophied crossed fibres were near the inferior surface; in the optic tract, near to the corpus geniculatum externum, the atrophied direct fibres were in the median part of the right tract, whilst on the left side the atrophied crossed fibres were in the outer part.

The above cases are given to illustrate the minute manner in which the cases are described.

Under the other subjects dealt with in this volume are: "The changes in the optic tract from a lesion of the corpus geniculatum externum," "Hemianopsia after (i.) gummatous basal meningitis; (ii.) after hæmorrhage into the optic thalamus; (iii.) from softening in the optic radiations; (iv.) cortical hemianopsia, contributions to the colour fields in hemianopsia, and a clinical study of cases of hemianopsia. The two latter were not verified by autopsies. On the other hand, there are cases showing the changes after tumours of the optic chiasma; visual disturbances from changes in the optic radiations and the optic tracts after lesion in the same part; and, lastly, tumours in the optic radiations, or cortical

changes of the occipital lobes, without hemianopsia. All the above subjects, with the exception of two enumerated, are illustrated by numerous drawings, as in the two cases already described.

It will thus be seen that Dr. Henschen has produced a most valuable work on the relations of the optic tracts and centres to the various changes in vision, and has done this by a most laborious and minute examination of the conditions of the brain which has never been surpassed, and in addition to the naked eye appearances, the microscopical examination has been most complete, as is testified by the fact that 10,000 sections have been made for the work. We have only one suggestion to make, and that is that in the second volume it would assist the reader if the table of abbreviations be put at the beginning of the plates in place of at the beginning of the work. We can most heartily recommend this book as one of the best works yet produced on the subject.

C. E. BEEVOR.

Lunacy Act of 1890. By CHARLES STREET, M.B.C.S., Superintendent of Haydock Lodge, Newton-le-Willows. Neill and Co., Edinburgh. 1890.

This is a paper which was read before the Liverpool Medical Institute.

Mr. Street has collected into this essay the chief details of the differences in the working of the new Act and the old, and in a short space gives all that is necessary for the medical man who has to sign a certificate for the reception of a patient into a private asylum. The forms for the friends, the magistrate, and for the medical men are added, as well as certain other forms which, according to the new law, the patient must see as to his rights and privileges.

We may here say that Mr. Street has also had published very artistic mountings with the forms, which have to be posted in every licensed house, informing the patients of their rights.

These forms, which were so strongly objected to, and which in any case must be objectionable, are by means of these mountings rendered ornamental and inconspicuous as far as they can be by artistic surroundings. We believe

they can be obtained on application to Mr. Street for a very small sum.

The two things are both useful, the essay being in the right spirit and the form being in the right taste.

Sutherland's Directory of Justices in Lunacy. 1890 and 1891.
Bale and Sons, Great Tichfield Street, W.

Dr. Henry Sutherland took a great deal of pains to prepare a very useful handbook for the use of asylum officers and other medical men, and it had no sooner established its place and its use than a fresh crop of judicial authorities were appointed, and so the book is, we regret to say, rendered all but useless, and certainly misleading. We feel that for an author to prepare a directory for each year is too much to expect, and yet unless this is done it will be useless. The difficulties are very great, and the book under notice was hardly out of the publisher's hands, than by death and removal it had become defective. All seems to point to the necessity of making all magistrates to be judicial authorities; then a complete list of Justices would be of great service, and the changes from year to year would be few and unimportant.

Fry's Lunacy Laws, CHAMBERS. Knight and Co., 1890.

It is hardly necessary for us to do more than state that the fresh edition of this standard book has appeared with commendable rapidity after the passing of the Consolidated Lunacy Act. It is full, and very clear; it gives the Act and the requirement under it, and gives all the leading cases which refer to clauses under the existing Act, so that for reference everything is handy. It gives not only the law, but the regulations or rules of the Commissioners in Lunacy. The editor modestly says as Fry's book is so well known and valued, he has followed its plan with little change. There are three parts, or books as they are called, the first being the epitome of all the regulations and laws of private, pauper, and criminal lunatics. Book II. contains the statutes, and Book III. the official documents, with the rules made by Lord Chancellors and by the Commissioners. The book closes with the circular letter of the Local Government Board issued in 1890. The volume is more handy than its predecessors in form and size.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Restrospect.**Asylum Reports for 1889.**(Continued from p. 428, Vol. xxvi.)*

Argyll and Buts (1889-90).—As the result of the discharge of all out-county private and pauper patients, it has been necessary to increase the weekly charge from 8s. to 9s.

Only one case of general paralysis was admitted, and not one death was due to this disease.

Measles, which had for some time previously been epidemic in the neighbourhood, appeared in the asylum during last April. All the cases, except one, appeared in the male department. Seven patients and five attendants were affected, of whom one patient and one attendant died. It was found necessary to convert the tailor's shop into a temporary hospital in order to secure proper isolation of the sick.

The alterations on the female side of the West House for the purpose of providing increased hospital accommodation have been finished. The new section provides for 32 patients, and these are all either suicidal, epileptic, or recent admissions. It has now become possible for the first time to have the whole of the female epileptics under constant supervision at night. The old infirmary ward is reserved exclusively for bedridden and feeble cases. It is hoped that similar arrangements may be carried out on the male side.

The water supply is very deficient.

Armagh.—The dormitories in the older portion of the building are to be fitted with a system of circulating hot-water pipes.

In the terrible railway accident three valued attendants were killed and the matron seriously injured. Two cases of insanity were indirectly due to the same cause.

A mild form of influenza occurred, attacking a few patients and a larger number of the staff.

Berkshire.—Dr. Douty reports that three times during the year typhoid fever appeared among the female population of the asylum, viz., in March, May, and August. The persons affected numbered ten in all—eight patients, a hospital nurse, and a junior laundry-maid. These cases did not originate in any one ward, but, on the contrary, there was no ward on the female side which did not supply one or more cases. There were two deaths, the patients being both chronic lunatics and advanced in years.

We refer to Dr. Douty's report for particulars of what was done to improve the water supply, to rectify the drainage, &c.

Concerning the new Lunacy Act, he says :—

This Act imposes upon the superintendents of asylums a large amount of daily extra work in the shape of certificates and returns. One would think that the statutory duties of superintendents were already too numerous ;

but the new Act makes them threefold what they are. Of the utility or otherwise of the Act, as far as it relates to private asylums, it is not for me to speak; but I confess that I entirely fail to see the slightest shadow of benefit to the patients, to the Government, to myself, or to the public which can possibly be derived from this mass of certificates and new duties with the corresponding penalties for omission imposed by this new Act upon us. Those who have framed the clauses of the Act relating to public asylums must, one thinks, have failed to recollect the fact that the superintendents of these institutions have in mind, as their chief aim, the cure and discharge of patients; and they must also have lost sight of the fact that all the hours to be spent in the future upon the vexatious duties newly imposed by this Act must be subtracted from those at present forthcoming for medical and surgical work.

Alas! Dr. Douty does not exaggerate the amount of work thrown upon the medical officers by the new Act.

Cambridge.—A culpable and stupid mistake has been committed in preparing the new buildings. The wings were expected to accommodate 40 persons each; but one can receive only 28 and the other 32! The Commissioners strongly and rightly condemned the condition of these additions when opened for the reception of patients.

Crichton Royal Institution.—As this asylum increases in years it appears to increase in the success of its work in all departments. The energy and enlightenment of its management are beyond a doubt, and the amount of benevolence extended to the poorer middle classes is worthy of the highest praise.

To Dr. Rutherford's report we refer those interested in the foundation and development of the institution; and we content ourselves by making the following extract:—

Such results show that insanity is a most curable disease (?); as curable as any other disease affecting a vital organ (?); but, like other grave diseases, it requires prompt and early treatment; indeed, it may be accepted as an axiom that its curability depends upon the period at which treatment is commenced. The first and most essential step in the treatment of insanity is removal from home and from the presence of friends whose injudicious kindness and attention often produce or keep up an excitement which, under other surroundings, does not occur, or if it does, speedily subsides. It constantly happens that patients reported as violent and unmanageable at home, or under the private care to which they had been sent in the anxious endeavour to dispense with asylum treatment, when brought to the institution become at once tranquil under the influence of its quiet routine and the care of an experienced staff. I consider that the early treatment of insanity can nowhere be carried out so well or so successfully as in a well-ordered asylum, and that everything which delays this, such as the placing of the patient under private care, or sending him on a voyage, or to travel, at the outset of mental disease directly diminishes his chances of recovery. The private care or the voyage might often be resorted to with advantage when the patient is convalescent, but not when the disease is beginning or progressing. Patients are sometimes sent by their medical advisers into lodgings in Dumfries to be attended privately, but I do not think that, in these circumstances, they have the same chances of recovery as in the institution, and generally they end by entering it, or one of its detached residences. Partly to meet such cases where there is a disinclination to entering an asylum, the Board of Directors has recently added two additional villa residences to the institution, into which suitable cases may enter as voluntary patients and have all the

advantages of asylum nursing and treatment without coming into the main building.

We venture to suggest that it is more correct to avoid the use of the word "curability," although the case may end in "recovery." Dr. Rutherford must be much less of a logician than we suppose him to be if he really believes that he has cured the patients who have recovered in the asylum under his care. He writes so definitely of "treatment" and its remarkable success, that we would gladly insert in the Journal the record of a series of recovered cases, showing that the happy result was *propter* and not merely *post hoc*. Dr. Clifford Allbutt stated at the Psychology Section of the British Medical Association held at Birmingham that he and another Commissioner had carefully examined the recovery rate in the overcrowded county asylums, and in the smaller ones where individual treatment was more practicable, and that the percentage was no higher in the latter than the former. The disorder ran its course to recovery or otherwise under the unfavourable as it did in the more favourable circumstances. If this be so — and it is very important that the statement should be confirmed—we ought to be cautious how we confound the *vis medicatrix Naturæ* with *curing*.

Dorset.—A large addition has been made to the estate by the purchase of about 199 acres with farm buildings. Some 99 acres of this are already in use by the asylum; and it is considered that the buildings on it can be utilized as a hospital for infectious diseases.

As is generally known, this asylum consists of two buildings about a mile apart. It appears to have been decided that the antiquated buildings at Forstons should be abandoned, and that those at Charminster should be greatly enlarged.

Dr. MacDonald touches on a great variety of topics in his annual report. Concerning the offspring of recurrent cases, he says:—

The subject of heredity in disease has received as much attention as any problem of equal delicacy and untold importance. But has it received the attention it deserves—I might almost say calls for—in connection with the offspring of cases of recurrent insanity? What can be said for the mental stability of the child whose mother or father has had two or three attacks of mental disease? It is quite the ordinary sequence of events to chronicle an addition to the family during the period between recovery and relapse. The child born after a first attack may never suffer from any mental trouble, yet there is always present the link in the chain of heredity. But a child born of a father or mother who has suffered from two or more attacks of insanity is not likely to be possessed of as stable a modicum of "brains" as is natural or physiologically necessary to survive the struggle for existence. I fear there is little or no chance of checking these tainted additions to our population. I am prompted to make these remarks because of the large number of married women admitted during the past year who have recovered and returned to their homes.

Dr. MacDonald's remarks concerning the new Lunacy Act are not favourable. He also regrets that much additional clerical work will

devolve on him, though his time is already fully occupied, and he can ill afford to have his mind and spare hours absorbed and taken up in writing and signing innumerable reports, the use and need of which are not apparent.

Dundee.—Concerning one department of asylum medical work, Dr. Rorie says :—

Post-mortem examinations continue to be made in all cases where the consent of relatives can be obtained, and the great importance of such examinations was shown in several instances. During the past year 36 such examinations were carefully carried out. A full account of the morbid conditions found is entered in the Pathological Record, and a summary of the more important cases was, as usual, submitted to the meetings of the Forfarshire Medical Society. The Pathological Research Room and Museum have now been fitted up, and afford ample provision for carrying out such researches.

It may be mentioned in connection with this department that the Clinical Clerkship, recently sanctioned, has been taken advantage of by two gentlemen. This addition to the medical appointments in connection with the institution has proved beneficial and successful. It has been found to benefit the asylum from the help afforded to the medical assistant in completing and extending the Medical Records; but the principal benefit conferred is in enabling fourth-year students and recent graduates to acquire a thorough knowledge of the various forms of mental disease, and of the modes of treatment now adopted in large asylums, and which can only be satisfactorily acquired by actual residence in such institutions.

Earlwood.—Concerning the causes of imbecility, Dr. Robert Jones says :—

The cause or causes of imbecility remain as before—one of the unexplained mysteries of Nature. To us, as medical men, if not to the public also, it is a matter of the greatest concern, and it affords a vast field for research and theory. It has frequently been stated that the eldest child is more often imbecile than others in a family, and considering the influence of maternal impressions and the exalted emotional life of a young mother under new circumstances, such might almost have been expected. It would also be expected that boys should be affected in a larger relative proportion than girls, but neither is the case. In sixty-four cases admitted twelve were eldest children, with an equal percentage in both sexes, ten were second children, twelve were third, and ten fourths in a family, and then in a gradually diminishing proportion until a rise takes place after the eighth in large families. Careful inquiries are always made as to the nature of the birth, labour, etc.; but none of these inquiries elicit facts of causation, whereas the mental condition of the mother during pregnancy—*anxiety, fright, affliction, etc.*—are made to account for twenty out of sixty-four cases, or about one-third of all the admissions. Consumption in the family is not so frequent as in the statistics of the Royal Albert Asylum, Lancaster, the geographical distribution of the disease being more marked in the northern counties. Marriages of consanguinity appear to have little to do with imbecility, unless there be hereditary taint in the stock. Convulsions in infancy, as a factor, must not be overlooked.

It cannot be too plainly stated that imbecility appears not to be due to any one single or definite cause, but to a multiplicity of causes acting together. Where hereditary taint exists the unfavourable conditions may be brought about by anything which may interfere with the due growth and development of the offspring, having its existence either before or after birth.

Edinburgh Royal Asylum.—Dr. Clouston devotes a large portion of his report to the consideration of alcoholic insanity. To his report we must refer those who desire to read his remarks in full, but we reproduce the following rather lengthy extracts, as they treat of subjects of the greatest importance :—

The chief points in regard to which the treatment of insanity and the administration of the Lunacy Laws have special concern are :—

1. Will habitual drunkenness be considered and treated legislatively as if it were a form of insanity ?

2. Will the measures that attempt to control habitual drunkenness be available for the control of those bouts of drinking that so often cause actual insanity in predisposed subjects when such bouts can be clearly shown to have caused attacks of mental disease ?

3. Will our present asylums be used in any way for the custody and cure of habitual drunkards? And will the machinery provided by the Lunacy Acts be used in any way for this purpose ?

That such legislation might affect this and every other asylum in the kingdom, if it mixed up ordinary mental disease, as we now understand it, and drunkenness, is very evident. No doubt there is a real connection between the two conditions, but there are also differences that seem to me essential, and that should be well considered before legislation takes shape.

The chief points of connection between excessive drinking and insanity are the following :—

1. Alcoholic excess is the most frequent single exciting cause of mental disease, and it acts also as a predisposing cause in very many cases. During the past fifteen years we have had 837 admissions in whom drink has been put down as the cause, or 16·4 per cent. of all our admissions during that time. This may be taken as about the general experience of the country. Let us suppose that excessive drinking could have been put a stop to, would all those 837 persons have remained sane? It is certain they would not, but a large proportion would have done so. It must be clearly kept in view that such mental disease, so called, is not "dipsomania," and may have little in common with it, and the proper treatment of such insanity is already provided for under the present laws.

2. Excessive drinking and mental disease are closely connected hereditarily in many cases. The children of drunkards sometimes become insane, and the children of insane people still more frequently become drunkards.

3. The same causes often tend to produce both, and in the same kind of people, viz., those of a too nervous constitution, whose power of control is innately below the average, or whose cravings are above it, of which causes the following may be taken as examples—viz., bad conditions of life, bad air, living too monotonous lives, over-work, over-anxiety, ill-health, injuries to the head, certain diseases of the brain, sunstroke, and, in some cases, the physiological crises and functions of life.

4. There are some cases of drinking that present some of the very same symptoms as many cases of mental disease, viz., periodicity, impulsiveness, suicidal and homicidal feelings, loss of the natural feelings of affection towards wife and children and relatives, incapacity to do continuous work, mental or bodily, etc.

5. Many cases of actual insanity are accompanied by the drink-craving. For such no new legislation is needed, however. The greater includes the less. In them the insanity is the disease, the excessive drinking is merely one of the symptoms.

6. Above all other resemblances we have this one, viz., that lack of the controlling power is the symptom most common to mental disease and drunkenness,

and constitutes, along with a dominating morbid craving, the disease itself in "dipsomania."

7. Mental disease always results from a pathological condition of the brain, and is a true disease, therefore precisely of the same essential nature as many other diseases; and I think it is proved that habitual drunkenness often also results from a pathological condition of the brain, and is therefore in those cases a true disease. It is only when it is such a true disease that it is proper to call it *dipsomania*. This word is used at present very loosely and inaccurately, and often misleads.

The differences and distinctions between ordinary mental disease and habitual drunkenness, or even true dipsomania, are then well stated, but our space does not allow of our extracting further from this excellent report.

Glasgow, and Lanark.—Dr. Campbell Clark considers :—

That patients may be allowed to remain too long in asylums. After a certain stage is past, prolonged residence in an asylum means, for some cases, a deepening mental degradation, and these should be tried at home or under care in private dwellings. At the worst it can be but a failure, if due care is taken in selecting cases and guardians, and they can ultimately be brought back to the asylum if necessary.

The following gives the results of Dr. Clark's treatment of puerperal insanity :—

No type of insanity is so distressing as the insanity of child-birth, and for such cases the very best hospital equipment is usually required; for they are cases as much of bodily disease as of insanity, and the death rate is relatively high. Against this must be placed the advantage that, if quickly put under special treatment, the chances of recovery are better than in the average of insane cases. Since the opening of the asylum we have admitted 52 cases of this class; of these seven have died, 40 have recovered, two are convalescent, one has improved, and two incurable cases remain. Of these seven suffered from consumption, 11 from serious blood poisoning, one requiring surgical treatment, 14 from inflammations and abscesses, four requiring surgical treatment, one from scarlet fever, one from typhoid fever, one from suicidal wound, one from heart disease, and all without exception required medical or surgical treatment of some kind or other. The record of the last two of the admissions will close in a few weeks, and we will then have for 52 cases a recovery rate of 80·7 per cent., a death rate of 13·4 per cent., and an incurable residue of 3·8 per cent.

Gloucester.—In concluding an unsparing criticism of the new Lunacy Act, Mr. Craddock says :—

A review of the essence and scope of the Act results in the inevitable conclusion that it has the cardinal defect of a tendency towards increased centralization. Its provisions are sanctioned by a ring fence of pains and penalties which will render more harassing and irksome than before the already sufficiently trying task imposed on all conscientious persons engaged in the care and cure of the insane; its proposed safeguards are, as has been shown in at least one important respect, visionary, and many of its enactments appear to have for their object little more than an increase of an already unconscionable amount of red tape. I look forward confidently (without being necessarily a Home Ruler) to the time when the management of county asylums and pauper lunatics will be really, instead of nominally, in the hands of the Committee of Visitors appointed by the County Council, and the functions of central boards, Government auditors, and other officials, who now merely have to do over again (at the ratepayers' expense) what has already been thoroughly done by the County Councils' own officers, will be relegated to and confined within their proper sphere.

The above paragraph must not be taken as expressing our views : it is merely given as an example of opinion on some very controversial questions.

Govan.—One man, who had been an inmate of the asylum for upwards of 16 years, had so far recovered as to warrant his discharge to the poor-house, where he has been regularly employed in responsible and remunerative work.

With the view of better testing the fitness of patients for discharge, either to their own homes or to be boarded in the country, Dr. Watson has made a more extended use of the power possessed by Scotch superintendents of liberating on pass for a period not exceeding 28 days. Eight men and 11 women were so dealt with. Of the former, all did well with the exception of one man. Of the 11 women, two were brought back in two and five days respectively, there having been in both cases a recurrence of excitement.

We observe that some of the statistical tables are not those recommended by the Association.

Ipswich.—In their report the Commissioners say :—

Some of the patients, though not technically secluded, were so in reality, as a nurse or patient was placed at the shut door to prevent egress. We mentioned our disapproval of this mode of treatment to Dr. Rowe (who, owing to the lamented death of Dr. Chevallier, has been recently appointed superintendent), and he agrees with us that it is seclusion, and if resorted to ought to be carried out thoroughly and recorded as seclusion. Our experience shows us that a patient secluded is much less liable to be irritated and excited than one who is kept in his room by manual force; and seclusion is the only proper course to pursue.

About the truth of this expression of official opinion there can be no doubt.

Kent. Chartham Downs.—Of the 69 deaths no fewer than 11 are attributed to exhaustion from mania, and eight to old age.

The number of cases in which a post-mortem examination was made is not stated.

Kent. Barming Heath.—Dr. Davies states :—

An important change has been made in the leave granted to attendants. Several years ago you sanctioned my recommendation to grant them the whole of every tenth day as a holiday, in addition to 14 other days as annual leave; at the time this change was made it was a vast stride in advance of what had been our custom. Lengthened experience convinced me, however, that we might with advantage go further, and I accordingly advised you to grant leave of absence to each attendant for the whole of every seventh day, in addition to the annual leave above-mentioned; you adopted my suggestion, and the result has so far proved most satisfactory. Work in an asylum is very depressing, and the hours of labour extremely, if not indeed excessively, long.

I regret I cannot see my way to suggest any diminution in the number of hours an attendant is on duty each day; the difficulty is one of expense only, but I feel strongly that it would be a very good thing for the patients if means could be devised by which no individual attendant remained on duty for more than eight consecutive hours.

Lancashire. Lancaster.—Having referred to the now notorious but exploded proposal of the London County Council as a “most-

praiseworthy attempt" in the direction of adopting new and improved methods of cure, Dr. Cassidy proceeds :—

In justice to us who are engaged in asylum practice it should be remembered that we are precluded from practising outside our asylums, and therefore precluded from treating that stage of derangement of body and nerves when the mind is balanced between sanity and insanity. The early stage of insanity is almost invariably past before the patient reaches us, and more than one half of the cases admitted are incurable *ab initio*. The stages which I have alluded to when treatment would be most desirable, are now observed and treated by physicians and general practitioners, or in the out-patient department of hospitals. To the specialists go their failures. In my view an out-patient department should be attached to all public asylums, and patients should be admitted as voluntary boarders, perhaps into special departments separate from other parts of the asylums. The existing situation, however, if it cannot be remedied, is amply met by our public asylums. They have advanced by a natural process of evolution, from the Bedlams of old, and every year we are making advances and improvements to meet new wants and new views. Without for a moment supposing that we have arrived at the stage of perfection, I hold that asylum medical officers are alive to the progress of science, and quick to adopt the most advanced treatment or means of cure, and our new Committees of Visitors will, I am sure, support us in every proposal we may make with that end in view.

The great drawbacks, therefore, which affect us would equally apply to the proposed hospital in London, with its further serious disadvantages of an unfortunate situation in the midst of a great city, and of being over-doctored. I feel a compassion growing within me for the inmates of that hospital of the future; they are not only to be studied and physicked by six physicians; they are also to be demonstrated and otherwise utilized for the instruction of classes of students, and for those who require his services, the special pathologist will be in waiting!

The following remarks on phthisis are important, but it should be remembered that prevention is better than cure, and it is to be feared that there are many shortcomings in this direction :—

This disease is constantly found, more or less, among the insane; they live on a lower level of vitality, their nutrition is impaired, and their habits and mode of living conduce to respiratory and cardiac diseases. I think, moreover, that in communities living together within a narrow area for prolonged periods, disease germs, and therefore the germ diseases, have a tendency to acquire an increased infectiveness. The modern belief that phthisis is due to a tubercle bacillus is now sufficiently well established, and on this I have acted in separating consumptive patients from the others. They are now isolated in small separate infirmary wards, where the atmosphere is kept charged with vapours of oil of peppermint and eucalyptus, and their various utensils are disinfected with hydro-naphthol or other agents believed to be destructive of the tubercle bacilli. Treatment by Rosenberg's method of intralaryngeal injections of oily solution of menthol has been attempted, but in the case of the insane it is attended with great difficulties, and is practically impossible. By these and by general hygienic measures and treatment I hope to limit, if possible, the spread of this disease; though, when a virulent and wide-spread epidemic, such as that of influenza and pneumonia, through which we have lately passed, attacks us, all precautions are apt to break down, and, as a matter of fact, have here broken down. The effect of the recent outbreak was as the lighting of a fire, and those predisposed to pulmonary disease rapidly became affected, and many died of phthisis. The influenza, however, did not occur within the period embraced in this report, and I merely mention it as *à propos* to the question of phthisis.

Lancashire. Prestwich.—We miss Dr. Ley's report. At the time that it should have been presented he was on sick leave, suffering from the serious assault committed on him by an attendant.

Lancashire. Rainhill.—The following is Dr. Wiglesworth's contribution to the question of the day—the medical treatment of the insane :—

If the constant and rapid accumulation of chronic cases is to be checked at all, it can only be done by increasing the recovery rate, and the question as to whether this is feasible is one which demands the most anxious consideration. And it is the more necessary to look this matter in the face, as of late years the opinion has been gaining ground that our asylums, however admirable as institutions for the *care* of the insane, do not, perhaps, pay sufficient attention to the cure of those who are gathered within their walls. It is not indeed that this question is by any means lost sight of, but it is more than doubtful whether the progress that has of late years been made in our knowledge and treatment has been at all commensurate with that which has been recorded in other departments of medicine. Doubtless in times past, advance has been retarded by the erroneous views which prevailed as to the nature of mental disease, but the old belief in the spiritual nature of insanity is dead, and we now know that insanity is a disease of a bodily organ—the brain—and that it is of all diseases the most obscure and abstruse, simply because it is the expression of the abnormalities of that organ, which is, of all others, the most complex and the least understood. But difficult as is the problem, it cannot be supposed that it is too great for the human mind to grapple with, and the progress of medical science may be expected in time to unravel many of the mysteries which, at present, surround the disease, and to inaugurate improved and more successful methods of dealing with it. But there is no royal road to knowledge, and it is by laborious and patient research alone that it is possible to wring new secrets from nature ; and if our knowledge of insanity is to be increased and an improved treatment to follow thereupon, it can only be done by a more detailed and systematic study of individual cases than has hitherto been either customary or practicable. And it must be admitted that the present practice of building colossal asylums, and of dealing with the insane in large masses, is one but little favourable to that individual study and attention which, in insanity of all diseases, is the most needed. Our endeavours rather should be to bring our asylums—those at least which deal with the *curable* insane—more into line with general hospitals, and to officer and equip them in such a fashion as to permit of more time and study being devoted to each individual patient ; and it is by developing our asylum constitution in accordance with this idea that we may hope to supplement the means already in use for the cure of those entrusted to us, and to contribute our quota towards stemming the tide of insanity at present at the flood.

Lancashire. Whittingham.—Dr. Wallis also has some sensible remarks on medical work in asylums.

I take this opportunity of thanking the Committee of Visitors for their ready consent to allow me to replace the former junior medical officer by a skilled pathologist at a salary of £200 a year. The gentleman appointed to this post will devote himself solely to pathological research, and I hope much good will result from this arrangement, for under the old system, no really sustained work in this direction was possible, so many demands having been made upon the junior medical officer's time. I look upon this departure as the most important event of the year, but there are other questions equally pressing, and I would pass on to one or two of them. I am more and more convinced as time goes on that more ought to be done in the direction of individual treatment than is done at the present time. For this purpose we must have special

hospital wards for the recent cases, and more medical officers and a larger proportion of attendants. There are special wards (admission wards) no doubt in every asylum, but I fear they are not sufficient in number so as to admit of a proper classification and sub-division of the recent admissions. At any rate, in this institution I have from time to time recorded my conviction that our accommodation in this respect is absolutely insufficient. . . . Further, our medical officers have at the present time an average of six hundred patients each to look after, and in my opinion three hundred would be more than enough for the careful and thorough attention which cases of insanity assuredly need, so changeable are they from day to day. A hundred cases of recent insanity would occupy the time of a medical officer most fully, were he to study them exhaustively, and in their wards the proportion of attendants should be no less than double the present proportion. We have to refrain from employing many recent admissions when we feel that some special employment might be most advantageous, because we have not, and cannot well ask for (as a curative measure) the implements necessary for the work. Our existing modes of employment may be unsuitable, or the individual case cannot be entrusted to the tenth part of an attendant, *i.e.*, one who has to look after nine other patients. You may wish to send out another inmate for country walks, whose sense of confinement is very intolerable and injurious, and yet whose mental state is critical, so that two attendants may be required to provide against any emergency. This under existing circumstances is an impossibility, so that here is a case of insanity sent to an asylum for cure, remaining unprovided with perhaps the most important element of treatment possible. To treat all our recent admissions, or, at any rate, all those in whom any chance of recovery existed, with a free hand, and without stint, would result in a very sensible increase in the cost of maintenance all round, whilst the present tendency in asylums is in the opposite direction; more's the pity. As I have said in former years, I have a sincere respect for economy, and know it is my bounden duty to practise it as far as possible, but it is no less binding upon the consciences of all concerned in the care of the insane, to see that they shall suffer no loss or detriment by any unwholesome striving for economy, only to be maintained at the expense of efficiency.

We may be excused if we remark that there appears to be no valid excuse for not employing the extra attendants required for the adequate treatment of the cases mentioned by Dr. Wallis. As to expense, that is nothing. The weekly cost at Whittingham is only a fraction of a penny above 8s. If the patients laboured under acute bodily disease, extra attendants would be engaged readily enough; why not in mental cases?

Lincolnshire.—The sanitary improvement of this asylum is continued. During the progress of the work numerous serious defects in the drains, &c., were discovered.

Leicestershire and Rutland.—Dr. Higgins reports that in several wards the wooden window frames have been replaced by iron ones, in consequence of several escapes having occurred. We would indicate that this step is in the opposite direction of what has been done in most asylums. It is far better to trust to careful supervision than to what are really iron bars. If the staff of attendants had been increased, this retrograde step would not have been required. The Commissioners remark that the staff is not too strong—a rather gentle way of stating the fact. The danger from fire has been much increased by the alteration made in the windows.

Leicester.—The accommodation has been increased by building for seventy patients. Twenty-two single rooms have been provided, and a large dormitory for epileptics.

London. County.—It is with much satisfaction that we observe in the report of the General Asylums Committee that —

The question of the pay, hours of duty, and leave of the male and female attendants, has been considered by a special sub-committee, and their deliberations have resulted in a carefully-prepared scheme, involving material improvements in the pay and relaxation from duty of these persons, and uniformity for the future in these respects in all the asylums. The recommendations of this sub-committee have been adopted.

London. Banstead.—Concerning criminal lunatics, Dr. Claye Shaw reports :—

Ten criminal lunatics were admitted during the year 1889, and between January 1st and March 31st, 1890, seven more, so that in the fifteen months we have had seventeen of this class of patients. I cannot honestly say that they have given us much trouble. There are many patients in the asylum who have, at one time or another during their lives, been in prison, so that it is difficult to see why such strong objections are so often made against the reception of criminal lunatics in asylums. As a rule they are either imbeciles or general paralytics, and from my experience they are neither worse nor better than most of the others; certainly the worst patients here are not the criminals. One noteworthy feature among these persons is that they prefer the prison; they say that it is much easier for them when discharged to get another situation from the prison than from the lunatic asylum, hence they are extremely anxious to be sent back to prison, instead of being discharged through the workhouse.

London. Cane Hill.—A limited outbreak of typhoid fever occurred, Dr. Moody reports that in one instance mental recovery took place as a consequence of the disease. In one of the cases who died the patient became quite rational before the end.

London. Claybury.—An asylum for the accommodation of 2,000 patients is in process of erection. The estate extends to 269 acres, and cost £37,895. The contract price of the building is £337,945.

London. Colney Hatch.—The introduction of hot water pipes into some of the dormitories and single rooms has greatly added to the comfort of the patients.

Every attendant is now allowed leave of absence for two whole days and three half days in each month, one of the whole days being, if possible, a Sunday. The annual leave has been increased to 12 days for attendants under two years' service, and 14 days for those who have served a longer time.

London. Hanwell.—In his report Mr. Richards states :—

Of the forms of insanity in those admitted, the most noteworthy feature is the gradually-increasing number of cases of those suffering from melancholia. This form of mental disease has undoubtedly been on the increase of late, and this I believe has been the experience of those who have the care and treatment of the insane. Formerly, the disease most prevalent was mania, accompanied for the most part with excitement, but now one is struck with the very large

proportion of persons who are admitted into asylums labouring under the depressing forms of mental disease, and I may add, from my own experience here, that of the recent and acute cases which come under treatment, by far the greater proportion are acutely melancholic, many having actively suicidal tendencies.

Concerning rest in bed, Dr. Alexander says:—

The average number daily in bed—about six per cent.—is larger than what obtains in most asylums. This is accounted for by the large number of far-advanced general paralytics we have, and by the great store we place on confinement in bed as a therapeutic agent in the treatment of cases of melancholia with refusal of food, and of certain cases of epilepsy; attaching as we do so much value to bed treatment in these cases, we do not strive to “break the record” of the smallest number of patients confined to bed in any asylum. In connection with this question it is a matter of fair speculation as to the share that our bed treatment has in the production of the low death-rate that usually obtains in this asylum.

Newcastle.—A patient sustained a fracture of the fibula in an unusually easy way. When playing at cricket he was struck on the outer ankle by the ball. He continued his innings, and it was not until he attempted to walk from the field that he experienced any great pain.

Mavisbank.—Dr. Keay mentions two cases which are of interest. It might be useful if he published them in the *Journal*, giving special prominence to the “active medical treatment” employed.

One case will appear in a future number of this *Journal*.

(*To be continued.*)

2. *Therapeutic Retrospect.*

By HARRINGTON SAINSBURY, M.D., M.R.C.P., Physician to the Royal Free Hospital.

The use of cocaine is so widespread that a few words of caution against its indiscriminate employment may not be superfluous. From time to time cases in which alarming symptoms have followed the use of cocaine are noted, but they do not attract much attention. Dr. Edmund Falk, of Berlin, is the more to be thanked for having collected and tabulated 176 cases of poisoning by therapeutic doses of cocaine. The dose employed, with its method of employment, and the results following the use, are carefully set down. Dr. Falk excludes from his table not a few cases of syncope which have been set down to cocaine, but which he considers may be referred to the operation itself. He is also of opinion that a majority of cases have not been published, and further that a large number of cases of insanity are to be found in the asylums, which have arisen from the prolonged use of cocaine. The 176 cases which he has tabulated will, therefore, fall very short of representing the real toxic dangers of cocaine. Ten fatal cases are to be found in the list. Two of these fatal cases followed the use of a

four per cent. solution of cocaine applied to larynx or pharynx. One case followed the injection of 0.06 gramme ($\frac{3}{100}$ grain) beneath the mucous membrane of the gums; another, the subcutaneous injection of a little over three grains. The smallest dose causing death was 0.6 grain (0.04 gramme) injected subconjunctivally. Short of death, very alarming symptoms are frequently noted, such as pallor, cyanosis, vertigo, fainting, collapse, unconsciousness, more or less prolonged, delirium, hallucinations, diminished general and special sensibility, impairment of vision, deafness, etc., etc.

A further critical survey of the dangers of cocaine is postponed to the next number of the "Therapeutische Monatshefte," but meanwhile we would direct attention to this most valuable synopsis in the October number of the above journal.

In the "Lancet" for Sept. 6th, 1890, Mr. Mayo Robson advises the use of Esmarch's bandage applied within half a minute of the injection and proximally to the site of the puncture. In this way he maintains that local anæsthesia is secured without the danger of general poisoning. This method is obviously only adapted to certain parts of the body ("Practitioner," Nov., 1890).

The addition of carbolic acid to cocaine solutions has been recommended by Dr. Gluck in the "New York Medical Record." The advantages claimed for this admixture are that the solution is more permanent and the local anæsthetic action increased, the carbolic acid acting also as a local anæsthetic; further, that toxic effects do not result from the use of this solution. The formula given is:—Carbolic acid (purs.), two drops; distilled water one drachm; shake till dissolved, then add cocaine 10 grains ("Practitioner," Oct., 1890).

Of late Mr. Rushton Parker has recommended resorcin as having similar properties to carbolic acid when combined with cocaine.

Chloralamide in Mental Diseases. Record of Experiments in the Asylum of the Rhine Province at Andernach by Dr. UMPFENBAOH.

The drug was administered in solution in absolute alcohol (one part chloralamide to two parts alcohol). This solution was diluted by the addition of water and syrup—it was taken without difficulty by the patients. The dose began with 30 grains at night and rose to 90 grains per dose.

Fifty-five cases were treated, viz., 14 of mania; 13 of paranoia; three of melancholia; three of general paralysis; nine of excitement in idiocy; and eight of excitement in epilepsy. The result was satisfactory in 30 cases, unsatisfactory in 12 cases, transitory in 13 cases.

The conclusions arrived at are that, as Rabow and Strahan affirm, the drug is useless in mania, but in opposition to Strahan some good results were obtained in the excitement of epilepsy. By-effects were comparatively rare. The drug was well borne even after prolonged

use. No case of collapse occurred since those recorded in the Feb. number of the "Monatshefte." One case of scaly skin affection was caused by the drug; it affected the flexor aspects of the elbow and knee joints and spread upwards and downwards on the limbs. This with Pye Smith's case makes the second record of a similar skin trouble. For the rest chloralamide may produce eruptions like those of chloral. Dr. Umpfenbach considers chloralamide to be serviceable but not very certain, and to possess no advantage over chloral hydrate ("Therap. Monatsh.," Oct., 1890).

Amylene hydrate was tried at the above-mentioned asylum in seven cases of long-standing epilepsy. The dose was 5-8 grammes (75 grains to 120 grains). Good results were obtained in two cases. In a third case the attacks were in the first instance diminished, but subsequently the drug was without effect. In four cases no special effect was witnessed. No bad effects were witnessed with the exception of a troublesome sleepiness and insomnia for some time after discontinuance of the medicine. So far as these results go the value of amylene hydrate is not very apparent ("Therap. Monatsh.," Oct., 1890).

Experiments with Orezine in the Treatment of Anorexia.

The doses were 0.25-0.5 grammes (4-7.75 grains); they were given in the form of pills or of powders, the latter in milk or bouillon. The dose was given once or twice daily, and care was taken to administer a sufficient quantity of the broth or milk. The results obtained were good in 19 out of 30 cases (of these 30 cases 25 were mentally affected), *i.e.*, in 63.3 per cent. They stand numerically between Penzoldt's and Glückziegel's, who recorded some 70 per cent. of successes, and Iwrédy's, of Budapesth, 58 per cent.

Orezine certainly merits a trial as a stomachic. In its critical employment care must be taken to avoid suggestion ("Therap. Monatsh.," Oct., 1890).

Penzoldt's original paper is to be found in the "Monatshefte" (Therapeutische) for Feb., 1890. In the "Lancet" for Nov. 15th it is stated that Dr. Penzoldt recommends the administration of orezine in starch paper wafers instead of in gelatine-coated pills.

In the October number of the "Practitioner," a claim is advanced for the further trial of bromide of gold in epilepsy. The salt appears to have been beneficial after the failure of many other drugs in a case of hysteria gravis recorded in the proceedings of the St. Petersburg Society of Psychiatrists. The salt is also said to have proved very efficacious in suppressing epileptic seizures. The dose advocated is $\frac{1}{2}$ grain. The "Practitioner" advises the admission of this compound to the list of bromides, to be tried if others fail. (*Vide* "New York Medical Record," Vol. xxxviii., No. 7., 1890.)

Biernacki records some very interesting experiments with strychnine. His proposal was to test the influence of the drug upon the cerebral cortex. The animals experimented upon were rabbits, and the method

was to expose the psycho-motor centres of the brain by trephining; to determine the minimal faradic stimulus which would give a definite contraction; then to administer strychnine, either subcutaneously or by painting the surface of the brain with very weak solutions, and then to proceed with the electrical testing of the cortex. The results he obtained were in all cases diminution in the cortical irritability. With the smallest doses 0.00004 and 0.00006 gramme (0.0006 and 0.0009 grain) of the nitrate of strychnine a result was not always obtained, but with 0.0015 grain it was always found.

An interesting point was the delay in the appearance of the result; the effect was not at its maximum for 27-30 min., and moreover slight signs of cord-action (strychnine-like) frequently appeared at this time.

The author concluded that the effect of strychnine is probably not direct upon the nerve cells in the same way that morphine and cocaine act, because of this delay; also that the depression of the functions of the cortex cerebri may in some way depend on the state of the irritation of the spinal cord, since the two effects, the maximum of the former and the minimum of the latter, come out together.

However explained, the diminished irritability of the brain is exceedingly interesting, and it explains the use of strychnine in epilepsy and in dipsomania—also its possible value as a sleep producer as, according to Brunton, it may act. The author suggests, further, its possible use in the treatment of unmixed cases of mania, and that moreover its use is likely to be witnessed for small doses, *e.g.*, $\frac{1}{10}$ of a grain (0.002 gramme).

In the comparative absence of any definite experiments upon the influence of strychnine upon the brain, and in the presence of the assumption that its effects were almost limited to the grey matter of the spinal cord, medulla and pons, these experiments are very welcome ("Therap. Monatsh.," Aug., 1890).

Exalgin.

("Therap. Monatsh.," Aug., 1890.) Falk largely enumerates the toxic action of this drug in the above periodical. The symptoms include: *free sweating*, though this is not likely to arise with careful dosing (3-6 grains); *vertigo*, a common symptom appearing in from quarter to half an hour, and sometimes amounting to a sense of intoxication with dazzlings and noises in the ears; *confusion of thought*, this has followed a larger dose, and there has been recorded *impairment of vision*, followed by *delirium* and loss of *consciousness*. *Convulsions* have occurred. *Cyanosis* is not likely to occur with careful dosing. *Methæmoglobinæmia* has not been observed, though a reduction of the oxyhæmoglobin has been noted.

Disorders of digestion are uncommon. *Fugitive erythematous exanthems* have been described. The danger of this aniline derivative appears to lie in its effect on the blood. Its close alliance to antifebrin, of which it is a methyl derivative, is drawn attention to.

3. Italian Retrospect.

By J. R. GASQUET, M.B.

The chief feature in the psychological literature of Italy since my last report has been the multiplication of periodicals devoted to it. Thus we have received copies of the following new journals:—"The Annali di Freniatria," of Turin; "Il Manicomio," of Nocera Inferiore; "Il Pisani," of Palermo; and "L'Anomalo," a "Gazzettino," published at Naples. On the other hand, I regret to say that no copies have been sent since 1888 of Lombroso's always interesting, if sometimes paradoxical, "Archivio di Psichiatria ed Antropologia Criminale." To some extent these periodicals may be considered as equivalent to our Asylum Reports; and they doubtless show the great activity and zeal with which our specialty is studied in Italy. But from another point of view they seem to me no unmixed advantage. Each periodical is starved by the scattering of so much ability, which was formerly concentrated in fewer journals; and the space left vacant has been, to a great extent, occupied by matters of local, temporary, or secondary interest. When allowance is made for this, Italian psychological literature will be found quite equal to the high level it has attained in former years.

The principal subjects of interest in the *Archivio* are the following:—

Prof. A. Verga describes the fear of falling from a height, which he terms *acrophobia*, thus associating it with agoraphobia, claustrophobia, and the like. The interest of this condition is its frequent occurrence in persons of otherwise sound mind, as is shown by the learned author being himself an instance of this irrational fear.

Dr. Frigerio relates a case of syphilitic insanity, in which refusal of food was the most prominent and obstinate symptom. This was found to be due to *megalopsia*, which enormously magnified the bulk of the mouthfuls presented to him, so as to lead him to suppose he was unable to swallow them. Ophthalmoscopic examination showed the existence of syphilitic retinitis, which was not relieved by treatment.

Dr. Baroncini gives an account of the *granulated*, shagreen-like appearance of the *ependyma*, which has been remarked by Rokitanski and other pathologists. He has observed it in 32 out of 650 post-mortems in the asylum at Imola. Of these, 21 were males and 11 females. One of these was a case of alcoholic insanity, four were instances of secondary dementia, while the remainder had been general paralytics. These results are in opposition to the statement of Joire, that this condition is invariably associated with general paralysis. He is equally mistaken in supposing that it is an invariable accompaniment of the disease; for these 27 instances were the only ones observed out of 62 autopsies of paralytics. It was found almost equally commonly in cases which had run a rapid course, as in chronic ones. The morbid appearances with which it was almost always

associated were thickening of the cerebral membranes, and sub-arachnoid and intra-ventricular œdema.

Prof. Raggi has described a case of *unilateral auditory hallucinations*. The patient was a drunkard, suffering from delusions of persecution. He ascribed the voices he heard to some poison, which, he alleged, had been poured into his left ear by his wife. No disease of the ear could be discovered on examination; but the patient also complained of a constant inarticulate noise in the ears. He had bilateral hallucinations of sight. In another case, a woman of 70, hallucinations of sight occurred in the right eye which was affected by cataract, disappearing after operation, but recurring with greater intensity.

Prof. Bianchi, of Palermo, has studied the *tremor of general paralysis by means of Marey's graphic apparatus*. I wish I could reproduce his very interesting tracings. The following are, however, his chief results:—1. The most characteristic point about the tremor is its great inequality; it is non-rhythmical, and oscillatory rather than vibratory. 2. It ceases during repose, unless the patient is fatigued, but reappears on voluntary movement, even of distant parts of the body. Violent efforts may exaggerate the tremor until it becomes a spasm. 3. The patient had considerable power of temporarily arresting or disguising the tremor by an effort of the will. The author infers that in this form of tremor the successive stimulations which produce a voluntary movement are greatly slackened. This condition is, of course, common to all tremor; but this further point is characteristic of general paralysis, that the stimuli directed to any given muscular group are not fused together as in health, but the psycho-motor force is diffused and discharged by other channels, often distant ones, in an irregular and non-rhythmical manner.

Dr. Guicciardi gives an account of the effects of *massage* as tried in the Reggio Asylum. Ten cases are described in detail, the general results being decided improvement in the bodily condition of all, but mental amelioration only in slight cases of melancholia. In one case melancholic symptoms were replaced by maniacal excitement. As the author remarks, these results are the same as have been obtained in this country.

The amount of the *cerebro-spinal fluid* has been measured in 152 autopsies at Mombello by Drs. Gonzales and G. B. Verga. It was found always greater than in sane persons, being largest in all conditions of dementia. The sp. gr. was also higher than the normal, varying between 1,010 and 1,017.

Dr. A. Verga gives a careful analysis of the *statistics* of insanity in Italy for 1888, from which I borrow the following:—The number of persons of unsound mind recorded at this date was 22,424, of whom 11,895 were males, and 10,529 females. The proportion of the insane to 100,000 of the general population has gradually risen from 51.00 in 1874, the first year which admits of comparison, to

71.01 in 1888. Verga considers that this apparent increase is, in great part at least, to be accounted for by the increased asylum accommodation; the number of asylums having advanced from 43 in the former of these years to 82 in the latter. The proportionate increase is greater in males than in females; the difference being, however, very slight. Insanity is relatively most frequent between the ages of 41 and 60; is more common in the single than in the married or widowed; more Jews are attacked than those of any other religion; more persons slightly educated ("non del tutto illetterati") suffer than either the illiterate or the well-educated. The proportion is highest in the Emilia, the Marches, and Liguria; and lowest in Sardinia, Sicily, and the province of Naples. As to the prevalence of the several forms of insanity, it can only be said that states of exaltation are slightly more frequent than those of depression.

Prof. Tamburini's periodical, the "*Rivista Sperimentale di Freniatria e di Medicina Legale*," fully maintains its high character. The following are some of the most important articles:—

Dr. Vassale proposes the following modification of *Weigert's process for staining the nerve-centres*: The sections are first immersed for three to five minutes in a one per cent. solution of hæmatoxylin in distilled water; whence they are transferred, for a like time, to a saturated solution of neutral acetate of iron, in which they become very black. After washing they are plunged in a solution of two parts of borax and 2.5 of prussiate of potash in 300 parts of water. The ganglionic cells, the neuroglia, and the degenerated portions lose their colour, the medullary fibres remaining a dark violet. After careful washing the colourless parts may be stained with picrocarmine according to Pal's method.

The same author writes on the relations of *renal disease and insanity*. He gives particulars of four cases, in which the first symptoms observed of sub-acute nephritis, or of an exacerbation in chronic kidney disease, were mental. In only one of these was there any other uræmic symptom. The obvious moral which he draws is, that the urine should be carefully examined in every suspicious case, where no other cause can be assigned for an attack of mania or delirium; also if there are any symptoms, such as intestinal catarrh, which are often associated with granular kidney. Dr. Belmondo describes the *spinal complications of Pellagra*. Degeneration of the posterior and lateral columns, and atrophy of the cells in the gray matter of the cord, are very frequent, with the corresponding symptoms of loss of power, exaggerated tendon-reflexes, paralytico-spastic walk, and tremor of the upper limbs.

In an article of great ability, Prof. Tamburini examines the nature of the bodily symptoms of *Hypnotism*. It is well known that the rival schools of Nancy and Paris have given different answers to this question; Bernheim, on the one hand, affirming that the three stages described by Charcot and his followers are merely artificial results of suggestion, while the Parisian school, on the other hand, hold that

the only true hypnotism known to science is "la grande hypnose," of which the bodily symptoms have been studied so exhaustively at the Salpêtrière. I may be excused for transcribing the conclusions at which this eminent author arrives:—

"1. The bodily phenomena of hypnotism, which are described as belonging to the so-called stages of lethargy, catalepsy, and somnambulism are met with in a few cases of hysteria major, independently of any suggestion.

"2. But these bodily conditions do not justify a nosographical division of hypnosis into three distinct stages, or rather 'three nervous states quite different from one another, each provided with its own proper symptomatology' (Charcot), because these symptoms may be found mixed and confused in the different stages, and also because they only represent so many manifestations of exaggerated reflex excitability, the variety of which is determined solely by the varying nature, intensity, and duration of the stimuli which are employed to bring it into evidence.

"3. These bodily phenomena are not characteristic of the so-called major hypnotism, because they are also observed independently of it, and of any suggestion, when fully awake, in cases of hysteria major, where they are present as so many 'hysterical stigmata.'

"4. Hence, in the few cases where they are observed during hypnotism, they are not the results of this, but are merely manifestations peculiar to hysteria, which are brought into evidence then, either by the increased reflex excitability, or by the stimuli employed, which act like injuries and other agents which reveal the latent hysterical diathesis.

"5. Hypnotism is not then a neurosis, since, in the few cases in which it seems to be such, it only displays pathological conditions which belong to the hysterical neurosis, either as pre-existing or latent, for which hypnotism is but a delicate test or revealing agent.

"6. Hypnotism is nothing but a simple state of induced sleep, which has no pathological character, but has the double property of increasing reflex excitability and suggestibility, which two conditions supply the key to all the bodily and mental phenomena of hypnotism.

"7. The conditions observed in the hypnotic state may vary indefinitely with the different condition of the subjects, whether healthy and robust, or feeble, or sick, or neuropathic, or hysterical to a slight or a serious degree; but all that in such cases gradually complicates the scene is due, not to hypnotism *per se*, but to the pre-existing morbid conditions which hypnotism merely brings into evidence.

"8. Hence the innumerable apparent forms of hypnotism, which have given rise to the divisions into major and minor hypnotism, and the like, are only due to artificial suggestion or to pre-existing pathological conditions superimposed upon different degrees of sleep."

Prof. Morselli has studied the *cranial anomalies* of 200 skulls preserved in Italian asylums. His main conclusion is that the occipital bone is more frequently anomalous than any other, and that fusion of

the atlas with the occipital is also much more frequent than in normal crania. He remarks that Lombroso came to the same results from his examination of the skulls of criminals.

The most interesting articles in the new "Annali di Freniatria" are two on *acetonuria* in the insane. Having examined the urine in 87 insane persons, Dr. Rivano found it to contain acetone 37 times; most often (nine out of ten times) in general paralytics, but also frequently (13 times in 21 cases) in melaucholiacs. He connects its presence with malnutrition, and in melancholiacs found it particularly associated with refusal of food. The subject is continued in a subsequent number of the same journal by the editor, Dr. Marro, of Turin. He has found acetonuria especially frequent in cases where there has been terror, frightful hallucinations, etc.; and he believes the connection between them is a causal one. He refers to Prof. Lustig's recent experiments, in which faradic stimulation of the cœliac plexus has produced temporary acetonæmia, and suggests that fear acts in the same manner.

Dr. Bozzolo gives, in the "Rivista Clinica," an interesting account of a case of *Hereditary Chorea*, which I notice because of the unusual association of this variety of chorea with mental disturbance. The case recorded had all the typical characteristics described by Huntington and others since. The voluntary inco-ordinated movements differ from those of ordinary chorea only by the possibility of checking them for a time by an act of the will. The disease attacks males and females alike; and appears between 30 and 55. It is transmitted from parents who have suffered from it. The mental symptoms seem to have been maniacal excitement with delusions.

4. American Retrospect.

By FLETCHER BEACH, M.B., F.R.C.P.

*State of New York.—First Annual Report of the State
Commission in Lunacy.*

The asylums of the State are divided into the public, the quasi-public, and the private. Exclusive of idiots and feeble-minded women, the number of insane under custody on the 1st of October, 1889, was 15,507. The Commission consists of three members, a physician, a barrister, and "a citizen of reputable character." The medical and legal commissioners are required to make 132 visits each year; the medical commissioner is expected to make 22; and the whole Commission, or a majority thereof, have to make 106, being a total of 260 visits to the various State institutions during the year. Literal compliance with the requirements of the Act of 1889 is physically impossible, and the Commissioners detail certain arrange-

ments which will facilitate the performance of their duties. The systems of accounts and statistics in vogue at the several State asylums show a lack of uniformity, and the Commission believes that these systems can be unified; to this end they have suggested a conference of asylum managers and superintendents with itself. The first effort towards intervention by the State in the case of the insane was made by Governor Throop, in January, 1830, but it was not until January 16th, 1843, that the New York State Lunatic Asylum was opened. In the course of a few years the asylum was filled, and it became necessary to send back to the poor-houses those patients who had received what was supposed to be the limit of beneficial treatment. Their treatment in these poor-houses was so bad that the Legislature passed what is known as the "Willard Asylum Act," which provided for a State Asylum for the chronic insane. The Willard Asylum was opened on October 13th, 1869, but soon became overcrowded. At this time the debt incurred by the State in aiding the prosecution of the civil war was most grievously felt, and in 1871 the Legislature passed an Act, by which counties might, upon showing that they had made proper provisions, care for their chronic patients. On October 1st, 1889, there were 5,371 patients in the county poor-houses and State asylums for the chronic insane. The Commission inquired into the two systems of care and treatment—the one conducted by the States and the other by the counties—and found that the latter did not provide the facilities which one would expect to find in every well-managed custodial institution or in any ordinary hospital. Some illustrations of evils inherent in the system of county care of insane patients in county alms-houses are related, and the Commission concludes that the system "in practical operation has been found to have failed and fallen short of the hope entertained for it when the Act of 1871, sanctioning its trial, was passed." The Commission makes many recommendations, of which the most important are: (1) that all of the insane in the county poor-houses in all the counties of the State, except New York and Kings, be transferred at the earliest possible date to State asylums; (2) that all laws having for their object the division of the insane into the so-called classes "acute" and "chronic" be repealed, and that all the insane be treated solely with reference to their curability; and (3) that an asylum be provided for the helpless and unteachable idiots.

Report of the Government Hospital for the Insane, Washington.

It appears from this report that on the 30th June, 1888, there were 1,361 patients resident in the hospital; during the year ending June 30th, 1889, 280 patients had been admitted, 130 had been discharged, and 114 had died, leaving 1,397 under treatment. The recoveries are reported as 70, being 28.68 per cent. of the discharges, including deaths. The daily average number in the hospital has been 1,373, and the percentage of deaths to the daily average number resident is 8.30.

The patients admitted come from the army, the navy, marine hospital service, and civil life, and are composed of white and coloured people. The extension of the lodges for the coloured insane has changed the character of many of the patients; chronic turbulent cases forget to be noisy or destructive, and go to work in an orderly manner. Howard Hall, for the convict and criminal class of the insane, has been erected, and 63 patients have been moved into it; it is provided with 60 single rooms. A pavilion for the sick has also been opened. The statistics of the hospital for the last ten years show that it is necessary each year to provide additional accommodation for 50 patients. There is a night medical service. The pathological supplement to the report gives an account of 29 post-mortem examinations; of these 15 were made on patients who had suffered from general paralysis, and three on cases of acute organic dementia; eight patients had suffered from acute mania, and three were cases of acute insanity with maniacal symptoms, dependent upon organic brain disease. The symptoms, naked eye and microscopical appearances in each case are given, and the report is illustrated with fourteen woodcuts made from drawings of microscopical sections of the brain. Dr. Blackburn's work is good, and Dr. Godding is to be congratulated upon having a pathologist of such high order.

*Annual Report of the Department for the Insane of the
Pennsylvania Hospital.*

Dr. Chapin reports that the number of patients in the hospital on April 22nd, 1889, was 393; during the year 178 patients had been admitted, 137 had been discharged, and 27 had died. The number remaining on April 22nd, 1890, was 407, and the daily average during the year was 404. On comparing the statistics of the present with the preceding year, it was found that there was a moderate increase in the number of patients admitted and discharged. The proportion of recoveries calculated upon the admissions was 25 per cent.; and the mortality calculated upon the average number resident was six per cent. Fifty per cent. of the admissions were regarded as recent cases, or of less than six months' duration. A larger number of recent cases now recover than at a former period, and the mortality at this stage is decidedly reduced. A gymnastic pavilion has been opened, and systematic instruction is given to a class twice daily. The physicians attend at the out-patient department of the hospital twice weekly, and have delivered sixty-one lectures to the attendants. At the request of Dr. Morton, Chairman of the Lunacy Committee, Dr. Chapin addressed him a communication on the subject of "the preparation of medical certificates," and he has included it in his report.

The Family System in Practice.

This is a report by Dr. Stedman of the condition of the boarded-out insane in Massachusetts. "The observations and conclusions

reached are drawn, with the exception of certain statistics, solely from personal investigation on the spot, of the operation of this system in Massachusetts after a trial of more than three years." Each patient was visited and examined in the house in which he or she resided without the previous knowledge of the householders or patients. The number of boarded-out insane on Nov. 3rd, 1889, was 66, 21 being men and 45 women. The patients selected for this treatment all belong to the harmless, chronic, demented class, which are so common in all asylums. They were found in (1) houses in which the surroundings were exceptionable; (2) houses reasonably well-kept; (3) houses more or less squalid and scantily furnished; and (4) dwellings in which the surroundings were extremely poor. Dr. Stedman says that with few exceptions these patients were generally found to be comfortable and contented. He makes suggestions for the complete efficiency of the system in Massachusetts, and concludes the paper by recommending some minor improvements, which the State Board of Lunacy and Charity might carry out.

Seventh Annual Report of the McLean Asylum Training School for Nurses.

In 1879 it was determined to establish a school, not only for the training of the attendants in the asylum, but also to fit young men and women, as in general hospitals, to undertake general nursing; and since the inauguration of the system four classes of women and two of men have graduated. In 1884, Miss L. E. Woodward, who had been for fourteen years supervisor, was appointed Superintendent of Nurses, and her long experience was supplemented by the privilege of attending a six months' course of practical study in the wards of the Boston City Hospital. There she learnt the technique of school work. The first seven years of the existence of the school show as results: 64 graduates, 19 remaining in the service, and 54 pupils under training. An arrangement was made in 1886 with the Boston Training School at the Massachusetts General Hospital, by which any female graduate of the school has the privilege of entering that school and receiving her diploma after completing satisfactorily the studies of its senior year. The graduates of that school are received at the McLean Asylum upon like terms. All the nurses are carefully instructed in giving massage and in other forms of physical exercise and movement treatment. Dr. Cowles says "the outcome is even better than was expected in so short a time, in respect to the number of graduates who remain in the service." As a result of the new order of things the asylum becomes a hospital in truth, and "both the humane and scientific spirit are invited to dwell in it." A circular of information to applicants, the course of instruction and the list of "graduates" of the school from the beginning are given at the end of the report.

PART IV.—NOTES AND NEWS.

The Quarterly Meeting of the Medico-Psychological Association was held at Bethlem Hospital, November 20th, 1890, the President in the chair.

There was a large attendance.

The following gentlemen were elected as members:—Edward Emerson Rosenblum, M.B., B.S.Melbourne, Senior Assistant Medical Officer, Lunatic Asylum, Yarra Bend, Melbourne; W. F. Menzies, M.D., B.Sc.Edin., Assistant Medical Officer, County Asylum, Rainhill; Robert Sinclair Black, M.A., M.B., C.M., D.P.H., Pathologist, County Asylum, Whittingham, Preston; Charles Lloyd Tuckey, M.D., C.M.Aber., 14, Green street, Grosvenor square; Ernest Milner, M.B., C.M.Edin., Assistant Medical Officer, Leavesden Asylum, Watford; Walter H. Barker, M.B.C.S.Eng., L.R.C.P.Edin., B.A.Cantab., M.A.Melbourne, Deputy Medical Superintendent, Hospital for the Insane, Kew, Melbourne; G. Alder Blumer, M.D., Medical Superintendent of the State Hospital for the Insane, Utica, N.Y.; Wm. Douglas, M.D.Queen's University, Ireland, M.B.C.S.Eng., Medical Officer, Provident Dispensary, Leamington Spa, Dalkeith House, 7, Clarendon Place, Leamington Spa; James Cameron, M.B., C.M.Edin., Assistant Medical Officer, Dundee Royal Asylum; Francis Neel Gaudin, M.B.C.S., L.S.A., M.P.C., Medical Superintendent, The Grove, Jersey; Farbrace Sydney Gramshaw, L.K.Q.C.P.Ireland, L.R.C.S.Edin., The Villa, Stillington, York; Arthur Nicholas Little, M.B.Lond., M.R.C.S., L.S.A., Assistant Medical Officer, Holloway's Sanatorium; John Abernethy Hicks, jun., L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., Assistant Medical Officer, Whittingham County Asylum, Preston, Lancashire.

Dr. POWELL exhibited a lock for single-room doors now in use at the Nottingham Asylum for outer doors and ordinary ward doors. The chief object was to avoid the slamming of doors. A knob was made to take the place of a key for fastening. The bolt was flush with the door frames, and all that had to be done was to lay a hand on the knob and shove the bolt. It could not be opened without the use of a key. The mechanism of the lock was extremely simple.

Dr. HYSLOP exhibited two pathological specimens:—

Section I. Fresh method $\times 350$. Vacuolation of nerve cell. (a) Several small vacuoles in one cell around region of nucleus; (b) Displacement or disappearance of nucleus; (c) Granular degeneration of protoplasm of nerve cell; (d) Nucleus vacuolation not confined to upper layers of cortex. Section II. Fresh method $\times 500$. Vacuolation of nerve cell from motor area. (a) Apparently primary vacuolation of nucleus of large pyramidal cell; (b) Granular destruction of cell protoplasm; (c) Vacuole surrounded by outer border of nucleus.

CASE.—E.I.C., wt. 27, admitted Oct. 23rd, 1890. Family history, *nil*.

History.—First attack seven months' duration; cause unknown. Began with simple melancholy ideas of being lost to God and man; constipated; wet and dirty. On admission almost stuporous, refused to speak, tongue foul, resisted everything, bowels confined; urine 1015, albumen. Subsequently continued in the same condition till Nov. 13th, when he developed peritonitis and died on the 15th.

Post-Mortem.—No cause for peritonitis found on examination. Dura mater was slightly adherent to skull cap. Inner membranes somewhat congested. In region of Sylvian fissure the membranes were matted together and could only be removed with difficulty, leaving the brain substance soft and torn. No evidence of coarse brain disease. On section of cortex of motor area there was found marked vacuolation of both nucleus and nerve cell.

THE WORKING OF THE NEW LUNACY ACT.

Paper by Dr. Percy Smith. (See Original Articles.)

The PRESIDENT—I will ask the Secretary to read the replies which he has received from superintendents in other parts of the country who have experienced similar difficulties in the working of the Act.

Dr. Spence, Burntwood, has found none except in the matter of filling up certificates, and that is righting itself.

Dr. Sheldon, Macclesfield, says the number of magistrates at first appointed was too few, but has now increased. The constant recurring formalities in the case of private patients is very annoying.

Dr. Wade, Somerset, says there is a difficulty in obtaining magistrate's signature for pauper patients in outlying parts of the country. Lunatics are carried from house to house looking for a magistrate. There is unwillingness on the part of the magistrates to have anything to do with the Lunacy Act.

Dr. Macdonald, Dorset, says the friends of private patients have experienced much difficulty because of magistrates' intervention. The general indefiniteness of many of the more important sections is sickening. The letter notices are disgraceful.

Dr. White, City of London, has found no difficulty. For the City *all* the Aldermen have been appointed to act.

Dr. Stilwell, Uxbridge, says he has had three applications for the admission of patients, but the friends when they heard a magistrate's order was necessary declined to take the necessary steps.

Dr. Bower, Bedford, says the appointment of too few magistrates has given trouble on several occasions. The forwarding of unopened letters to certain relatives has caused difficulty and done harm to the patient.

Dr. Weatherby, Bath, says the chief difficulty is want of knowledge on the part of the magistrates' clerks. With regard to the letter notices, only the worst lunatics have acted up to the suggestion. There will be no difficulty in getting the orders of admission duly signed in a district provided the medical men attending the case have the requisite knowledge of the Act, and energy enough to see it carried out.

Dr. Campbell, Assistant Medical Officer, Shrewsbury, says: Impediment to early treatment of pauper, but more especially of private patients, caused by the trouble relieving officers and petitioners have in procuring magistrates willing to examine lunatics and sign the necessary orders, in several cases has hindered recovery and rendered the prognosis unfavourable. There are worry, expense, and anxiety to the friends of insane persons, not only on account of the difficulty of obtaining an interview with the justices, but the ignorance of the latter when confronted with their duty. On account of these difficulties, persons who would otherwise have been placed in an asylum have been withdrawn from official cognizance. On account of increased clerical work, the superintendent and assistant medical officers have to spend time at the writing-desk which would otherwise be better employed in the moral and medical treatment of patients. In consequence of the fuss made about the employment of mechanical restraint and seclusion, chemical restraint has to be employed.

Dr. Ward, Warneford Asylum, says there is difficulty from errors in admission orders on account of magistrates and medical men being unfamiliar with the forms. More magistrates are required. A great many erasures are required in the forms, which nearly always call for correction, especially the one where the patient is certified to be or not to be fit for removal.

Dr. Savage, London, says there are difficulties arising from only a few magistrates being able to act. This is illustrated by a case, which also shows that the order-form must be provided by the petitioner, as the duty of the official authority is only to *sign*. There is also difficulty when the judicial authority assumes medical functions. A case illustrates this where the prejudice of the magistrates' clerk prevented action being taken in a suicidal case.

A medical man, who does not want the name of his asylum to appear, if his remarks are printed, says difficulty has occurred in consequence of a justice having signed an order who was not specially appointed for the purpose. The remedy is to make sure that a J.P.'s signature is by one specially appointed. The addition of a justice's address to his signature would be a great convenience.

In another case, the wife procured the necessary petition and certificates, but could find no magistrate at home. She objected going to a police magistrate and making a police case of it.

In another case, a melancholy patient implored to be sentenced and executed for his crimes. Notice was given to the patient that he could see a magistrate, and the request form was filled up. The patient thought the magistrate was going to sentence him to death. The result may be imagined.

In another case, the magistrate signed the order for the reception of a private patient though the medical examination had been made a month previously to the petition being obtained. The friends were upset because the medical superintendent would not admit the patient.

Dr. Hack Tuke, London, has sent me an important statement, which can only be read as a whole.

Dr. FLETCHER BEACH—Altogether 17 answers have been received to the slips sent out in the October number of the Journal. Four only have not found difficulty in the working of the Act.

Dr. SAVAGE—Although it appears to me that we must remember that the Act is on its trial, and that magistrates may improve, I quite agree with what Dr. Percy Smith has said—that all magistrates ought to be allowed to act; that the difficulty is, that one magistrate being qualified, his next-door neighbour not being qualified, and then the next perhaps being qualified, there is in consequence endless confusion. Then as to the question of signing the order. It appears that it is necessary for the petitioner to have the order ready for the magistrate to fill up, attached to the rest of the papers, for in one case of a suicidal patient, the whole certificates having been signed rapidly with the idea of getting him under control at once—he residing in a house where there were three or four women, and being utterly beyond control—the forms were taken to the magistrate, but there not being a form for the order, he declined to have anything to do with it, saying that his duty was to sign an order when brought to him and not to provide one. Therefore, because the form of order was not at hand, the patient had to be sent back uncertified. The difficulty was got out of for the time, as many of these difficulties may be, by the use of an urgency order. The next thing is the difficulty in a case in which a magistrate distinctly decides to act on his own judgment and recommends treatment. I may mention the case of a patient who had been advised upon by six or eight of the leading physicians and surgeons in London, including the ex-President of the College of Physicians and the President of the College of Surgeons, the Physician to Guy's, the Physician to University College, the doctor who had known her from her childhood, the doctor who had known her for very many years, and two local doctors, where she was stopping as a voluntary patient. These gentlemen all gave their opinion that she was only fit to be under certificate. They did not wish to send her into an asylum, they wished to have authority to see her. The magistrate went to see that patient, and although she had attempted suicide, and the opinions of these doctors were given that it was absolutely necessary that she should be controlled; though the magistrate knew that she had taken no food for three days and a half, and that she had said that she had but one desire, which was to get away from where she was to have connection with certain persons—notwithstanding all that, he declined to sign the order for detention in a private house and recommended that she should go for a little change of air to the seaside! For a time there seemed great risk. Her mother had to be sent for from a distant part of England, an urgency certificate was obtained, and then another magistrate living in the same district had to be persuaded to sign the order, having of course laid before him the reasons for the dismissal before. That is a real practical difficulty. You may say that these magistrates may be educated, and there is a way out of the difficulty, but one feels that for the practical treatment of cases the Act works badly. Two other cases have occurred quite recently in which one is afraid to recommend patients to be under certificate simply because one knows that though there is evidence enough to satisfy any medical officer that the patients are insane and ought to be under control, yet it is rather loss of control than the presence of delusions

that characterizes the insanity, and, therefore, these persons who have lost their control may temporarily recover themselves, as it were, before a magistrate and deceive him. So that at this present moment there are two patients that ought to be under certificate, and for their own good under control; but medical men of experience decline to certify because they are sure that no ordinary magistrate will act, and they know that if they certify, and the patient is after all allowed to go free, it would be much more dangerous to society than if no steps at all had been taken.

Dr. HACK TUKE—I should like to support all that Dr. Smith has said. As a member of the Bethlem Committee, I have seen the practical working of the Act in most of the cases to which he has referred, and certainly the labour and annoyance which it has caused have been very great indeed, the greatest of all being the delay in placing the patient promptly under proper care and treatment, and the increased expense, not only with regard to the small fees mentioned by Dr. Smith, but in many other ways. For instance, a patient is brought up to London and arrangements made for that patient being placed in Bethlem Hospital or some other asylum, it being hoped that he or she will be admitted on the same day; but the difficulty of getting a magistrate on that day is often so great that the friends of the patient have to stay in London for at least a night—often two—very much to their inconvenience and cost. I have seen several cases of this kind which have shown very forcibly the way in which the Act at present works. Therefore, both from what I have seen myself, and what I have seen in connection with Bethlem Hospital, I feel very strongly indeed that the working of the Act in regard to the action of the magistrates is injurious; and if it is possible in any way to mitigate the evils connected with it, we ought to do all in our power in that direction. Then there are so many formalities required, so many papers to fill up, so many detailed statements made that it is most difficult for people to avoid making some omission or actual mistake, do what you will. With regard to another point, one which comes before us at Bethlem, that is the regulation that some member of the Committee a month after the admission of the patient shall satisfy himself on behalf of the Committee that the patient is properly detained, and see the report made by the Superintendent at the close of the month after admission, I may say that this involves much trouble; and if the member of the Committee who does it is not a medical man, it may well happen that his going to see the patient and initialling a paper to say that the patient is properly detained in the asylum is a complete farce. And then, of course, what is yet to come, and will tell so hardly upon the superintendents of large pauper asylums, when the reception order expires at the end of the year, or in chronic cases at a longer period, will throw an enormous amount of work upon the asylum officers; I understand, indeed, from one superintendent to-day, that in view of that extra work he is going to have an additional medical officer in his institution. On these and many other grounds I am forced to the conclusion that the practical working of the Act is at present mischievous, and this to a greater extent than many of us expected. The whole thing is characterized too much by red tape; and in illustration of that I may hand round a comic drawing by a gentleman who is no mean artist, and formerly on the staff of Bethlem Hospital, in which you will see he represents a figure swathed in red tape. Whether it refers to the patient or to the superintendent it is equally clever. That really in sum and substance is, I think, the great evil of the Act, that it is red-tapism almost from beginning to end.

Dr. BLANDFORD—I may state that my experience of the Act is nothing like the experience of gentlemen at Bethlem, but I have suffered not so much from the unwillingness of justices to sign orders, but from their too great willingness, that is to say, they have signed without being specially appointed for the purpose, and they do not seem to know whether they are appointed or not. This is a source of immense confusion and expense both to us and to the friends of the patient. A patient is sent up, as has been stated, from the

country with an order signed by some justice or other, and we have no means whatever of knowing whether he has been properly appointed or not, and, indeed, why should we have to find this out? The papers go before the Commissioners, and in process of time come back again, and then the justice is referred to, and it comes out that after all he is not appointed. By that time the medical certificates have got out of date, and fresh certificates have then to be signed. The friends may have to be brought all the way up from the country to see some properly-appointed justice in London, and no end of trouble and expense is caused in that way. I think it will be a very great improvement to the Act if every magistrate were allowed to sign, and I believe in some counties that is the case. There are various other points in connection with the Act which work badly, and which I should like to discuss here, but I do not think we can enter upon that at this period; we have quite enough at present before us.

Dr. THOMSON—I should like to ask whether there has been a definite decision as to what constitutes the pending of a petition subsequent to the granting of the urgency order. I think we understood Dr. Percy Smith to say it was necessary that the petition had been actually presented to constitute what is meant by pending. I should like to ask for information on that point.

Dr. R. JONES (Earlswold)—As a practical outcome of this discussion, I may say at present there is a British Medical Committee inquiring into the working of the new Lunacy Act; and it might be of advantage if we were allowed to make use of Dr. Smith's paper, and also of the opinions read by Dr. Fletcher Beach before that Committee. No doubt this Act is on its trial. Meanwhile we have to ascertain whether it is considered desirable that its working should be smoothed. If that is the general opinion, I shall be very glad to do what I can in furtherance of that object.

The PRESIDENT—I imagine it would be open to this meeting and this Association, if it thinks proper, to take any action of its own as the result of this discussion, or, if it thinks well, to endeavour to strengthen the hands of the British Medical Committee, they having a common object. It will be for this meeting to say whether, as the result of our discussion to-day, some representation should not be made with a view to rectify some of the difficulties that have been referred to.

Dr. PERCY SMITH—I may say, in reply to Dr. Thomson, that the decision arrived at is that a petition is only to be considered as pending when it has actually been presented.

Dr. CLAPHAM—I may mention that in the West Riding of Yorkshire the magistrates are spoken of as belonging to one or other division of that county, which means nothing at all. I do not know whether those divisions are political or otherwise. The addresses of the magistrates are not given. It is therefore a very great difficulty indeed to find out who are the particular magistrates belonging to your division. I may say also that when you have found them the patients and their friends very often object to appear before a magistrate.

Dr. WEATHERBY—I may say that, with regard to my own district, that of Bristol and Bath, the Act seems to work smoothly. The clerk to the magistrates of Bristol sent out a notice to all the medical men in the district to say who the magistrates acting under the Act are, and that they are to be found every morning at certain times, and that the petition can be signed at those times. They do the same in Bath. In the county of Somerset all the magistrates are appointed to act in their districts; but a difficulty has arisen from the fact that the clerk has not known his duty, that is to say, he has kept back the petition, thinking that he ought to keep it and only send the order. The magistrates in Bristol have medical men appointed who see to their pauper cases; and the first case which came before the Bristol magistrates happened to be one which was sent to my asylum. The clerk said: "The magistrates will not look at your medical certificates;" and yet one of the medical certificates was signed by the doctor appointed by them to see the patient. A great

row was created, and the matter was brought before the British Medical Association.

Dr. BAKER—I have had very little difficulty myself with the new Act. Perhaps the magistrates appointed have been people who have known their business. The difficulty that has presented itself to me has been that already mentioned, of an individual member of the Committee having to visit a case at the end of the month. My Committee have always been guided entirely by their medical officers; and they do not like to have to visit the patient and to express an opinion as to the sanity or insanity of a patient a month after admission.

Mr. ADAMS, J.P.—Although I am not a member of your Association, I am a medical man, and one of the judicial authorities for London. I came rather to learn than to speak. I was very anxious indeed to learn how my brother magistrates had been doing their work in London. I had heard, directly and indirectly, that there were many difficulties in carrying out the Act, especially in some of those cases which Dr. Smith has put before us. Knowing that, I brought the matter before the County Sessions at the last county day, at the time the new appointments were made, and urged that the judicial authorities then appointed should be called together for the purpose of discussing their duties; for I felt very sure, from what I knew of the irregular way in which my brother judicial authorities were acting, that, though they were—I will not say, ignorant of the Act, there was a great difference of opinion as to what their duties were with reference to granting the reception order. It was thought premature, at all events, to discuss the question or to call them together, and our Chairman, Sir Peter Edlin, suggested that the matter should be put upon the agenda paper for the next county day. I shall be greatly fortified in bringing that matter before the justices on that occasion by the remarks which I have heard from Dr. Percy Smith, and I hope his paper will be printed, because it will be a very great help to us. I have no doubt whatever that the justices appointed are very desirous of doing their duty, and also to carry out the Act properly; but there is amongst the non-medical element a great deal of ignorance prevailing as to what really should be done. I know some justices will not act at all unless the clerk is present. Of course, every medical man must know that that would be attended with a fearful amount of loss of time, and it really might lead to dangerous consequences to have to send out to the justices' clerk to bring him to the patient's house, whilst a sort of legal inquiry was carried on, before the judicial order was granted. I know that that was the case with one of the justices in my own Petty Sessional Division; but, happily, he is not re-appointed for the current year, he having declined to act. I think if we can bring the judicial authorities together as we are here to-day, and have such a paper as that of Dr. Percy Smith's read to them, they will then see exactly the points of difficulty, and how important it is that they should be carefully attended to. I hope we shall get some information from members present as to the duties of judicial authorities in acting beyond their own Petty Sessional Division. I confess I have a very strong feeling, being appointed for my own (St. Pancras), where three others besides myself are appointed, that the proper and more workable plan would be if the justices would confine themselves exclusively to their own Petty Sessional Divisions, and, that being so, we should take care that two or more of them should always be ready to act; so that if a judicial authority leaves town he should depute a brother justice to do his work. If the justices realize their responsibility in that respect and carry out their duties thoroughly, I do not think there will be any difficulty. One other point I should like to mention is with regard to cases that are sent from one's own Petty Sessional Division under urgency orders. It has happened in two or three instances in my own division—and I believe one or two of the cases came to Bethlem—that after being admitted on an urgency order, then the petition was presented to me to sign. Now, I do not think that the justice should be called upon to go beyond the bounds of his Petty Sessional Division to grant an

order. I think if, under an urgency order, a patient is taken away on the certificate of the doctor and a relative and is admitted to an asylum, unless the asylum happens to be in his own Petty Sessional Division, he ought not to be called upon to follow that patient or even to incur the responsibility of signing any order without seeing the patient. There is considerable difference of opinion as to whether justices should visit the patients. In my own case, as a medical man, I prefer to exercise my right of seeing the patients, not, perhaps, to raise any question whether the patient is insane or not, but if the patient is not seen by the judicial authority before he signs the reception order, what is the result? The patient is to be presented with a notice by the superintendent of the asylum that he or she has a right to be brought before a magistrate to be examined. One knows that in many cases, especially acute cases from drink, they recover very quickly, and it might be an awkward thing if one signed the order without seeing the patient, and then another judicial authority was called in, found the patient was not insane, and ordered his discharge. That is obviated absolutely by the justice going to see the patient. I prefer, then, and I intend to exercise that right, to see all my patients, and I do not think, except under very special circumstances, I shall be inclined to sign a reception order without going to the house, seeing the patient, his certificates and surroundings, and then granting the order. There are one or two points that Dr. Tuke referred to with regard to patients being brought up from the country to be admitted to Bethlem, as throwing blame upon the judicial authorities in London for not facilitating the admission of such a patient. I do not quite know how the Act would work in that matter; but it seems to me that all the forms should be complied with, and the order should be given in the county from whence the patient came, and that there should be no further trouble given to the judicial authorities in London. I thank Dr. Smith for the paper he has read to us. It has exposed a great number of faults on the part of judicial authorities, and I hope that his paper will find its way into print; and I will do my best to lay it before my judicial friends in the County of London. I may say, with regard to the appointment of justices, I believe there will be no difficulty whatever in appointing any number. They are not selected. In London a letter was sent to every justice before the 29th of September asking him if he would be disposed to take upon himself the duty of a judicial authority, and, I believe, everyone that replied to that letter was so appointed. The difficulty is to get an ordinary justice of the peace to take up these responsibilities.

Dr. HACK TUKE—In reference to one remark of Mr Adams', I would say that the friends of a patient in the country very frequently strongly object to making the illness of their relative known to the local magistrates. That is one reason why the case comes up to London without a reception order. A second reason is that, in many cases in the country, the magistrates object to act even more strongly than in London; and a third reason is that, when the forms are filled up in the country, it is usually found, when they come to London, that there is some blunder, and it has to be all gone over again.

I should also state that I have obtained the names of magistrates, from the proper authority, on whom I could rely to sign orders in one division of London. I called on one of them and found he had let his house for six months. A second was out, and I was told that he went to the City immediately after breakfast and came back to a late dinner, and, therefore, was not available, and so on. The result is that the difficulty is extremely great in getting hold of a magistrate who can, and if he can, who will, sign the order.

Dr. RAYNER—A difficulty may arise from the character of the delusions of the patient. In a case where a patient had a delusion that she had been drugged and raped by a medical man—she had had other melancholic delusions, was disposed to cut her throat, and so on—if she had been seen by a magistrate it is quite possible that he might have thought there was some foundation for

the delusion, and it might have led to some unpleasant consequences. During the discussion of the Bill I strongly objected to the whole body of magistrates being appointed. I preferred that a limited number should be selected. I thought then, and I still think, that a wholesale appointment to these duties would be objectionable. I cannot, therefore, support the proposal.

The PRESIDENT—It seems to me desirable that this discussion should not end in merely a blank shot, but that some definite steps should be taken. I think the paper should be circulated amongst the gentlemen who are specially interested in the matter. Perhaps the Parliamentary Committee might take the matter in hand, and circulate either this paper or any other information that they think proper, and so bring the weight of the opinion of the Association to bear, and get these matters rectified. I am exceedingly thankful that in Scotland we are free from this perplexing Act.

Dr. NEEHDAM—I think it is very undesirable that we should adopt any resolution expressing our feelings about this Act, which would go to the Lord Chancellor. Of course, we are all perfectly conscious of the great difficulty of working it—nobody can dispute that for a moment. We said all we could against the various clauses of the Act before it was passed, and objected to it in every possible way. We objected to the introduction of the magistrate because we thought the introduction of a lay person to decide questions which were medical was not at all a desirable thing. But however, all our remonstrances were perfectly unavailing, and the Act became law. It does seem to me, therefore, that it would be rather unwise on our part to formulate any resolution which would go to headquarters about this Act. I think we ought to give time to the people who have to work it to become familiar with it, and I would much rather try and adopt some method of informing the magistrates as to their duties. It seems to me one of the blots in the working of the Act is the quite insufficient appointment of magistrates. I must say in my own county the Act has worked comparatively smoothly, although there have been hitches and some difficulties, and the reason is that all the magistrates of the county are specially appointed. You go to any magistrate in the county of Gloucestershire; you cannot get wrong, because every man is appointed as a special magistrate for the purposes of this Act. If that was done all over the country this particular difficulty would vanish. Of course magistrates, like other people, do foolish things. A man sent me a patient the other day with an order signed by a magistrate who had never even seen the petition; in fact, there was no proper petition. There were half-a-dozen lines written on a petition. There was no signature, no statement of particulars. The consequence was, from my point of view, that the magistrate's order could not be made valid. Therefore I sent my patient into Gloucester that he might have a fresh magistrate, who saw the patient, and gave an order which was in perfect form. There is another very serious difficulty, and that is that in the order there is no provision made for the address of the magistrate being given, and if there is any informality one does not know where to find him to get any alteration made. That has happened to me once or twice. I think the great thing for us to do is to let the public feel the inconvenience of an Act which they demanded, and which has been passed in obedience to this public demand, and as soon as the public have sufficiently felt the inconvenience of an Act which we always objected to, I think they will demand a public remedy.

Dr. SAVAGE—I cannot see that any harm could arise by circulating to the judicial authorities engaged under this Act the address given by Dr. Percy Smith, and will formally propose that that be done.

Dr. NEWINGTON seconded the motion.

Dr. WHITCOMBE—So far as we have seen at present the errors made in carrying out this Act are confined rather to the Metropolitan area. The whole business seems to me rather one of magisterial duty. I have received several private patients, and had no difficulty whatever. I would like to point out to Dr. Smith that the Act provides for the rectification of clerical errors, and so on.

Dr. NEEDHAM—I should like to supplement what I have said by expressing my great gratitude to Dr. Percy Smith for having brought the subject before us in the way he has done, and given us these facts. It is very desirable indeed that we should circulate his paper.

After a brief discussion, it was agreed that the paper should be printed and circulated among the judicial authorities in the Metropolitan area, and that a certain reserve should be kept in the hands of the Secretary for the use of any superintendent of a public or private asylum who might wish them to be circulated in his district.

Dr. WEATHERBY asked whether the quarterly meetings could not be fixed a longer time before the meetings than a fortnight or three weeks. Many country members would, he thought, avail themselves of the opportunity of coming to the meetings much more frequently if they knew their date a month or two beforehand, as they could then make their arrangements for coming to London coincide with the date of the meetings.

The PRESIDENT said the matter had been carefully considered by the Council, who found there was great difficulty in fixing the dates earlier. To a good many people, including the readers of papers, notices were sent out by the Secretary a fortnight or three weeks before the meeting. It was found impracticable to do more than that, or at the beginning of the year to fix the meetings for the year.

Dr. PERCY SMITH then replied. Several members have said they have not much difficulty with the Act, but that must simply be because they have had very few private cases to admit. In Bethlem, since the 1st of May, we have admitted 145 new cases, exclusive of voluntary patients, and of those 62 have come in on urgency orders, meaning, of course, three certificates for each of them. Out of those cases I think about 100 had not been seen by the justices before admission. Considering the large number of acute cases, it cannot be surprising that in 81 it was certified that it was prejudicial to them to be taken before the magistrate or a justice. The other 19 or so I think gave notice of an interview, but only four desired to see the doctor. There has not been much difficulty in that way, but still, of course one has to go through the process of deciding whether you should admit the patient; there is a distinct mental effort in each case. Then Dr. Tuke spoke of the inspection by the committee of a copy of the superintendent's report at the end of the month after admission, and the examination of the patient by one member of the committee. As we have the great advantage of having Dr. Tuke on the committee, of course it is very simple, but I think from a medical point of view one would feel it rather degrading to have to submit the question of the proper detention of a case of insanity to a member of the committee who perhaps had never been in the place before in his life, and is perhaps a new member. With regard to Dr. Jones' remark as to the British Medical Association, there has already been communication with Mr. Ernest Hart about it, and it is hoped that the facts will be laid before the committee referred to. Another thing that occurs to me is that medical superintendents require a special examination in geography to see whether they can carry out the Act. I do not know where the county of Surrey begins or ends, and even if I did know, one side of a street may be in London and another in Surrey, and the same justices may be perfectly able to see the patient in both cases, and yet not able to act. Mr. Adams spoke of the justice acting only in his own petty sessional division, but any justice in London has a right to act in any part of London. And with regard to the justice seeing the patient before signing, we find that 100 cases have not been seen by the justice before signing. Although a medical man may say whether the patient is all right, yet the inexperienced justice can go into the patient's case, and worry the patient very much and do great harm. One feels the uncomfatableness of sending a justice of the peace to see the patient after the order has been signed without seeing him, and yet he cannot see the uncomfatableness of having to sign at all. Then, with regard to patients from the country having the trouble they have about justices, in one case from Sussex the justices of Sussex had

improperly detained the petition. There was nothing else to be done but take the patient to a London justice and have a fresh order, unless he was taken to the workhouse for the night, to allow of time to get back the petition. No wonder that it is found more convenient to apply to a London magistrate, assuming he is willing to do his duty.

Mr. ADAMS—I should like to ask Dr. Percy Smith whether his experience is that things are improving.

Dr. PERCY SMITH—There were a number of cases in November, and also at the end of October—in fact, all through.

Dr. NEEDHAM—By the 35th clause of the Act it does not seem to me that it is the business of the superintendent to decide as to the jurisdiction of the magistrate.

Dr. PERCY SMITH—Clause 9 says: "The powers of the judicial authority shall be exercised by justices of the peace specially appointed."

Dr. NEEDHAM—The onus lies on the people who bring the patient, not on the superintendent.

Dr. SMITH—The Commissioners say it lies upon us.

Dr. NEEDHAM—I should refer the Commissioners to the Act.

SCOTCH MEETING OF THE ASSOCIATION.

The Quarterly Meeting of the Medico-Psychological Association was held on the 13th November in the Hall of the Faculty of Physicians and Surgeons, Glasgow. Dr. Yellowless, President of the Association, occupied the chair, the other members present being—Drs. Buchan, Campbell Clark, Clouston, Hyslop, Ireland, Carlyle Johnstone, Keay, Macpherson, R. B. Mitchell, A. Robertson, Rorie, Watson, and Urquhart (Secretary).

The minutes of the last Scottish meeting were read, approved, and signed.

The following new members were duly elected:—

Frank Hay, M.B., C.M., Assistant Medical Officer, James Murray's Royal Asylum, Perth.

John McCubbin Johnston, M.B., C.M., Assistant Medical Officer, Govan Asylum, Glasgow.

Alexander Keiller, LL.D., M.D., F.R.C.P.E., 21, Queen Street, Edinburgh.

Robert Lawson, M.D., Deputy Commissioner in Lunacy, Edinburgh.

George R. Wilson, M.B., C.M., Assistant Medical Officer, Royal Edinburgh Asylum.

Dr. A. ROBERTSON reported a case of recovery from Acute Dementia: Treatment by Heat and Cold and by Electricity to the head. (See Clinical Notes and Cases.)

Dr. CLOUSTON remarked that they were all much indebted to Dr. Robertson for this report. Personally, he must only regret that he had not used one of Dr. Robertson's "caps." He should certainly do so after hearing this case. The question came to be whether this was a cure due to therapeutics or whether it was a case of ordinary recovery. Was it an ordinary case of stupor?—though stupor at that age was rather uncommon. It might be important to learn if improvement had not set in before the application of his treatment. Hitherto they had all used electricity, friction, massage, good food, fresh air, stimulating moral treatment; but they had still to make use of the cap introduced by Dr. Robertson, and apply heat and cold to the heads of stuporose cases. And if they applied it in stupor, why not in many kinds of melancholia, in cases where there was a want of general energizing in the brain convulsions? This treatment, at any rate, was well worth trying.

Dr. IRELAND said it seemed to him that Dr. Robertson had the right to claim a very remarkable success. No doubt the point here was the novelty in the

application of heat. Electricity had been used in a great many cases—sometimes with very good effects—and had been deemed most successful in cases of melancholia. Dr. Robertson had given them no explanation of the theory of the cure, but he had brought into play powerful agents, most of which affected the circulation. He (Dr. Ireland) had always considered that acting upon the vessels of the brain would lead to hopeful results, and he was not sure if other methods or agents would have the same effect. There were few cases on record where heat was applied to the extent to which Dr. Robertson used it, viz., a temperature of 120° . He would accept that statement only from a physician of Dr. Robertson's known care and experience. He had seen cases of sunstroke at a lower temperature.

Dr. RORIE wanted to know how much importance Dr. Robertson attached to heat and how much to electricity? He (the speaker) had used an interrupted current with good effects.

The PRESIDENT considered the case and its treatment very interesting, although it was true that favourable cases of this type often recovered within the same period of time under the ordinary treatment. He felt strongly with Dr. Ireland that a temperature so high as 120° , especially when alternated with ice cold water, was a very powerful remedy, severely testing the vascular system, and not to be used without the greatest care. A current of ice-cold water applied to the head for 20 minutes continuously in a case of stupor seemed to him very emphatic treatment not free from danger. He supposed the idea of alternating heat and cold was to quicken the tone of the sluggish vascular system. It appeared that Dr. Robertson had used other means of treatment as well—general stimulation, good food and attention to the bowels—so that the patient had every possible chance. The use of alcoholic stimulants in stuporose cases was a practical question worthy of a remark from someone. Were such cases usually benefited by freely administering alcohol?

Dr. URQUHART—Certainly.

Dr. ROBERTSON, in replying, said it was only when the case was not progressing favourably that he determined upon this special mode of treatment. He was induced to believe it to have been beneficial because improvement resulted soon after the application of heat and cold. The intelligence brightened, and the patient was able to feed herself. When such cases were threatening to become chronic (the patient remaining month after month in the same state) it was important to alter the existing condition somehow, even although there should be a slight risk of bringing on some other trouble. He took it there was a want of circulation in the brain cells, and a stimulus was essential to bring about a more active circulation. With regard to the temperature applied, in the first case it was generally 110° or 115° . Under that temperature there was no faintness, nor even up to 120° . The water was kept circulating through the pipe of the cap at 120° . Of course indiarubber was a material which did not conduct heat very readily; but the temperature must have been very near 120° all through. The question had been raised as to how much of the result had been ascribed to heat and how much to electricity? These means of treatment were used at different stages. A time came when there was no apparent change after two or three weeks use of the water-cap. He then proceeded to use massage and improvement was visible, and on the application of electricity there was still further amelioration. He was surprised to hear that Dr. Rorie had used an interrupted current to the head. He (Dr. Robertson) had never used that. He had always used the continuous current, because there was less of a shock, it was less painful, and its modifying effect on nutrition was greater. He had found it safe in all cases. With regard to the shock from the alternation of heat and cold, he had to say that the change of temperature was effected gradually. They did not turn on the hot water all at once, but reduced it by degrees until it became ice-cold.

Dr. URQUHART called attention to the tenure of appointment by Attendants. This subject had been formed on his notice by two recent cases. Dr. Conolly

Norman had made a communication to him on one case (See Occasional Notes of the Quarter). The other case had occurred in his own experience and almost at the same time. He had seen two attendants illuse a patient, but unfortunately there was no one at hand, sane or insane, to corroborate his evidence. They were dismissed next day after the usual communication with the Procurator Fiscal and the Board of Lunacy. Through a Perth lawyer they claimed wages, and board wages for a month, denied having in any way ill-treated the patient, and alleged wrongful dismissal. There were no marks on the patient; and, acting on the best legal advice, the committee paid the claim so made. He therefore urged that some change should be made in the form of declaration signed by attendants to obviate recurrence of such cases.

The PRESIDENT had great sympathy with Dr. Urquhart, and should have been inclined to go into the witness box and fight it out before a jury. He thought the jury would take the word of a superintendent—who was the legal guardian of the patient—for what he had seen with his own eyes, before the word of an attendant, who was interested in the denial. He would suggest an addition to the last clause of the "Declaration" signed by attendants, viz.:—"Upon such evidence or information as may to the Medical Superintendent seem sufficient." That appeared to him to be all that was needed.

Dr. CAMPBELL CLARK said that he had experienced several cases. He had occasion to discharge a man for damaging property and insolence to the head attendant. In that case the committee paid a month's wages and board wages on threat of an action. He had discharged another for striking a patient, the Fiscal declining to proceed on the evidence of two patients and one attendant tendered by him (Dr. Clark). He also threatened an action, but the result of the investigation of the Visiting Commissioner stopped procedure. A third case of dismissal for insubordination did not get into the courts. The Sheriffs do not always take the same view of these matters. Dr. Clark concluded by recommending that the declaration should be stamped.

Dr. HYSLOP (Natal Asylum) related how some attendants who went out to Natal took an agreement with them which was signed in London. The declaration on arriving there was not approved of, and was submitted to the Attorney-General, who pointed out that the document was useless unless it was stamped. A new document had to be drawn up.

The PRESIDENT—It is a question whether as a matter of asylum discipline one ought often to dismiss instantly.

Dr. CLOUSTON—For no cause?

The PRESIDENT—Only in really grave cases. The moral effect of instantaneous dismissal is not always so good as dismissal by notice. When a good attendant makes a mistake and under great irritation gives way to temper, it is a momentary lapse, and it depends very much on the person how you would deal with it. I am satisfied that dismissal at a month's notice is often better than instant dismissal. Instant dismissal too often gives to the other attendants an impression of harshness and injustice, and makes them think that we do not properly sympathize with them in their most difficult duties.

Dr. CLOUSTON recalled a case which came up two years ago, and where the sub-Sheriff at Edinburgh sentenced the attendant to a month's imprisonment on the evidence of one patient alone, corroborated by the fact that there were marks upon the body, and on his (Dr. Clouston's) evidence that the patient was able to give evidence on a simple matter of fact as well as a sane man. He had had to dismiss attendants dozens of times without warning; and he had never yet been threatened with an action. He had always the feeling that most cases that deserved instant dismissal deserved reporting to the Fiscal. The proper course was to throw the onus upon the Fiscal.

Dr. ROBE had never experienced any difficulty in regard to this matter. He judged each case on its own merits. As the agreement is in the form of a legal obligation it must be signed in the presence of witnesses and stamped.

The meeting thereupon finally adjusted the "Declaration," which now stands as follows:—

I hereby promise to obey the Rules of the Institution, to faithfully execute the orders that may be given me by my Superior Officers, and to perform any duty assigned to me, although not of the kind for which I am chiefly engaged. I consider myself bound to promote the objects of the Institution, to do my best to further the recovery of the Patients, and to secure their comfort and safety. I also undertake not to bring into the Institution any intoxicating liquors; to be careful of its property; to avoid all gossip as to its inmates or affairs; and to endeavour generally, by my own conduct and demeanour, to sustain its reputation. If anything improper be done in my presence, or to my knowledge, I pledge myself to lose no time in reporting it to the Medical Superintendent or one of the Superior Officers. I understand my engagement to be monthly, and agree to give one calendar month's notice should I wish to leave my situation. I acknowledge the right of the Medical Superintendent to discharge me without warning for acts of harshness or violence to Patients, intemperance, immoral conduct, or disobedience to orders, upon such evidence or information as may seem to the Medical Superintendent to be sufficient.

Signed at.....this.....day of.....18.....

.....Witness,

(Occupation).....

(Address).....

.....Witness,

(Occupation).....

(Address).....

DELUSIONAL INSANITY.

Dr. KEAY reported a case of Delusional Insanity.

In answer to the President, Dr. KEAY mentioned that he had seen the patient—who was sixty years of age—within the last month. He had granted her a certificate of sanity for the discharge of the *Curator bonis*.

Dr. URQUHART—That is contrary to legal precedent. It has been held that such a certificate, bearing date from an asylum, ought not to be granted.*

Dr. CLOUSTON—I have done it frequently.

The PRESIDENT—The asylum physician is the best of all judges surely. This is a most interesting case. I am bound to say that in my experience I have never seen complete recovery in such a case where the patient had been insane for nine years, and had been full of all kinds of suspicions and constantly manifested hallucinations of the senses. Such cases of all others are usually the most unfavourable as regards prognosis.

Dr. ROBE—The nearest approach to such a case I can recall was that of a female patient who believed that she had poisoned the water supply of Dundee.

The PRESIDENT—That was melancholia, although delusional. Melancholies may recover after any length of time, but this is something quite different.

Dr. CLOUSTON—It is a most striking case. The first observation that occurs to one is "Never give up hope." The symptoms here seem about the least hopeful that you can have. It is the fact that the patient had these delusions for so many years that makes the recovery so very exceptional. Might the illness not be owing to some lesion about the membranes? The case would be described by the Germans as *Paranoia*. The disorder was a slow evolution—it had not an acute beginning. To me the case is positively unique in its character; I cannot recall anything like it.

Dr. URQUHART—I mentioned two cases of deferred recovery in my annual report some years ago. One was a case of resistive melancholia and the other was a case of delusional insanity. The former is perfectly well after seven years' residence in the asylum, manages her household perfectly, and is regarded by her neighbours as being uncommonly shrewd. She recovered after hæmatoma auris. The other is reported to be quite well, but I fancy that certain peculiarities will always continue with her.

Dr. KEAY—In this case the patient did not become demented; but rather

* Frazer, "Parent and Child," 2nd ed., p. 550. Simpson, 11 Jan., 1890, 22 D., 350.

very intelligent and communicative. The climacteric was over before I knew her.

SEXUAL PERVERSION.

Dr. URQUHART reported a case of Sexual Perversion. (See *Clinical Cases*, p. 94.)

Dr. IRELAND—As physicians we have to do with such perversions from time to time. I would not say that a man of this stamp was intellectually insane; but rather that he had a depraved taste. No sentiment is more firmly rooted in our nature than a partiality for the other sex and a comparative indifference towards our own. I confess I am at a loss to account for the perversion, unless it be that a boy with the face of a girl may to a being of this sort excite feelings which generally appear in young men for young women. They yield to this perverted taste, and in course of time women become distasteful to them. But it also exists in women. There are women who have depraved taste for women. It has been so down through the ages, if we are to trust to classical authorities. What is the Lesbian passion? Some of the finest odes of Sappho signalize this unnatural love.

Dr. URQUHART—The point is that this man will come out of prison in a year. What better will he be? Has society taken the best possible course for its protection? He would fain hope that a more scientific method of dealing with such criminals would yet be adopted.

Dr. CLOUSTON had never met a very clear case of this kind. We know that boys sometimes behave in effeminate ways and in this way they may be led to grosser forms of immorality.

THE PALATES OF THE INSANE.

Dr. CLOUSTON briefly described the results of his investigations in regard to the development of the hard palate. He said: We have been investigating in a large way the condition of the palate among (1) the general population; (2) such degenerate specimens as criminals and inhabitants of poorhouses; (3) the insane of different classes; and (4) congenital imbeciles and idiots. In order to provide a standard of comparison, and that observations may be made somewhat on the same lines in future, I have divided palates into three forms, which I think practically cover the ground. In the first, "the typical," there is a large flat dome over the mouth. Then we get the second, the "neurotic," vault much higher, and in some of those you have a tendency to "rabbit teeth;" in the third, the "deformed," the palate is of a "V" or saddle shape. The "deformed" palate exists in 19 per cent. of the general population. The "neurotic" prevails to a large extent among people of "neurotic diathesis." Going over all the idiots and congenital imbeciles in Larbert institution and those in Morningside, I find 61 per cent. of the whole "deformed." Taking criminals, I find that 35 per cent. of those are deformed. Among the insane generally there is 33 per cent. deformed. In the insanities of adolescence and puberty the patients have deformed palates to the extent of 55 per cent., so that this class approaches almost the imbecile in regard to this peculiar deformity. Of course there are various other deformities. The importance of the palate shape depends upon the relation of the palate to the base of the skull. There are two theories that occur to one: (1) take the anterior part of the brain as representing the more mental part, imagine that to be contracted in its width right above the palate; and supposing that the palate was not contracted similarly, but remaining the same in actual length, then it must assume a "V" shape from the contraction of the space it bridges over. Supposing, second, you have a tendency to a lower animal reversion of the lines of the teeth of the upper jaw—in the typical case they are somewhat circular—supposing you have these brought together at the back row to produce the lines of teeth in the jaws of the ordinary lower animals, like the monkey, then you can imagine the palate being pushed upwards, through this process of reversion, into a "V" shape.

CENSUS OF THE IMBECILE.

At the Scotch Quarterly Meeting of the Association, held at Glasgow, reference was made to an application forwarded to the Office of the Secretary for Scotland, suggesting the advisability of distinguishing between the classes "lunatic" and "imbecile" in the next census.

The following satisfactory reply, addressed to the President, Dr. Yellowlees, was received :—

Office of the Secretary for Scotland,
Whitehall, S.W.,
12th November, 1890.

SIR,—With reference to your letter of the 1st September last, I am directed by the Marquess of Lothian to acquaint you that the suggestion of the Medico-Psychological Society as to the advisability of distinguishing between the classes "lunatic" and "imbecile" in the census of 1891 has received careful consideration, with the result that the column in the Householders' Schedule has been amended to read as follows :—

II.

- If (1). Deaf and Dumb.
(2). Blind.
(3). Imbecile or Idiot.
(4). Lunatic.

Write the precise infirmity, if any, opposite the name of the person, and if the infirmity dates from childhood, add "from childhood."
Do not use such a general term as "afflicted" or "infirm."

I am to add that the Secretary for Scotland trusts that the object aimed at by the Society will be attained by this alteration.

I am, Sir,
Your obedient Servant,
R. W. COCHRAN PATRICK.

D. Yellowlees, Esq., M.D., LL.D.,
Superintendent Royal Asylum,
Gartnavel, Glasgow.

At the Council Meeting, held in London November 20th, 1890, the subject was brought forward by the President, and it was agreed that he should make a similar request to the Registrar-General in regard to the census for England and Wales. This letter elicited a courteous reply, in which the information was conveyed by the Secretary, Mr. Noel Humphreys, that "in the Householder's Schedule to be used at the approaching census in England and Wales, in April next, the heading adopted for the column relating to the deaf and dumb, the blind, and the lunatic, imbecile and idiot, is in precise accord with that which has been adopted in the Scotch Schedule, which the Registrar-General is glad to learn meets the views of your Association."

We understand that the distinction has already been adopted in the census for Ireland.

[Since above was in type, the subject has been reconsidered by the English and Scotch offices, and "Lunatic, Imbecile or Idiot" will be printed together, but the foot note will remain.]

AN ASYLUM PHYSICIAN SHOT DEAD BY A LUNATIC.

It is with great regret that we have to record the homicide of Dr. George F. Lloyd, the Assistant Superintendent of the King's County Asylum, Flatbush, Long Island (U.S.A.).

It appears that* James M. Dougherty was admitted to the Flatbush Asylum in November, 1888. In August, 1889, he escaped, and threatened to strike the

* We are indebted to the courtesy of the Editor of the "American Journal of Insanity" for the account of this melancholy event, as sent to him by Dr. Fleming, of the Flatbush Asylum, N.Y.

attendants with a shovel when they pursued him. Dr. Fleming, the Superintendent of the Institution, states that, when he took charge on October 1st, 1889, he found him a quiet patient, although he complained of the diet. He laboured under visual and auditory hallucinations, and had delusions of persecutions. He again escaped September 16th, 1890. On the 26th, that is ten days after his escape, he walked into the asylum, revolver in hand, and demanded his property. Dr. Fleming was in the office alone. Dr. Lloyd, at this juncture, entered the room, and Dr. Fleming requested him to get Dougherty his property, which he did. He was then asked to sign a receipt for it, upon which he laid his cane on the desk, transferred his revolver to the left hand, and signed. It was thought by the medical officers that he brought the revolver to prevent his being retaken, but he was informed that his name had been removed from the books. Dr. Fleming heard nothing more of him until October 9th, when he was told he had been seen in New York two days before, and that he behaved in a surly manner. On the same day, Dr. Fleming was informed that the patient had returned to the asylum, and almost immediately afterwards two shots were heard, followed by the sound of hurrying steps. On entering the office from which the sound proceeded, Dr. Lloyd was found on his side by the desk, and the blood pouring from his body. The patient was seen walking rapidly to the gate. He was subsequently given in charge at the police-station and locked up. On examining Dr. Lloyd, it was found that one ball had gone through the heart and the other into the throat.

Dr. Lloyd was only 29, and had been appointed to the post which he held July 1st, 1890. Dr. Fleming writes: "He was a loyal friend, a competent and painstaking official, and had a peculiar faculty of gaining the love and respect of all who came in contact with him—even those who had met him but once or twice had mentioned that quality. His taking away is deeply deplored, especially by his associates and personal friends."

We join in the sympathy expressed by the "American Journal of Insanity" for the mother who survives, and whose grief has been intensified by the death of a daughter from diphtheria twelve days afterwards.

Correspondence.

MOSCOW ASYLUM.

We have received a communication from Dr. Korsakoff, Private Docent of Psychiatry in the University of Moscow, drawing attention to what he regards as inexact statements made by Dr. Robert Jones in his report on the Lunatic Asylum of Moscow, published in this Journal, April, 1890. Dr. Jones stated that mechanical restraint was rare. Although Dr. Korsakoff does not belong to the administration of the institution, he delivers a course of clinical lectures, as "private docent," and consequently considers that he knows perfectly well that this and other statements are incorrect. In proof of this he encloses a letter, describing the clinique in the asylum, written by the Superintendent, Professor Kojewnikoff. It is as follows:—

Refutation of Dr. Robert Jones's article, "Russian Retrospect," referring to the Moscow Clinic for Mental Diseases.

GENTLEMEN,—I consider it my duty to state that the account of the Moscow Clinic for Mental Diseases, given by Dr. Robert Jones, and published in this Journal in April, 1890, page 295, is incorrect in many respects. In the month of August, 1889, Dr. R. Jones stopped at our Clinic for less than half an hour, so he could not become acquainted with its organization. Without entering into the details and the tone of his description, I will merely point out the chief errors in his article.

Dr. R. Jones says that our University Clinic "is the acute asylum for Moscow;" this is a mistake, as our Clinic is exclusively a clinical establishment designed for the purpose of lecturing on mental diseases. Therefore, in summer, during the vacation, when there are no lectures, patients are not admitted into the Clinic, and only those remain whom it would be inconvenient to discharge. There is accommodation at our Clinic for 50 inmates—30 males and 20 females; during lecturing time the number of patients is complete. In August, 1889, there were 19 inmates—eight men and 11 women.

In describing our Clinic Dr. R. Jones says: "The doors are very substantially made and the fittings good. They might be hammered and beaten all night without much noise. The padded-rooms are lined with thick, well-tanned hide—leather being comparatively cheap in Russia." The doors are padded only in the single rooms, occupied by violent patients; the other apartments have ordinary doors. As to rooms lined with hide or padded-rooms there are none. Dr. R. Jones goes on to say: "Mechanical restraint is rare, more so than in French and Italian asylums for similar patients. The strait-waistcoat is the method employed." Our Clinic has been in existence for nearly three years, during which time the strait-waistcoat has not been once employed, and in general no mechanical restraints are ever applied. Further Dr. R. Jones says: "Tin plates for dinners, tin pannikins, and much slovenliness might be remedied. The meals I considered execrably served." At the time of Dr. Jones's visit at our Clinic the patients were not having a meal, therefore he could not see how such are served. At our Clinic crockeryware is in general use, but for violent patients there are enamelled iron dishes and plates. Then Dr. R. Jones proceeds to say: "There are no books or newspapers to wile away the terribly long and weary hours." At our Clinic for Mental Diseases three newspapers and nine magazines are taken; there is a library increasing by degrees, and which at the present time numbers 443 books for the use of the inmates. Besides various games out of doors and indoors our patients amuse themselves with reading, music (there are two pianos), drawing, bookbinding, the women with needlework, knitting, embroidery, and similar work, men as well as women with gardening, so that our patients are occupied as much as possible. As for gardens, our Clinic is in possession of a park of almost eight English acres; it is divided in two, one half for men, the other for women; each half is again divided into three parts, the larger of which is set apart for quiet patients, the other of smaller dimension for troublesome ones, and finally a small part, surrounded by walls, for violent ones. All these grounds are exclusively for the enjoyment of the inmates, consequently Dr. R. Jones's statement cannot refer to our Clinic in any way, when he says: "It is probable, as in the University Clinic of Berlin, that other patients, not affected mentally, use the more extensive grounds, the poor lunatics being hemmed into a pen." He then goes on: "I did not see any female patients, and, if I remember rightly, I do not think there were any." When Dr. Jones visited our Clinic, there were 11 women there; perhaps he did not see them, as at that time they were in the garden, where he did not go. He then proceeds: "Fortunately for the inmates, there were far more vacancies than inmates. I was informed that there was accommodation for 98 males and 88 females, total 186." As mentioned before, at our Clinic there is accommodation for 50 patients. Dr. Jones goes on: "No suicides have occurred, but the normal mortality is high." In the years 1888 and 1889 the number of patients admitted into our Clinic amounted to 150; of these 10 died. It must be remarked that for scientific purposes very frequently the most serious cases have to be admitted, which rapidly end fatally.

I will not allude to any other particulars, containing many errors. I suppose those I pointed out will be sufficient to prove that Dr. Jones's account of our Clinic is very superficial and does not agree with the real state of things.

PROF. AL. KOJEWNIKOFF,
Director Clinic for Mental Diseases of Moscow.

Moscow, Oct. 16th, 1890.

Dr. Robert Jones has availed himself of the opportunity we have afforded him to reply to it.

GENTLEMEN,—I beg to express my thanks for your courtesy in affording me the opportunity of replying to Dr. Kojewnikoff simultaneously with the appearance of his protest.

To be able to write a commendatory description of such an institution as the Moscow Clinic, without interposing epithets of abhorrence in due proportion, would either betoken ignorance and inexperience or the possession of intellectual distinctions and contradictory virtues of a very peculiar order.

I have every reason to remember my visit to the Clinic, for it was the afternoon of a long day spent with the insane. I had reached the Slavyanski early that morning from Nijni Novgorod, and commenced by inspecting the new buildings for hospitals in the southern section of the city. Thence I went to the hospital Moquelevitch, where, as described in my impressions, "I spent most of the day with the officers and patients, going over the whole of the asylum according to the plan and photographs before us." After inspecting this hospital (the St. Andrew's of Russia) I paid my visit to the University Clinic, Dr. Moquelevitch accompanying me, the contrast between the two striking us both very forcibly. Dr. Kojewnikoff refers to my visit as being of less than half-an-hour in duration. I need hardly say that the professor was absent on vacation, and whatever he may have heard subsequent to my visit must have been secondhand. An interval longer than that attributed to the whole of our inspection was probably passed in waiting for the pleasure of his deputy (Dr. Korsakoff, the private-docent, a most courteous and able specialist) to take us round, when we saw as much of the establishment—a new, ugly-looking, barrack-like building of two storeys—as the management chose to show us, including about 10 male patients out of a complement of 30, being those probably whom the learned professor "considered inconvenient to discharge," and who gave the tone of a decidedly *acute* asylum to the Clinic.

I will now take the professor's refutations *seriatim*, and, although our references to the same thing appear to be somewhat contradictory, it is that the one describes through Russian spectacles and the other by the light of British experience. The professor states: "The doors are padded only in the single rooms occupied by violent patients." My contention is that these lined rooms answer every purpose of a padded room. Moreover I will concede that this leather lining is infinitely superior to our rubber or painted canvas. The refutation continues: "The strait-waistcoat has not been once employed and *in general* (italics mine) no mechanical restraints are ever applied." My description states that mechanical restraint was rare, appearing thus to tally with the professor's own words, but surely these verbal quibbles are beside the mark, and I fear that the spirit of restraint still lingers if the letter be in abeyance, and my own observations at the time, in the case of a noisy, maniacal, male patient, struggling near two or three attendants, convinced me of its existence, for he was dressed in exceedingly rough canvas-like material, having every appearance of a *camisole de force*. Considering other things, I am not surprised that, euphemistically, this is recognized not as a "strait-waistcoat," but whatever other term may be applied makes it none the less reproachful and objectionable. Again, during my visit some refreshments—whether a meal or not I cannot state—were being served, the attendants and patients apparently partaking. In the absence of Dr. Kojewnikoff this may have been irregular, and his authority may not recognize its occurrence, but the metal ware was certainly to the fore, and I am amused to find that, being enamelled iron dishes and plates, they are so far superior to tin. In my opinion nothing could be coarser or more slovenly and less conducive to foster self-respect. The three (!) newspapers and nine magazines, apparently omitted during my visit, may be explained not improbably by the fact that vacation time had unfavourably affected the circulation of literature for that class of the insane "whom it was considered inconvenient to discharge," and a knowledge of human

nature might suggest that the attendants would presumably derive more recreation and amusement from their perusal.

In my report a matter of far greater importance than the trivial details referred to is allowed to pass unchallenged, and will bear its own interpretation and reflection upon the management, viz., "a want of homeliness and domesticity, very little furniture, except tables, benches, and beds, no pictures in the wards, no variation in the colour of the rooms" (not even stencils). With regard to the de-scription of the grounds, I must complain that sections have been extracted from my article and separated from the context, so as to (unwittingly, perhaps) distort my meaning. Describing the male side I wrote: "The airing courts are cramped and small, a high wooden hoarding shuts you round, and no glimpse is got of the outer world. A larger airing court beyond this, I believe, used for some patients, and a still larger one with gardens beyond is, apparently for three classes of patients, but they were unoccupied during my visit." The latter evidently owing to their being in their wards, for my statement proceeds: "On a summer afternoon, pleasantly warm out of doors, all the patients (males) were indoors. Such a state of things would hardly be the case in England." The professor quotes me: "I was informed that there was accommodation for 98 males, 88 females, total 186." These numbers I got from Dr. Korsakoff, and were taken down in his pathological laboratory; they evidently refer to the total number under treatment since the opening, which the professor states was about 150, and if he refers to my opening remarks he will find that I quote the University Clinic as having about 50 patients, the number he himself sets down as the limit of their accommodation.

Either a lunatic hospital is for promoting the cure of mental affliction or it is not, and if not there can be no further justification for its existence. The fact, to quote the professor's own words, of importing "very frequently the most serious cases for scientific purposes, which rapidly and fatally," is barbarous, and does not commend itself as humane or justifiable. It would not be tolerated outside Russia.

I considered, and do so still, with a very vivid recollection of the Clinic and having a fair average acquaintance with home and Continental asylums, that there can be no justification for the existence of an institution having such magnificent pretensions and so little performance. There appeared to me a supineness in the management which pointed to a deplorable administration, and I conclude by reiterating my previous description, that "if ever surroundings influence a mental condition, detention for treatment in such an asylum ought to render a victim hopelessly incurable."

I regret, gentlemen, that in the warmth of controversy, I should appear to use harsh expressions; but they are certainly not with a desire or design to affront the learned professor, whom it was my misfortune not to meet.

I have the honour to remain,

Your obedient servant,

ROBERT JONES, M.D. Lond., B.S., F.R.C.S.

Earlswood, Surrey.

RATING OF ASYLUMS (LUNACY ACT, 1890).

GENTLEMEN,—Section 263 of the Consolidation Act, 53 Victoria, Chapter V., appears to have given as much trouble to the officials of the pauper asylums throughout England as other portions of that over-carped-at statute have to the authorities of some of the institutions for the reception of private patients. Without going into the entire matter of the rating of asylums, it may perhaps be of interest to many readers of the Journal, who have to consider this subject, if the result of a recent inquiry into one very small, though not unimportant, corner of it, is placed briefly before them. The question asked was to this effect: To which account (building and repairs or maintenance) do you propose to charge the rate levied under the new rating section in the Lunacy Act?

Fifty-four post-cards were sent out; and thanks to the prompt courtesy of the superintendents addressed, fifty-four answers were received. In fifteen asylums it has been decided to charge the entire amount to the maintenance account; fifteen to the building and repairs; four charge the maintenance with that portion of the rate paid on the land, and the balance to the building and repairs account; one charges this latter with everything except the poor rate; while nine counties have not yet settled the question in any way. One gentleman writes: "We are all puzzled as to the construction of the Act." A second says: "As far as I can see there is no choice at all—the new assessment should certainly be charged to maintenance." Another, however, is equally emphatic: "To the building and repairs. Certainly *not* the maintenance;" while a fourth very pertinently draws attention to the fact that, in the form of abstract of account recently issued by the Local Government Board, "there is a place for rates in building account, but none in the maintenance." It is clear that considerable difference of opinion exists on this point at present. Probably much of it will be reconciled when the new auditors have made their report to headquarters. Uniformity, though not always desirable, would, in this instance, be an advantage, especially if it took the shape of insisting upon the amount being paid out of the county rate, and not out of the monies chargeable with the maintenance and care of our patients.

Yours, etc.,
J. BEVERIDGE SPENCE.

Appointments.

BLACK, R. S., M.A., M.B., C.M., D.P.H.Aberd., appointed Pathologist and Assistant Medical Officer to the Lancashire County Asylum, Whittingham.

BONNEY, A. W., M.R.C.S., L.S.A.Lond., appointed third Assistant Medical Officer to the Worcester County and City Asylum.

BOYCOTT, A. N., M.R.C.S., L.R.C.P.Lond., appointed third Assistant Medical Officer to the Cane Hill Asylum.

COMPTON, THOS. J., M.B., C.M., appointed Resident Medical Superintendent, Higham Hall Asylum, Norwich.

COWAN, JOHN J., M.B.Ed., appointed Assistant Medical Officer to the Roxburgh District Asylum, Melrose.

CRAIG, F. A., M.B., B.Ch., Roy. Univ. Irel., appointed Resident Clinical Assistant to the Nottingham Borough Asylum.

DUNN, E. L., M.B., B.Ch., T.C.D., appointed fourth Assistant Medical Officer to the West Riding Asylum, Wakefield.

FARQUHARSON, A. C., M.B., C.M., appointed Assistant Medical Officer to the Burntwood Asylum, Lichfield.

FITZGIBBON, H., M.D.Dub., F.R.C.S.I., appointed Medical Visitor of Lunatics.

HAY, FRANK, M.B., C.M.Aberd., appointed Assistant Medical Officer to the James Murray Royal Asylum, Perth.

LYONS, ALGERNON WILSON, M.B.Lond., L.R.C.P.Lond., M.R.C.S.Eng., of King's College, London, appointed Resident Clinical Assistant at the City of London Lunatic Asylum, Stone, near Dartford.

MACKENZIE, HENRY J., M.B., C.M.Edin., appointed Resident Clinical Assistant at the Darenth Asylum for Imbecile Children, Dartford.

MIDDLEMAN, JAS., M.B., C.M., B.Sc., appointed Resident Pathologist to the Morningside Asylum.

ROUSE, EUSEBIUS ROUSE, M.R.C.S., L.R.C.P.Lond., L.S.A., appointed Assistant Medical Officer to Camberwell House Asylum, London.

TANNER, C. PRICE, M.R.C.S., L.R.C.P.Lond., promoted to be second Medical Officer to the Worcester County and City Asylum.

WATSON, W. E. K., M.A., M.B., C.M., appointed Assistant Medical Officer to the Lancashire County Asylum, Rainhill.

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of Great Britain and Ireland).*

EDITED BY

D. HACK TUKE, M.D.,
GEO. H. SAVAGE, M.D.

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

FRANCIS BACON, *Proleg. Instaurat. Mag.*

APRIL, 1891.

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No. 157. NEW SERIES,
No. 121. APRIL, 1891. VOL. XXXVII.

PART 1.—ORIGINAL ARTICLES.

On the Weight of the Brain in the Insane, with reference to the Hemispheres, Lobes, Brain-Stem, and Cerebellum. Illustrated by Charts. By A. MERCIER, M.D., Burghölzli Asylum, Zürich. (See foot-note, p. 208).

These results are tabulated after weighing 400 brains as follows :—

150 cases of Paralysis.
70 cases of Atrophy.
180 other causes.

Divided according to sex, thus :—

Males—126 cases of Paralysis.
36 cases of Atrophy.
108 other causes.

Females—24 cases of Paralysis.
34 cases of Atrophy.
72 other causes.

In our tables only paralysis and other causes were mentioned, that is, 330 weighings of brains in all. Of the 400 brains weighed, 350 were treated by Meynert's sections, thus :—

Males—117 cases of Paralysis.
36 cases of Atrophy.
81 other causes.

Females—23 cases of Paralysis.
34 cases of Atrophy.
59 other causes.

The cases of atrophy were not taken into account. The total, therefore, is :—

140 cases of Paralysis.
140 other causes.

The weighings were expressed in grammes. An inequality of two grammes and less was taken as equality; an inequality of more than two grammes was taken as inequality. The brains, or parts of brains, were weighed without moisture, and after removal of membranes. The frontal lobe was separated by section along the fissure of Rolando. The medulla oblongata was cut off at the pyramidal decussation. The number of cases or of times was reduced to percentage. By the term *other causes* we mean all cases not arising from paralysis or atrophy.

The sections after Meynert were nearly all performed by Prof. Forel, the weighings by his assistant physicians. The tabular diagrams refer to 280 cases (Meynert's sections):—

Males—117 cases of Paralysis; 81 other causes.

Females— 23 cases of Paralysis; 59 other causes.

Those for the whole brain refer to 330 cases:—

Males—126 cases of Paralysis; 108 other causes.

Females— 24 cases of Paralysis; 72 other causes.

All weighings follow one another in a continuous series, and have been taken from the records of the Burghölzli Asylum.

Among other results, the graphic representation demonstrates how greatly the brain substance decreases, especially in the frontal lobe, and in how pronounced a manner this fact reveals itself in females.

With reference to weight, the influence of paralysis on the brain-stem* and on the cerebellum is of very slight value. This is, perhaps, connected with the specific gravity of these parts of the brain.

In paralysis, the right frontal lobe seems to suffer more loss of weight than the left, and this fact is very pronounced in cases of atrophy. The right hemisphere is mostly (cases

* For a full description of Meynert's methods, see his work on "Psychiatry," translated by Sachs, and published by Putnam, New York, 1885. The description of the ganglia of the prosencephalon, thalamencephalon, mesencephalon, and metencephalon is given at page 25, and illustrated by drawings. At page 256 Meynert says that he gives preference to the statistical results of Weichselbaum and Pfleger, because they have enabled us to draw conclusions as to the proportionate weight of the different divisions of the brain. They used his (Meynert's) methods by not joining the cerebellum to the pons and other parts, and they regard the brain-stem, including the prosencephalic ganglion, as an important factor in calculating the weight of the brain. The brain-stem is separated from the mantle by cutting through the corona radiata—that is to say, the caudate nucleus with the island of Reil, the optic thalamus, corpora quadrigemina and crura cerebri, together with the pons and medulla oblongata, are separated from the rest of the brain. Meynert divides the brain into these parts:—Brain-mantle, cerebellum, and brain-stem—synonymous with Brain-Trunk or Axis.—A. E. U.

of atrophy excepted) heavier than the left in "paralysis," and in "other causes" the percentage is over 50.

The inequality is in general more pronounced for the occipital brain than for the frontal.

The equality for the frontal lobe occurs most distinctly in those cases which have been designated "other causes," that is, in the approximately normal (or less abnormal than paralysis, for instance).

By "other causes" (in the diagrams the continued (—) line), we indicate all those causes of death due neither to paralysis nor to atrophy; deaths, for instance, in cases of delirium acutum, typhus, pneumonia, hæmorrhage, foci of softening, etc.

The cases of atrophy were not marked in the diagrams in order to avoid too many complications.

Many conclusions may be drawn from these calculations and diagrams.

	per cent.
TABLE I.—Cerebellum and Brain-Stem (each weighed separately). Of 350 cases (all included) there were found:—	
Cerebellum and brain-stem of equal weight 52 times ...	= 15
Cerebellum and brain-stem of unequal weight 298 times ...	= 85
Namely, brain-stem heavier than cerebellum 48 times ...	= 13·7
Cerebellum heavier than brain-stem 250 times ...	= 71·4
And further (1°) in 140 cases of General Paralysis (40 per cent. of all cases) cerebellum and brain-stem were found of equal weight 13 times ...	= 9·3
Cerebellum and brain-stem of unequal weight 127 times ...	= 90·7
Namely, brain-stem heavier than cerebellum 17 times ...	= 12·1
Cerebellum heavier than brain-stem 110 times ...	= 78·5
(2°) In 70 cases of <i>Atrophy</i> (20 per cent. of all cases) cerebellum and brain-stem were found of equal weight 7 times ...	= 10
Cerebellum and brain-stem of unequal weight 63 times ...	= 90
Namely, brain-stem heavier than cerebellum 17 times ...	= 24·3
Cerebellum heavier than brain-stem 46 times ...	= 65·7
(3°) In 140 cases of <i>other causes</i> (40 per cent. of all cases) cerebellum and brain-stem were found of equal weight 32 times...	= 22·8
Cerebellum and brain-stem of unequal weight 108 times ...	= 77·2
Namely, brain-stem heavier than cerebellum 13 times ...	= 9·3
Cerebellum heavier than brain-stem 95 times ...	= 67·9
TABLE II.—Frontal Lobes, right and left (each weighed separately). Of 350 cases (all included):—	
Right and left frontal were found of equal weight 102 times	= 29·2

	per cent.
Right frontal and left frontal of unequal weight 248 times	= 70·8
Namely, right frontal heavier than left frontal 124 times ...	= 35·4
Left frontal heavier than right frontal 124 times ...	= 35·4
And further (1°) in 140 cases of <i>General Paralysis</i> (40 per cent.):—	
Right and left frontal were found of equal weight 17 times	= 12·1
Right and left frontal of unequal weight 123 times ...	= 87·9
Namely, right frontal heavier than left frontal 61 times ...	= 43·5
Left frontal heavier than right frontal 62 times ...	= 44·4
(2°) In 70 cases of <i>Atrophy</i> (20 per cent.):—	
Right and left frontal were found of equal weight 14 times	= 20
Right and left frontal of unequal weight 56 times ...	= 80
Namely, right frontal heavier than left frontal 24 times ...	= 34·3
Left frontal heavier than right frontal 32 times ...	= 45·7
(3°) In 140 cases of <i>other causes</i> (40 per cent.):—	
Right and left frontal were found of equal weight 71 times	= 50·7
Right and left frontal of unequal weight 69 times ...	= 49·3
Namely, right frontal heavier than left frontal 39 times ...	= 27·8
Left frontal heavier than right frontal 30 times ...	= 21·5

TABLE III.—350 cases—*Frontal Lobes*.—Of these weighings:—a. 140 cases of *General Paralysis*.

b. 140 cases of “other causes.”

[70 cases of *Atrophy* are not mentioned.]TABLE IV.—*Right Occipital Lobe and Left Occipital Lobe** (each weighed separately). Of 350 cases, all included:—

Right occipital and left occipital were found of equal weight 95 times ...	= 27·2
Right occipital and left occipital of unequal weight 255 times	= 72·8
Namely, right occipital heavier than left occipital 154 times	= 44
Left occipital heavier than right occipital 101 times ...	= 28·8
And further (1°) In 140 cases of <i>General Paralysis</i> (40 per cent.):—	
Right and left occipital were found of equal weight 21 times	= 15
Right occipital and left occipital of unequal weight 119 times ...	= 85
Namely, right occipital heavier than left occipital 70 times	= 50
Left occipital heavier than right occipital 49 times ...	= 35
(2°) In 70 cases of <i>Atrophy</i> (20 per cent.):—	
Right and left occipital were found of equal weight 16 times	= 22·8
Right occipital and left occipital of unequal weight 54 times	= 77·2
Namely, right occipital heavier than left occipital 33 times	= 47·1
Left occipital heavier than right occipital 21 times ...	= 30·1

* By “Occipital lobe” is meant the Brain-mantle exclusive of the “Frontal lobe.”—A. R. U.

	per cent.
(3°) In 140 cases of <i>other causes</i> (40 per cent.) :—	
Right occipital and left occipital were found of equal weight	
58 times = 41·3	
Right occipital and left occipital of unequal weight 82 times	= 58·7
Namely, right occipital heavier than left occipital 51 times	= 36·4
Left occipital heavier than right occipital 31 times	= 22·3
TABLE V.—Hemispheres. Of 350 cases (all included) :—	
The two hemispheres were found of equal weight 62 times	= 17·7
The two hemispheres of unequal weight 288 times	= 82·2
Namely, the right hemisphere heavier 177 times ...	= 50·5
The left hemisphere heavier 111 times	= 31·7
And further (1°) in 140 cases of <i>General Paralysis</i> (40 per cent.) :—	
The two hemispheres were found of equal weight 16 times	= 11·4
The two hemispheres of unequal weight 124 times..	= 88·5
Namely, the right hemisphere heavier 72 times ...	= 51·4
The left hemisphere heavier 52 times	= 37·1
(2°) In 70 cases of <i>Atrophy</i> (<i>Dementia Senilis</i> , organic diseases of the Brain, &c.) (20 per cent.) :—	
The two hemispheres were found of equal weight 20 times	= 28·5
The two hemispheres of unequal weight 50 times... ..	= 71·4
Namely, the right hemisphere heavier 27 times ...	= 38·5
The left hemisphere heavier 23 times	= 32·8
(3°) In 140 cases of <i>other causes</i> (40 per cent.) :—	
The two hemispheres were found of equal size 26 times ...	= 18·5
The two hemispheres of unequal weight 114 times... ..	= 81·5
Namely, the right hemisphere heavier 78 times ...	= 55·7
The left hemisphere heavier 36 times	= 25·7

TABLE VI.—*The Brain-Mantle. The Frontal and Occipital Lobes.*

TABLE VII.— <i>Weights of 330 Brains</i> (without atrophy) :—		
126 cases of Paralysis	} of males.	
108 other causes		
24 cases of Paralysis	} of females.	
72 other causes		
Together—150 cases of Paralysis	} dotted (...) line.	
180 other causes		} continued (—) line.

The tables for the “whole brain—males and females” have not been made, as it completely alters the percentage. Generally, in such weighings, the difference between females and males is so sharply marked that the headings “males” and “females” should always be kept separate.

Mania and Melancholia. By JOHN MACPHERSON, M.B., M.R.C.P.E., Medical Superintendent, Stirling District Asylum, Larbert.

The attention of those interested in mental diseases has lately been directed towards theories of the causes and origin of these diseases. In two recent works,* widely differing in scientific scope and aim, though respectively instructive and powerful, theories of the genesis of melancholia and mania based upon the latest psychological and physiological knowledge have been advanced. To my mind, these theories, though containing much statement that is incontrovertible, stop short of conclusive, satisfying argument. At the same time, I was much surprised to read the following remarkable passage in a review of Dr. Mercier's book in the pages of the last number of this Journal:—† “It is well to have a devout follower of Hughlings Jackson and Herbert Spencer, or, perhaps, one ought to have said a follower of Darwin and of evolution, giving his views upon mental order and disorder. . . . We ourselves are still inclined to believe in the unknowable.” Is the clinical and scientific work of the past few years, based upon the writings of, to put them in their proper order, Herbert Spencer, Darwin, and Hughlings Jackson, to be undone and disregarded, and are we to calmly fold our hands and wait with the reviewer for a new revelation? It will be strange, indeed, if any future theory of “mental order or disorder” can exist without having to reckon with the theories of Herbert Spencer and of evolution.

Whatever views may be held on the subject of speculative theories in other branches of medical science, there can be no question as to their value in the study of mental diseases which occupy the border land, so to speak, between the palpable and the impalpable.

I commence, then, by considering, speculatively, these two forms of mental disease, mania and melancholia:—

I.—*From the chiefly psychological point of view.*

The origin of the two psycho-clinical factors which distinguish mania and melancholia from each other, viz., pleasure and pain, has been accounted for variously, the most

* “Text Book of Mental Diseases,” by Dr. Bevan Lewis; “Sanity and Insanity,” by Dr. Mercier.

† “Journal of Mental Science,” Vol. xxxvii., p. 149.

currently accepted theory being that pain is the result of inaction and of hyperaction, while pleasure is produced by an intermediate state in which there is neither underaction nor overaction.* For instance, intense heat and intense cold both cause acute suffering, while a moderate warmth is pleasurable, and conduces to a physical well-being. Inaction of any organ, such as of the stomach in extreme craving for food, is painful; conversely, overaction due to the swallowing of too much or unsuitable food may also be painful; and we thus see that there are two kinds of pain, negative pain due to inaction, and positive pain due to overaction. Between these two extremes there is a wide range of indifferent and pleasurable states of feeling produced by the moderate action of the organism and by moderate stimuli from the environment. Further, inaction and negative pain imply a decrease of nervous energy or tension, while overaction or positive pain implies too rapid or too violent increase of nervous energy or tension. Between the two extremes, again, a moderate degree of nervous energy must be taken to mean the production of pleasurable or indifferent states of feeling.

The same variety that exists among sensations does not exist among emotions. There are really only two kinds of emotion—emotions of pleasure and emotions of pain—and the varieties of each only differ from each other in degree. Whatever sensory impressions produce mental depression, whether impressions having their origin without the organism or impressions of internal origin, painful emotions resemble each other closely, in fact, are in their nature indistinguishable; the same is true as regards pleasurable emotions.

In order fully to elucidate the significance of this important fact, it is necessary to reduce all cerebral phenomena as far as possible to terms of motion, and all cerebral physiology and anatomy to levels of evolution. When a ray of light falls upon the retina or a wave of sound on the tympanum the molecular motion of the impact is transmitted along the sensory nerves to the cerebrum. This afferent function is as essentially motor in its nature as any voluntary muscular act induced by efferent impulses from the brain. Histologically, then, the nervous system may be divided into *recipio-motor*, *libro-motor*, and *dirigo-motor* elements.†

* Herbert Spencer, "Principles of Psychology," Vol. i., p. 273.

† Herbert Spencer, *op. cit.*, Vol. i., p. 49.

In the performance of a reflex motion in a highly evolved nervous system the whole of the afferent impulse does not pass from the recipio-motor cell to the dirigo-motor cell, but a part of it passes upwards to a higher recipio-motor cell, thence to a higher dirigo-libro-motor cell of the same level, thus forming a higher arc charged with a surplus fraction of the nervous energy of the reflex act. This higher arc then becomes inhibitory or acceleratory in its relation towards the lower arc, in accordance with the new doctrine of Interference which has now greatly modified the old theory of Inhibition,* and it would seem in the highest levels to form the physical basis of the consciousness of the action. Where action is perfectly automatic feeling does not exist,† though where action is partly voluntary partly automatic it can be at any time represented in consciousness. Thus, for instance, the organic actions which have their centres in the medulla and pons are not ordinarily present in consciousness, whereas the partly-automatic partly-voluntary actions which have their seat in the motor cortex are capable at any time of becoming vividly conscious. There is a constant tendency for actions to become automatic, and consequently unconscious, and there is, therefore, an ever-increasing tendency for higher levels to become subordinate to still higher levels. This invasion of ever higher levels by automatism while consciousness ascends in proportionate advance is the true explanation of nervous evolution. It is maintained by some recent writers, pre-eminently by Dr. Mercier, that consciousness is the sum of the coenæsthesiæ, that is, of stimuli constantly received by the cerebrum from every part of the organism and from the environment through the organs of sense.‡ To render such a statement at all intelligible it is necessary to go a step further, and to assert that the coenæsthesiæ are collected into and united in one locality of the brain by means of centripetal nerve fibres. By a process of exclusive reasoning, we are almost compelled to relegate this locality to the region in front of the Rolandic area.

In a paper like this it would be out of place to enter into arguments to show reasons for supposing that the pre-frontal lobes are the centres of conscious intelligence; their later evolution and the facts just stated regarding the functional evolution of the nervous system give countenance

* *Lauder Branton, "Pharmacology and Therapeutics,"* p. 167.

† *Herbert Spencer, op. cit.,* Vol. i., p. 478.

‡ *"Sanity and Insanity,"* pp. 88 and 89.

to such a theory. The experiments of Ferrier* show that removal of the frontal lobes produces dissolution of the faculties of attention and observation. The pathology of secondary dementia, in the profoundest cases of which great atrophy of these lobes is found, goes far to prove it. I may also quote Dr. Hughlings Jackson, whose writings overflow with the idea,† as well as the opinion of Dr. Ross, who, in his work on the nervous system, goes so far as to locate the higher cognitions and emotions in the orbital convolutions of these lobes.‡

The nervous system is thus seen in the light of a mechanism for the transmission of molecular motion along certain tracks and under certain conditions. These conditions are the continual superimposition of controlling arcs culminating in consciousness. The continuous passage upwards of fractional currents arising from innumerable arcs forms a state of mind. There are two classes of currents, painful and pleasurable, and the preponderance of one or other arouses a corresponding mental state. The normal mental state is a neutral compound in which the aggregate of perpetually nascent pleasurable feelings is fused with the aggregate nascent painful feelings. This state of mind may be compared to white light, which, though composed of numerous colours, is colourless, while pleasurable and painful moods of mind may be compared to the modifications of light that result from increasing the proportions of some rays or decreasing the proportions of others.§ The painful impression conveyed along a recipio-motor nerve, say, either of sight or hearing, passes from the sensory area to the conscious area (whether it is strong enough to cause a reflex discharge or not) as an upward escape from its current, and produces a painful emotion. This emotion of pain is, as I have already indicated, almost identical with every other painful emotion in its character. It is vague, undefinable, and, like the visceral sensations, inchoate. This psychological phenomenon has been explained by Mr. Herbert Spencer to be due to the fact that neither emotions nor visceral sensations cohere readily with one another.|| It tends still further to resemble previous painful emotions, in so far as it stirs up kindred groups of feelings, as Mr. Darwin puts it

* "Functions of the Brain."

† See, e.g., "British Medical Journal," Vol. i., 1890, p. 704.

‡ "Diseases of the Nervous System."

§ Spencer, *op. cit.*, Vol. i., p. 602.

|| *Op. cit.*, Vol. i., p. 187.

in his definition of the third law of associated and serviceable habits. "When the sensorium is strongly excited, nerve force is generated in excess, and is transmitted in certain definite directions, depending on the connections of the nerve cells and partly on habit."* The discharge of molecular nerve energy tends to pass along the lines of least resistance, and it may be taken as an axiom that the lines of least resistance lie towards the organized nerve tissue which forms the physical basis of allied groups of feelings. In the case of depressed emotion, therefore, the lines of least resistance to nervous energy would be in the direction of arousing the emotions of fear and terror. These emotions are so organized in the life of animals that conduct under their influence can only be described as automatic. The chief psychological result of their action on the organism is to produce introspection by throwing into prominence the personality of the organism and the danger threatening it to the exclusion of almost everything else. As Dr. Bevan Lewis puts it, there is an increase in subject consciousness, and a corresponding decrease in object consciousness.† We thus come to recognize that "there must be a psychological no less than a physical continuity throughout the length and breadth of the animal kingdom."‡

What has been asserted as to pain holds equally good of pleasure. A pleasant perception yields a pleasant emotion, in precisely the same way as a painful perception yields a painful emotion. While the perception may be clear and defined the emotion is always vague and undefined, and on account of its very vagueness resembles generally every other pleasurable emotion. It tends also to arouse kindred emotions of pleasure. Thus the pleasurable emotion caused by the acquisition of wealth arouses that of self-esteem.

All pleasurable emotions, like all painful emotions, tend towards enlarging the personality of the individual, towards an increase of subject consciousness with a corresponding decrease of object consciousness. When the painful and pleasurable feelings are properly balanced, proportionately admixed, and reflected on the screen of consciousness, the ordinary every-day conscious personality of the individual is attained. In this connection there are one or two important considerations to be mentioned. (1) In a

* Darwin, "Expression of the Emotions," p. 30.

† "Text Book of Mental Diseases," p. 116.

‡ Romanes, "Animal Intelligence," p. 7.

healthy individual the pleasurable feelings are vastly more numerous than the painful feelings for the normal organic actions are attended by pleasure. (2) On the other hand the painful sensations are more intense than the pleasurable, consequently their channels are more permeable, they easily pass into consciousness, and readily arouse kindred emotions. (3) It follows as a corollary to the two preceding propositions that when nervous pressure falls to a low ebb, as at certain hours of the day or night, or in certain conditions of the organism or of the environment, the faintly permeable tracks, though more numerous, offer more resistance to the passage of the molecular nervous motion. The more permeable painful paths afford a greater facility for the transmission of nervous energy; therefore, when nervous pressure decreases, the balance is disturbed, and the painful feelings tend to predominate.

It has now been shown how, by an access of painful or of pleasurable emotions, the *ego* is prominently augmented in consciousness. The bearing of this fact upon insanity is very important. We have seen that a painful perception causes a painful emotion. That depressed emotion in its turn arouses the elements of the emotion of fear, and the latter emotion has, through innumerable generations, become one which disturbs the judgment by diverting, for purposes of self-preservation, the circulating nervous force which is necessary for the maintenance of the association of ideas and conduct. Similarly pleasurable emotions increase subject consciousness at the expense of judgment by dissipating through numerous channels molecular nervous energy, and by arousing kindred emotions of a less intense order, and raising them to an importance which is unreal. Comparisons resulting from long experience are thus disturbed. Therefore, it may be generally stated that *emotions always disturb judgment and that the more powerful the emotion is, the more serious the interference with the power of judging*. This is verified by what we actually find to be the case in insanity. The first stage of all insanities is characterized by a more or less powerful emotion; the second stage by an affection of the inter-relational elements of mind.

II.—*The physiological aspect.*

Regarding all nervous actions in terms of motion we are faced with the difficulty of understanding what probable

changes take place in the nervous system during the reception of painful or pleasurable feelings. I shall begin with painful emotions. As an illustration of the second of his laws of serviceable associated habits—the principle of antithesis—Mr. Darwin describes the appearance of a favourite dog when taken out for a walk. The dog trotted gaily in front, with his ears and tail erect, in a state of great nervous and muscular tone. Whenever he observed his master entering a hot-house, in which he was accustomed to spend much of his time, the animal's whole aspect changed. The expression was so ludicrous that it was known in Mr. Darwin's household as the dog's "hot-house face." "This consisted in the head drooping much, the whole body sinking a little and remaining motionless, the ears and tail falling suddenly down, but the tail was by no means wagged. With the falling of the ears and of his great chaps, the eyes became changed in appearance, and I fancied that they looked less bright. . . . Had not the change been so instantaneous I should have attributed it to his lowered spirits affecting, as in the case of man, the nervous system and circulation, and consequently the tone of his whole muscular frame."* There could hardly be a better description of nervous shock produced by depressed emotion. When Darwin wrote the last sentence of the paragraph I have quoted he could not have considered the rapidity of nervous action. As soon as the animal had perceived the unpleasant reality, nervous shock resulted as quickly, though less intensely, as it would have done in concussion of the brain from external violence.

M. Feré points out that different sensory stimuli affect consciousness differently. Thus the stimulus of heat, of light, or of electricity increases the energy of movement and shortens the reaction time. Darkness, in perfectly normal subjects, determines a prolongation of the reaction time to the extent of an excess of a quarter or even of a third of the normal. He justly concludes, "Cette modification de l'énergie et de la rapidité des mouvements est en rapport avec des modifications de la circulation et de la nutrition. J'ai déjà rapporté des expériences nombreuses qui mettent en lumière la relation qui existe entre l'état de la nutrition et l'activité de phénomènes psychiques."† Any explanation

* "Expression of Emotions," p. 62.

† "Note sur le physiologie de l'attention rendue à la Société de Biologie," 26 Juillet, 1890, p. 2.

of nervous action in such cases must be merely hypothetical. We know that the proportion of solids to fluids in the composition of grey nervous matter is twelve per cent., while in white nervous matter it is up to or beyond twenty-five per cent. The inference, as stated by Mr. Herbert Spencer,* is that the molecular change in the nerve-cell during nervous action is attended by chemical decomposition, while in the nerve-fibre the change only amounts to isomeric transformation of molecules. The theory is still further strengthened by the extensive blood and lymph systems which permeate the grey matter for the removal of its waste products and the reconstruction of its elements after decomposition. That under the strain of excessive action these waste products are enormously increased, and that the lymph connective elements increase *pari passu* for the purpose of removing them has been shown by Dr. Bevan Lewis.† Any disturbing agency then will cause a decomposition of cell contents and an isomeric change in certain nerve-fibres. An emotion of tolerable intensity produces a manifest physical result, a painful emotion produces one train of bodily symptoms, a pleasurable emotion causes equally distinct but different symptoms.

The physical symptoms, which follow a painful emotion, are as follows:—(1) A diffuse, partially unregulated discharge of nervous energy passes from the cerebrum to all parts of the body. (2) There is a vaso-constrictor action produced upon the arteries generally, excepting perhaps those of the abdominal viscera.‡ (3) There is inhibition of the heart's action. (4) The circulation of nervous energy tends to limit itself to the special emotional tracks, and to be transmitted to permeable kindred channels. (5) Owing to the inhibition of the heart's action and the vaso-motor influence upon the cerebral circulation, the removal of waste products from the grey matter of the nervous system, and the reconstruction of libro-motor elements can only be tardily and imperfectly accomplished, and there is thus a failure in the reproduction of nervous energy. Nerve fibre, as well as nerve cell, requires for its perfect working sufficient heat and nourishment, and there is thus a failure in rearrangement of molecules. Nervous energy will not travel continuously along a fibre, but interruptedly, owing to the necessity there is for appreciable time being given for the readjustment of

* *Op. cit.*, Vol. i., p. 21.

† *Op. cit.*, pp. 83 and 84.

‡ Foster's "Physiology," Ch. iv., *lib.* i.

molecules after isomeric alteration. It is unnecessary to quote authority for the purpose of establishing the fact that the process of liberating molecular nerve motion from the central nerve system requires (a) a sufficient pressure of nerve force in the highest centres, and (b) a supply of pure blood, with sufficient *vis a tergo* for the removal of waste products. (6) The action of the emotion of fear upon the sphincters is more obscure, but it is most probably due to the primary diffuse nervous discharge inhibiting the lumbar centres, from which the sphincters receive tonicity.* This view is maintained by the fact that the relaxation is early in time, instantaneous, and very transient.

The concomitant physical symptoms of pleasurable emotion are in most respects nearly opposite to those of painful emotion. They are briefly (1) a diffuse discharge of nervous energy from the centres; (2) a vaso-dilation of the arteries; (3) an increase in the number and the force of the heart's beats; (4) a vastly wider circulation of cerebral nerve energy, owing to the fact that pleasurable associations preponderate so greatly in the coenæsthesia. (5) The foregoing conditions afford the greatest facility for the reproduction and transmission of nervous force to all parts of the organism for the removal of the waste products of nervous metabolism, and for the nutrition and building up again of the discharging libro-motor elements. These conditions constitute the cause of the physical manifestations of the emotion of pleasure—the muscular tone, the energy, the bright complexion, the glistening eye. They also enable us to understand better the antithetical states caused by the emotion of pain or of fear.

III.—*The pathological aspect.*

An emotion is generally regarded as morbid when it is (1) of extraordinary intensity; (2) when it arises without what is known as adequate cause, that is, without any originating circumstance in the environment; (3) when it is indefinitely prolonged.† These three characteristics of morbid emotion generally coexist.

First, with regard to depressed emotion, I have already dwelt on the fact that low, nervous tension produces depressed feelings. Therefore any cause that affects the reproduction of molecular nerve energy or that interferes with the transmission of that force will cause melancholy.

* Foster, *op. cit.*, p. 380.

† *Vide* Clouston, "Clinical Lectures," p. 30.

We know that each of the two forms of emotion has its complementary vaso-motor change, and that so long as the emotion lasts there will be a tendency for the vaso-motor condition to persist. Physiologically the order of the causative events in the production of the physical and other symptoms of emotion are—(a) perception, (b) emotion, (c) vaso-motor and cardiac affection, (d) nutritive changes. Pathologically it is very important to observe that it is necessary to assign a different order to the causes of events. They should rank thus—(a) nutritive changes, (b) emotional condition, (c) vaso-motor and cardiac affection, (d) secondary nutritive changes. There are four manifest ways in which nutrition can affect cerebral action—(1) either the blood is insufficient in quantity, or (2) it is deficient in nutrient qualities, or (3) it is toxic, or (4) there is auto-toxicity due to the imperfect metabolism existing between the cerebral cells and the albumen of the blood and the consequent formation of poisonous compounds. Examples of the first two conditions, insufficiency of blood supply and deficiency in its nutrient qualities, have long been recognized as promoters of weak and defective cerebral action as well as of depressed emotional conditions. They are, moreover, commonly induced as secondary nutritive changes in prolonged cases of insanity. The third and fourth conditions demand more attention.

Toxicity of the blood is probably much more commonly than is supposed a factor in the production of depressed feelings. The introduction into the circulation of nervous depressants such as hyoscine, belladonna, and nicotine, causes immediately a lowering of nervous and muscular tone. The lowness of spirits and prostration which is experienced in the ordinary forms of blood-poisoning and in fevers is evidence of a similar kind. There is no more suggestive form of mental depression than that which results from jaundice. There are many individuals otherwise sane in whom the advent of a severe bilious attack, with pigmentation of the skin, causes delusional melancholia. It is very important to remember what has been pointed out by Murchison, that cerebral symptoms of hepatic origin do not depend upon the amount of skin pigmentation, that they do not necessarily occur in cases where the blood is loaded with all the elements of the bile for long periods, and that they sometimes occur in diseases of the liver where little or no visible pigmentation is present. It must, therefore, be con-

cluded that these symptoms are due to toxicity, the result of the products of faulty albumen disintegration, in other words, to the presence in the organism of poisonous leucomaines. The knowledge which is daily increasing as to the production of ptomaines and leucomaines in the normal metabolism of the body cannot be very much longer disregarded by cerebral pathologists. The analogy existing between the action of drugs and that of ptomaines is suggestively forced upon our attention. The vegetable alkaloids, ether, chloroform, and the mineral acids, undoubtedly act upon the nervous system by their power to affect the metabolism of albumen. "We need not," says Mr. Herbert Spencer,* "suppose the anæsthetic or narcotic to have more affinity for the protein substances of nerve corpuscle or nerve fibre than for the other forms of protein substance which it comes in contact with; but its effect is comprehensible as resulting from the structural relation of nerve corpuscle and nerve fibre." May we not safely go a step further and assert† that the selective affinity of these substances for particular nerve centres is for the same reason due to the particular structural relation of nerve corpuscle to nerve fibre within these centres.

This leads up to the still more interesting, though more obscure, subject of cerebral autotoxicity. It was first put forward by Hughlings Jackson in the West Riding Asylum reports as a practical theory, which he practically verified by the results of his treatment of epilepsy. He argued that certain cerebral cells took on a faulty nutrition, whereby (as I understand it) they produced and assimilated a highly explosive compound of nitrogenous metabolism. No better substantiation of such a theory could in the present state of our knowledge be afforded than the cure of limited epileptiform spasms by the excision of such morbid cerebral cells.‡ Within the past six months startling confirmation of the presence of such an explosive material in the blood has been demonstrated by Mon. Ch. Feré.§ He has made experiments which appear to prove that the urine of epileptic patients excreted immediately previous to the fit produces convulsions when injected into the circulation of the lower animals. There is good reason for supposing that these toxic substances are the results of the product of faulty cerebral metabolism, and

* *Op. cit.*, Vol. i., 632.

† This is still further in accordance with the doctrine of Interference.

‡ See Victor Horsley's Article, "British Med. Journ.," Vol. i., p. 1286 (1890.)

§ "Note rendue à la Société de Biologie," 1890.

of the trophic interaction which exists between the nervous system and the ferment histozyme which Schmieberg has shown to exist in the blood for the purpose of decomposing albumen.* Just as the bacillus becomes poisoned by its own ptomaine, or the yeast plant by the product of its own fermentation, so the morbid brain cell is poisoned by the product of nitrogenous metabolism, and, as in epilepsy, the morbid cell itself suffers first and most severely. It is more than probable that each stage in the disintegration of albuminous compounds in the system is attended with the production of a leucomaine or ptomaine, more or less poisonous. Dr. Lauder Brunton has pointed out the extreme toxicity of peptones, and has shown that the feeling of ill-being, lassitude, and depression of spirits in certain cases of inaction of the liver is due to the passage of peptones into the circulation. We may suppose, indeed we have good reason for believing, that the proteid molecule has certain lines of cleavage, "along which it breaks when certain forces are applied, and that the resulting fragments have also lines of cleavage, along which they break under certain influences, and so on until the end products, urea, ammonia, water, and carbonic-acid gas, are reached; also that some of these intermediate products are highly poisonous compounds has been abundantly demonstrated."† Selmi,‡ in his researches upon the discovery of ptomaines in the secretions and excretions of patients labouring under distinct pathological symptoms, found that the urine of a patient labouring under progressive paralysis contained two poisonous bases, strongly resembling nicotine and coneine.

The symptoms produced upon the lower animals by the action of the ptomaines of the choline group so strikingly resemble certain forms of mental disease, chiefly melancholia and stupor, that I cannot refrain from referring to them. At the same time, I am undesirous of being supposed to be attempting to do more than indicate generalities. The choline group includes choline, neurine, betaine, and muscarine. They have the general chemical formula, $N(CH_3)3OH$. The only member of the group which is not actively poisonous is betaine. The two first named members of the group, choline and neurine, are invariably

* Lauder Brunton, "Pharmacology and Therapeutics," p. 76.

† Novy and Vaughan, "Ptomaines and Leucomaines," p. 289.

‡ Mem. to Academy of Science, Bologna, 1880.

found together when they exist in animal tissues. They are more or less readily formed by the decomposition of lecithin, and it is very significant that lecithin is most abundantly formed in fresh brain tissue.

“It is equally well demonstrated that similar bases [to choline] do pre-exist in the physiological condition of the tissues and fluids of the body.”*

Second, with regard to exalted emotion. The same series of causative events, which were described as occurring in melancholia, exist in mania, and as in the case of melancholia, the primary nutritive condition demands chief attention. If a product in the stage of disintegrating albumen, or a resultant or concomitant ptomaine or leucomaine of that disintegration, can produce epilepsy or melancholy, there is no reason why a similarly produced, but differently constituted, compound should not cause mental exaltation. We have the analogy of the power of the product of the yeast plant to cause intoxication and elevation of spirits. Certain alkaloids have also this power. There are two groups of ptomaines formed in the body during the normal metabolism of nitrogenous material: (1) The uric acid group, of which ten alkaloids have been separated and tested; (2) the creatinine group, which contains about six known alkaloids. The action of the alkaloids of these two groups may be said to range from muscle (cardiac) stimulants up to convulsants.

As to the character and effect upon the organism of ptomaines produced during normal nitrogenous metabolism we as yet know nothing, and we can only speculate.

A few words on the inferences to be derived from the modern methods of treatment. According to the foregoing theory the essential factors in the production of mental disturbance are: (1) The presence in the blood of an unnecessary proportion of unstable nitrogenous material; (2) a failure on the part of certain nervous elements to correlate properly in the process of metabolism of nitrogenous compounds; (3) a consequent auto-intoxication of nervous elements; (4) the establishment of a tendency in the cell towards morbid periodicity.

Modern treatment has been successful in modifying nervous disturbances by reducing the supply of highly nitrogenous food, and substituting a chiefly farinaceous dietary. In this way the morbid tendency of nervous cells has been

* Novy and Vaughan, *op. cit.*, p. 284.

limited. The autotoxic effect of peptones, with its train of disagreeable symptoms, ceases to occur when the patient is fed upon farinaceous food.

Dr. Hughlings Jackson has by the same means derived the greatest assistance in his treatment of epilepsy. The beginning and the end of cerebral cell degeneration, as described by Dr. Bevan Lewis,* in his recent work, is "fatty degeneration." It is not, I think, taking too much for granted to attribute these universal fatty changes to hyper-nitrogenous nutrition.

We cannot help discerning, though as yet dimly, that the neurotic constitution, owing, most probably, to defective trophic energy, is liable to be perniciously influenced by some of the numerous transformations to which nitrogenous material is subjected within the body. The points which I have endeavoured to sustain I shall now summarize under the following heads: (1) I have shown that perceptions and ideas, however varied in their origin and character, produce only two classes of emotion, viz., emotions of pleasure and emotions of pain. (2) That these two emotions cause, physiologically, two antithetical trains of bodily symptoms, especially distinct vaso-motor changes. (3) That an emotion, whether morbid or natural as regards origin, always tends to disturb judgment. (4) That as depressed feeling or exalted feeling can, by the use of drugs, be artificially produced by affecting the metabolism of albuminous material within the organism, there is ground for supposing that nutritive changes initiate the symptoms which we recognize as constituting morbid mental depression and morbid mental exaltation. (5) We know that poisons developed within the system in certain morbid conditions have the power, at any rate, of producing mental depression and mental excitement. (6) There is authority for believing that certain ptomaines produced within the human organism have the effect, when injected into animals, of causing convulsions or stupor or depression of spirits or stimulation of the muscular and vascular system. (7) There is abundant clinical experience in favour of the fact that highly nitrogenous nutrition invariably tends towards exacerbation and recurrence of the mental neuroses.

* *Op. cit.*, pp. 471 *et seq.*

The Colony of the Insane at Gheel, Belgium. By MARGARET A. CLEAVES, M.D., formerly in charge of the Female Department of the Hospital for the Insane, Harrisburgh, Penn., U.S.A.

Possibly the impressions received by an American during a visit to Gheel, may have an interest for some of the readers of the "Journal of Mental Science." Its very unique organization seems still worthy of study, and suggestive, at least, in its teachings to the candid and unprejudiced observer.

Everything depends upon one's point of view, and Gheel will be condemned or commended as one looks at it. One must consider its origin as an outgrowth of tradition and religious belief; and as an institution adapted to the needs of a country and a people whose mode of life is foreign to that which one is accustomed to in the United States, for instance. If one expects to find it a "veritable paradise of lunatics," on the one hand, or on the other an "abode of desolation," one is going to be disappointed in either of these expectations. Topographically Gheel is not an interesting place, nor is that part of the Belgian kingdom in which it is situated. However, "that nothing in the nature of a hill breaks the monotony of the plain," is not to be attributed to the insane colony at Gheel. That same endless monotone of landscape is probably as dear to the eye of the Belgian people, sane or insane, as the Alps of Switzerland to the mountaineer, or our own western prairies to those whose home they have always been. It is no criticism of Gheel to find fault with its geographical location.

As is well-known, Gheel, as a home for the insane, owed its reputation for the successful cure of lunatics to St. Dymphna, the daughter of an Irish king who lived in the seventh century, whose shrine was believed to possess miraculous powers.

Her remains are preserved with great veneration at the Church of St. Dymphna, in a rich shrine painted with scenes from her life, probably by a contemporary of Memling. Just why this particular saint was supposed to have miraculous powers in curing people of their insanities is not clear, but there are records of undoubted authenticity showing that in the twelfth century Gheel was then an ancient and famous resort of lunatics.

The ancient treatment was entirely of a religious character, and all the insane who formerly came to Gheel were lodged either in or near the Church, as proximity to the shrine was essential in order that the patient should benefit by the miraculous powers of the saint. A door in one side of the Church leads into an old house, part of which was destroyed by fire, but some of the rooms remain. The windows are graded, and in the floor are two iron rings, to which patients were secured during their stay. These rooms are very dark and gloomy. Here those who came on pilgrimages remained for nine days, participating in prayers and invocations at the shrine of the saint. If they were not better at the end of that time, treatment was continued nine days longer, and if at the expiration of the eighteen days the evil spirits were not exorcised, the patient was placed with a family near the Church to be cared for, to which they went daily to participate in the prayers offered in their behalf. Thus arose the custom of placing the insane in the families of Gheel. Only fourteen days prior to my visit, a young insane girl came on a pilgrimage, to pray at the shrine of St. Dymphna, showing the hold that tradition and religious feeling have upon the credulity of the people.

Gheel is a quiet, uninteresting place, and not frequented by the ordinary European tourist, with his red-backed Baedeker. It is the centre of the district devoted to the care of the insane. The district is about seven miles square and thirty in circumference. It contained, at the time of my visit, a population of 11,000 sane and 1,760 insane. Sixty of the latter class were in the infirmary, the others in the families of the cottagers throughout the district. There are in the commune nine villages, six of which have churches.

Gheel is the central or administrative village, and has a population of 5,000 sane and 700 insane people. It has a school, a college with seven priests and 120 students, a civil hospital, the infirmary, two churches, an amusement hall or theatre in connection with the public-house, two general physicians, besides those connected with the insane, and from 100 to 117 *estaminets* or saloons. At the minimum rate this gave one saloon to every fifty sane people. Drinking is carried to an excess, and to this evil the superintendent, in common with representative citizens, is fully alive. The liquor commonly used, called Geneva, is made from juniper berries, and has a most pernicious effect upon those habituated to its use. Liquor is not allowed to be sold to patients, and

in the event of its being done, proceedings are instituted against the offenders, and they are obliged to suffer the penalty of the law. That, despite its illegality, it is often so sold, I felt confident, and that there was great need, moreover, for the enforcement of the laws, which are themselves rigid enough, was quite evident to me. During the three days I spent at Gheel I saw many drunken men, and in the rooms at the back of the saloons patients were kept as in other houses. The insane of Gheel were formerly under the care of city government, but since 1850 under the same government as the infirmary, which is that of a royal commission of seven members, who report after inspection, once a quarter, to the Lord Chief Justice. There is also a permanent committee of five, who assist in the distribution of patients and exercise a general supervision over them. There are five physicians for the colony, two superintendents, each with an assistant, and the resident physician in the infirmary. Formerly there was but one superintendent for the entire colony, but at the time of my visit there were two, the change having been brought about by political opinion, each party, Catholic and Liberal, desiring a representative. It was quite evident to me, from the remarks of the superintendent longest in service, that the joint arrangement was not satisfactory in its workings. The infirmary patients were half under the care of one, half the other, the one taking the even numbers, his *confrère* the odd ones, and the resident physician was responsible to both. There are also six attendants, whose duty it is to visit the patients in their respective cottages daily, and who record, in a book for that purpose, the patient's name, age, cottage in which placed, amount and date of payments for care, clothes furnished, and any other facts of interest. Dr. Peeters says that the number is entirely too small, and in this opinion I quite agreed. The assistant physicians must visit every chronic case once a month, and every recent or curable case once a week. The superintendents must visit every patient, I believe, once in six months. The physicians and the attendants are appointed by the Lord Chief Justice. Visitors are admitted by order of the superintendent. Restraint is not permitted to be used save by his order. There are no manufacturing interests at Gheel, and the chief places of business seemed to be the *estaminets*. The cottagers either own or rent their places, and they all have a small garden at least. Suicidal and homicidal cases are not received at Gheel, but are sent to

other asylums in Belgium. At the time of my visit there were 200 epileptics in the colony, and 66 paretic patients. Fifty of these were men, sixteen women. In the opinion of the superintendent there was a tendency to an increase in the number of cases of paresis.

Patients are placed in families according to their social position and occupation. No family is allowed to receive more than two patients, and many but one. If by experience it is found that any given family is unfitted to have the care of patients they are not permitted to continue as nurses.

There is paid for pauper patients respectively, according to their class, as follows:—

First class, quiet and clean, 84 centimes per day; 60 centimes, or 12 cents, goes to the cottager, the balance, about five cents, into the administrative fund for clothing, etc.

Second class, dirty at times, 94 centimes a day, of which the cottager gets 74, about 15 cents, and the administrative fund the balance.

Third class, dirty and troublesome, 1.10 francs per day; of this 94 centimes, or about 19 cents, goes to the cottagers, and the remaining three cents to the administrative fund.

Private patients pay variously according to their means, one, a Polish nobleman, paying 3,600 francs a year.

From 1879 to 1883 there were no accidents at Gheel. For the year following 1883 there were two men drowned, one suicide, and a number of cases of pregnancy among patients.

There are few successful escapes. Everyone in the commune exercises more or less watchfulness, which, in connection with the presence of the police on the borders, is sufficient to frustrate the efforts on the part of patients to get away. More attempts are made on Sunday than on other days, because then they are not employed. Patients go about with the greatest freedom, and on leaving Gheel I saw several at the station. Dr. Hack Tuke tells of one who accompanied his party to Antwerp and offered to do the hospitalities of the town.* None are allowed to be absent over six hours without search being instituted. That accidents of various sorts do not oftener happen speaks well for the liberty given them.

So well do the Belgian authorities think of Gheel that they have located another colony at Lierneux, near Liege. At first this was opposed by the people, but since they have become accustomed to the presence of the insane in their

* Notes of a recent visit to Gheel, "Journal of Mental Science." (Jan., 1886.)

midst, and appreciate the pecuniary advantage, the disposition among the people to inscribe their names as nurses has become general.

It is now several years since I visited Gheel. I arrived one Sunday afternoon, November 30th, and went at once to the one hotel of the place, which is situated on one side of the Grande Place. This is a large, unadorned square, upon which, despite its wet, mud, and general bleakness, a group of children were clumping about in their wooden *sabots*, filling the air with their shouts and laughter in healthful, childlike fashion, showing that they, at least, were not depressed by their association with the insane.

After taking a room at the hotel, *petit garcon* conducted me to the residence of Dr. Peeters, the kind and courteous superintendent. After a brief visit, arrangements were made for the doctor to call for me at my hotel on Monday morning to visit the cottages and infirmary of Gheel.

On leaving the doctor's house I went to the Church of St. Amand for the vesper service. This is the church of the people, the insane going to St. Dymphna, although there were those at the vesper service at St. Amand who were undoubtedly patients. Quaint, black-hooded and cloaked women, with wooden *sabots*, kneeled and crossed themselves in the dim light, while in the baptistery near by an infant was undergoing the rite of baptism.

On Monday morning, when we started on our tour of inspection, I felt that there was little opportunity for the cottagers to put on visiting attire, as asylums are sometimes said to do, and that I should see everything in a state of undress, so to speak.

If in visiting Gheel one expects to find gilt-edged cottages, such as Queen Victoria provides for her aged and infirm servants, or even such as we have the habit of building for public purposes in this country, one will find one's self disappointed. The cottages of Gheel are not solely erected for the purpose; they are simply the homes of the people, of whatever class they may be. Peasants, farmers, tradespeople, and even those of higher social position receive into their homes, for the pecuniary consideration allowed, one or two insane persons. Long years of training and experience has fitted these people for the care of the insane, and it has become a part of their lives and work. I found some families in Gheel who had the same patient with them for forty-five years. The houses were not up to my standard of cleanliness

and comfort; but, recognizing the fact that they were similar in every respect to homes of the same class throughout the Kingdom of Belgium, I could not criticize. In no country are the homes of the poor and uneducated up to our standard of order, cleanliness, and comfort.

The first house visited was that of a baker. We passed through the shop in front of the house to the living room beyond, where we found the members of the family and two patients. Both were of the better class and both troublesome. The one, an English girl, had been there eleven years. She was a dement, paid no attention whatever to the presence of an English-speaking person, was destructive, and restrained by means of leather mittens. The other, a Dutch woman, was violently excited, and scolding vociferously. For her the superintendent ordered a bath of two hours' duration, hoping to control her excitement. Their bedrooms upstairs were small, plain, but clean and comfortable.

Another house was that of a saloon-keeper. We passed through the saloon where the men were all drinking, but, despite their occupation, stopped and lifted their hats politely until we had passed through the saloon into the family or living room beyond. In this family there were two insane women, whose united ages were 150 years, and one of whom was blind. The family seemed very fond of them, and they both were tidily dressed, looking well and contented. They sat in their respective corners of the great fire-place, the feature of all the cottages, engaged in paring the potatoes for dinner. The mother of the family was churning, assisted by the eldest child. Four other children, of little varying sizes, were amusing themselves about the room, while, to complete the picture, the youngest, a demure little tot, with a close, black cap tied under her chin, sat in a low chair in the middle of the room employing herself with her slate, and totally indifferent to our entrance. Despite the fact of this house being that of a saloon-keeper, everything, though plain and simple, was neat, comfortable, and thrifty in appearance. The patients not only seemed well and kindly cared for, but there was an impression of *hominess* about it that was not apparent in many of the cottages, at least not in the same degree.

In still another house there were two epileptic women. One was ill, and the assistant physician, who had been sent for, arrived during our visit. The patient was found to have pleurisy with effusion, and was at once put to bed and pre-

scribed for. This house was not so comfortable and home-like as the preceding one. In another house a widow lady cared for two patients alone. This, while exceedingly plain and simple, provided the patients each with a small but clean bedroom, and they both appeared to be kindly cared for. In still another house I found an old pauper woman, who had been with the family for forty-five years. The family were of the better class; but there existed a mutual attachment, and neither the patient nor the family were willing to make an exchange. In still another I found an old man, insane for many years and then quite feeble. He employed himself in assisting the housewife, his principal employment being that of rocking the cradles. Cradles I say advisedly, for there were two, occupied by two children of nearly the same size, while a third, but little larger, was playing about the room. Even though the house was small, primitive, and not always swept and garnished, this old and feeble insane man seemed much more comfortable there among people of his own kind, engaged in helping about the little domestic duties that give one a sense of home, than he would have been in the crowded wards of a large asylum, where he would have been too feeble to get about or to engage in work, and where he might have sat vacant and idle until death came to his release. And not only that, but his place in the asylum remained vacant for a case of greater necessity, while the expense of his maintenance was diminished to the smallest possible amount. Such were some of the thoughts which presented themselves to my mind, not only concerning this, but the most of the patients as I went about the village and some of its adjoining hamlets.

In still another home I found two men—one a pauper, the other a private patient; the latter a youth of eighteen or twenty, who would, in my judgment, have been better off in the wards of a well-directed asylum, under more constant medical supervision, and with a different moral environment from that which I felt surrounded him. The houses were all much the same; those of the poorer class, where pauper patients were boarded, were not so well furnished nor so tidily kept. The floors of the halls and rooms were mostly of brick, sanded, and the common living room answered the purpose of kitchen, dining-room, and salon. Bright copper vessels were hanging upon the walls and standing about, showing evidences of faithful polishing. In the bedroom of one house I saw a bread-tray filled with partly-mixed dough,

while other things grouped themselves about in convenient, picturesque fashion that did not accord with my ideas of good house-keeping; but such things may be seen in any of the humbler homes, whether in a Flemish hamlet, an English village, or an American town. The sense of the eternal fitness of things is not possessed by all alike.

In yet another cottage I found a tall, slight, pale, and melancholy-looking English girl, a cousin of the "gentle Elia," who no doubt was placed at Gheel because of the very moderate expense her care there entailed. Her mind was filled with fancies and delusions, many of them of an ambitious nature. She seemed very pleased to meet an English-speaking person, and I had a pleasant conversation with her. She was a fine musician, and played very beautifully for me on a cabinet organ, which she had in the sitting-room. There were no carpets, but the floor was sanded and traced in fanciful patterns, as is the custom. In this house everything seemed neat, clean, and comfortable. This patient had been there for two-and-a-half years, and will probably remain during her life-time.

In the house of the former superintendent—the best I visited—were two male patients. In this house everything was as comfortable as one could desire, and over all a homelike air that was very pleasant to feel. The house contained a salon, dining-room, halls, the family apartments, and large, neatly-furnished, and comfortable rooms for each of the patients besides. There were carpets on the floors and pictures on the walls; the house was well kept. On the lower floor there was an English gentleman, an architect by profession, and something of an artist as well. His was a case of *folie circulaire*, and he had been at Gheel for forty-five years. During his better times he amused himself with his pencil. In the case of both of these English patients I felt that in their better days they must feel their exile from home very acutely; but I found that for economic reasons English patients were often sent to Gheel. The other patient in this house was a Polish prince, who seven years previously had jumped from his carriage into the Seine on his return from the church where he had just been married. His was a case of dementia. He received us with courtly grace, but apologized for not being *en grande toilette*. He had a rag baby with which he amused himself, and which he called Princess Josephine. When at his best he entertains himself with reading, painting, and music.

I spent the most of Monday going about the village of Gheel, and in the late afternoon visited the infirmary. The houses were as I have described them. In those of the better class there were carpets on the floor, separate sitting-rooms, and more comfortable bedrooms. In some housewifely skill was not the supreme feature; but in none did I see evidences of lack of care or harsh treatment of the unfortunate members of the households.

Just adjoining the superintendent's residence is the infirmary, a plain but apparently well-constructed building. It has room for about eighty patients, but contained only sixty at the time of my visit. The male and female wings were separated in the usual fashion by the administrative department. The work of the hospital and the care of the patients was in the hands of five sisters; in the male department there were three male attendants as well. Formerly they had other attendants than the *religieuses*, but, judging from what I was told of them, they could not have been under good discipline, for they were extravagant, noisy, and immoral, several cases of pregnancy having occurred among the women thus employed. The sisters manage things much better, and have reduced the expenses 2,000 francs a year. The wards of the infirmary were very plain, entirely without adornment, but clean, well kept, and very free from hospital odour. The patients were divided into three classes:—

First class, quiet and clean. These slept in small, white-curtained beds in the dormitories, and the sister-in-charge in the dormitory with them. The day rooms were separate.

Second class, dirty at night. These had a common dormitory and living room. The sister slept in an adjoining room with an observation window between the dormitory and her room.

Third class, dirty and troublesome. These had separate day and night sleeping rooms.

The rooms for new admissions were single rooms, opening on a corridor, and with what I considered a very objectionable iron grating, affording, as it did, every facility for hanging to one so inclined. If new patients were found quiet and sleeping well the first night, they were assigned to the class to which they belonged. If noisy and troublesome, they were kept in these rooms.

The infirmary is provided with baths, but there are none throughout the district. At the time of my visit Dr. Peeters was hoping that moneys would be appropriated for that purpose, and certainly they are much needed.

Patients are sent from the infirmary to the cottages after having been under observation for from five to eight days. Every Wednesday the medical staff and permanent committees decide what patients shall be sent out. Certain chronic cases are always kept in the hospital to assist the sisters. Sick patients are sent to the infirmary, and deaths rarely occur in the cottages.

The following day I visited the church of St. Dymphna, in company with the priest who officiates there, and afterwards, accompanied by an attendant and an interpreter, I went by carriage to two of the outlying hamlets of peasants and farmers. The term farmer is rather an ambitious one, used in this connection, for both farms and houses are almost microscopic, so small they are as compared to those to which we are accustomed. In these two hamlets I visited from 15 to 20 houses. They were all substantially the same, those north of Gheel being a little better than the others. The day was a cold and dreary one in December, the landscape a monotone both in contour and colouring; the cottages were all small, and in close proximity to the apartments devoted to the cows, pigs, etc., as is the custom. The roofs were thatched, and the floors of brick. Most of these houses contained, in addition to the bedrooms, but the one living room, which answered all purposes. The ceilings were low, the interiors dusky and smoky. At the one side or end of the room was the great fireplace, which belched forth smoke into the interior most successfully. In most of these fireplaces, suspended from a great iron crane, was an immense iron kettle, in which boiled and bubbled in true Macbethan fashion a most unsavoury concoction, judging from the odour, which was designed for the pigs and the cows. A long and very high mantelshelf over every fireplace was adorned with the bits of family china. The bedrooms for the patients were small, not always inviting in appearance; the beds of straw, usually clean and with plenty of covers. Sometimes the bedroom opened from off the living room; again they were in the low attic, and reached by a primitive flight of stairs. In some of the better farm-houses there was a second room containing a store, but for the most part but one, and the patients' sleeping rooms. In many of them there seemed no place for the family to sleep, and in answer to my questions as to where they slept the attendant shrugged his shoulders and said, "Anywhere." In one house I saw a bunk let in the wall, and shut off from the room by a curtain, even with the wall, wherein someone slept. The peasants

seemed a strong-limbed, muscular people. The men were mostly out about the farms. The women, dressed in peasant garb, short-skirted gowns, kerchief crossed over the shoulders, caps and wooden shoes, stood with arms akimbo during our visit. They were for the most part very untidy. Some of the insane members of the family I found at work—churning, paring potatoes, sewing, etc. Others were crouched in the corners of the great fireplaces, with heads and faces buried in their laps, indifferent to all about them, as is the habit of the class of which they were the type. In a cosy, comfortable room in one of the farm-houses I found a Flemish woman making Valenciennes lace. This she sold from time to time, thereby supplying herself with pin money. I took what she had made, which was beautifully done, and much more valuable to me than that sold in the shops.

Gheel is not perfect, and I could see wherein much might be improved. More attendants are needed, and more careful supervision. An effort should be made to elevate the tone of the place and the people. This could be done to considerable extent under the wholesome influence of an educated and interested commission, which should be composed partly of women. The hours for work should be fixed by law, so that no patient could be overworked. Whether sane or insane there are always those who are ready and willing to bear the brunt of things. Much might be done in the way of amusements and diversion for patients. An organized effort on the part of the better class in each hamlet would accomplish much in this direction. Still there remains the fact that with their domestic occupations, larger liberty, and freedom from the restraints of an asylum life, the need for systematic diversion cannot be so keenly felt by the insane at Gheel as in large asylums.

As to the influence of the insane population upon the sane, I was told that it was *nil*, there being but one in every one thousand of the inhabitants of Gheel insane, epileptic, or idiotic; still, I doubt if statistics would ever elicit the facts, just as I doubt whether statistics would ever clearly show to what extent the liberty at Gheel is abused. The degree of evil attendant upon the large amount of freedom enjoyed by so many insane people cannot be estimated by statistics, just as the evil arising from the crowding and restraint of asylums do not, and cannot, find expression in statistical figures. The influence of a large number of insane people, one upon the other, which is, I believe, hurtful rather than

beneficial, is obviated by their great dilution, so to speak, in the sane life about them. Always, I believe, the saner and more healthful the influences surrounding the insane, the better chance they have of maintaining the highest degree of mental equilibrium which is consistent with their actual brain lesion. Certainly the disastrous influence upon those having the care of them cannot be so insidious and far-reaching from this mode of life as is the constant association necessitated by the care of them in the crowded wards of large asylums.

In all that I have said I wish to be understood as referring to the chronic insane, and while one sees much to criticize at Gheel, one cannot but question why the chronic insane of our country, for instance, should be housed and cared for at a *per capita* cost, infinitely in excess of what they have been accustomed to all their lives, and whether, with simpler, plainer homes, familiar occupations, and larger freedom, this class would not only be happier, but better off in every way, as well as less expense to the State. And why should the legitimate work of a hospital be hampered, as it undoubtedly is, by the vast accumulation of chronic cases, involving, as their care does, an immense amount of work, non-professional in character? Could not these cases be just as well cared for in asylums built at less expense, or placed in homes where that is feasible, rather than permitted to encumber the wards and hinder the work of a hospital in which recent cases demand, and should have, every care and all the skill that science has at its command? Might there not be greater probabilities in the way of recoveries if this were true? I simply question, for I know how the life of every hospital physician is burdened with petty details, and how difficult it is under such circumstances to attain to the highest professional ability. For many years the plan for the care of the insane, which has commended itself to me, has been that of a hospital to which patients should be committed, and from which they should be drafted after their condition is determined, into simple, plain, inexpensive asylums, cottages, or homes, such as the State could best furnish, there to be cared for well and kindly, under medical as well as State supervision, but at a minimum cost as regards their housing, while in the hospital should be kept those who needed the best of skilled medical care and trained attendance. From this hospital, in all cases where such a course would be advisable, transfer should be made to a convalescent

home, and so into the world again. The mammoth asylums to which year after year wings are added, until no man can have an adequate conception of the needs of his patients, and especially no idea of their pathological condition, are a blot on the intelligence of the age.

The lesson to be learned at Gheel is a valuable one, and while it could not as an institution be transplanted to the United States, yet modifications of it might.

Already in Massachusetts success has followed the placing of certain cases of insanity in the homes of those who were not only willing, but fitted to receive them.

A recent report made by eminent medical men of Belgium to the Belgian Royal Academy of Medicine, has reported favourably on the hospitalization and colonization for the care and treatment of epileptics.

The Plea of Insanity. By GEO. H. SAVAGE, M.D., F.R.C.P.

Gentlemen,—Having received a notice from our secretary that a paper was needed for this meeting, I felt in duty bound to comply with his request that I should supply one. It was easy to promise and not very difficult to decide on a subject, but since giving the promise I have found that there was very little new or worth my saying about the very important subject which is the theme of my paper.

In what I have to say I shall confine myself almost entirely to the plea of insanity, as raised in grave criminal cases. The active reason for my choosing this subject was the trial of Mrs. Pearcey for murder, as so many points of interest arose between the time of the trial and the execution of the sentence that I felt it would serve at least as the text. I speak chiefly from personal experience, for in one way or another I have had a great deal to do with doubtfully sane prisoners who have committed criminal offences. I shall not spend much time in discussing things in general, but I must make several digressions from the main line.

First of all, each trial of this kind impresses me with the very great necessity there is for medical men to remember that they are to act as *witnesses*—skilled witnesses, it may be—but not advocates; I fancy there is a danger of our assuming the advocate, and even wanting to perform judicial functions. I believe our profession makes us very intolerant of opposition,

and one result of this attitude of mind of skilled witnesses is to discount the value of their evidence, so that judges (and others) are in the habit of looking at all skilled witnesses as liars in the higher degree.

Our duty is finished when we have placed the facts of the case and the specially medical inferences before the judicial authority. We have to make clear the difference between the facts and the inferences, and we must never forget that counsel are very apt to take our inferences as facts, and to build a false superstructure upon these inferences. The inferences, too, are of very varying value, for, though it may be assumed by some, that one man is as good as another, yet, I think, few would allow that the judgment of each is equally valid. The strength of any plea raised, must depend on the strength of the facts, the truth of the inferences and the personal value of the witness.

As the next general remark, I would say that a medical man often finds it difficult to decide when it is his duty to take part in raising or assisting the plea of insanity. As a rule, I think it is safe to say that when a medical man is asked to give evidence, and when the facts, or statement of facts, laid before him are so strong that he feels a prisoner may suffer unjustly if he does not give his aid, then he is justified in doing his best for him. It seems to me that a prisoner has a right to such a defence if it is not in distinct opposition to the belief of the medical witness. I can hardly understand a medical man raising and maintaining a plea which he does not believe; it is quite different in the case of the lawyer, though here, too, I have heard discussions on the morality of advocacy. I have, with intention, said "the doctor may give evidence if called upon," for I feel there is a very grave risk of our being misunderstood if we rush into advocacy, and generally at the same time into print, whenever a crime becomes notorious. I have also pointed out the importance of having your facts clear and true before you frame your inferences; one so constantly meets cases in which a defence on the plea of insanity has been raised, with good inferences drawn from untrue facts, or rather from mistaken descriptions of facts. For instance, there is all the difference in the world in the inferences to be drawn from the occurrence of epilepsy or of hysteria. It may be safely inferred that if a prisoner is epileptic he is likely to be of unsound or defective mind, but it would be rather hard to say that because a person has had hysteria she is of unsound mind. Be sure, then, that you have to do with Epilepsy, and not Hysteria.

I believe it is our duty then to be prepared to defend, or rather to assist the defence of, a prisoner when we believe him to be accused of a crime which might reasonably be believed to have been committed by him as a result of insanity which existed in him at the time of the act, or which was committed by him while he was of unsound mind, though there is no apparent relation between the act and the insanity. Before you, gentlemen, it is not necessary to point out that we cannot be controlled in our opinions by the legal dictum as to "responsibility," but we must look much further, so that we shall be prepared, as a general rule, to accept the crime as a possible result of the insane state of mind, though the connection between the two cannot be traced. I know that it is very difficult to get even medical men to acknowledge that this is a correct way of looking at things, for they all say the very existence of asylums depends on the inmates not being completely "topsy turvey," and that if those in asylums use graduated rewards and restrictions, surely society has a right to exercise a similar system of discipline. Some would go further, and suggest that just as the stupid boy may be made to learn something more by the fear of the stick, so the lunatic should suffer *more*, rather than less, as he needs the more distinct lesson, but I need not say more on this head beyond recording my experience of the punitive judicial treatment of some insane persons. I know of one now undergoing imprisonment, and I believe it will do him some temporary good, and I remember one young fellow who was certainly checked in a career of mad criminality by punishment. These are only very exceptional cases, and I feel I should be doing harm if I did not make this clear. Punishment is of no use as a warning to other insane persons, but may act as a warning and deterrent to the individual.

I fear that I shall be but a poor follower of your former editor, the brilliant writer of "Responsibility in Mental Disease," but in his track I wish to recall attention to the great difficulties which rise from the parallelism between the states of the nervous system which lead to crime and to insanity. Though long impressed with this, from asylum experience, I have been yet more struck by it in recent years by the number of dwellers one sees in the border lands of crime and insanity. One is constantly asking, "What is my duty to such and to society?" They are not mad enough to be secluded, and one cannot act prophetically and lock them up because they may become insane, otherwise the large asylums of England would not be half big enough to contain them all.

In seeing such cases one cannot exclude from one's mind the thought that they are not only possible lunatics, but also possible criminals, and it may be our duty at some later time to defend them. We must not forget that in the order of things there will always be some who suffer through the tyranny of their organization.

"It was ordained by Fate that I had to steal," said the slave. "Yes," said the judge, "and it was ordained by Fate that you had to suffer." Some of these dwellers in the borderland of insanity have a fairly just judgment of the consequences of their acts, and of the nature of punishment, and on more than one occasion a prisoner-patient has selected to fall into the hands of the law rather than into those of the asylum physician. "Broadmoor" sounds like a life sentence, and I agree with some that a few months in prison may be preferred to that of a long sentence to an asylum. I would here certainly urge upon you to weigh carefully the full consideration of the plea you are raising before you raise it; for, though things may be just, they may not all be convenient. Practically we have to trim very often in this world. I say we have a right to consider the effect of the plea before we raise it, but it seems to me going rather far for a judge, as once happened in a case in which I appeared, to say to the jury, "You have heard the evidence of insanity, but, gentlemen of the jury, think very carefully before you send this young patient to an asylum where he may spend his life." It might be justifiable to urge this point so strongly that the weak-minded prisoner was found guilty of manslaughter instead of murder, and sent for years to penal servitude, but I have my doubts of it. And the result appears to me a very questionable gain either to patient or to society.

Other difficulties may arise when the prisoner is both acknowledgedly immoral and wicked, as well as insane, and under this head many cases associated with drink occur. Only recently I was speaking to one of the criminal judges on the point, and he owned the very great difficulty which arises in accepting the plea of insanity when the prisoner has brought the mental disorder on himself.

Each of us, when consulted in such cases, must use the best of his judgment, and be prepared to receive abuse from the public in some cases.

It is often very difficult indeed to decide on one's duty when a prisoner, who has without doubt been very intemperate before the criminal act, is seen by you for the first time after a couple of months of prison-care and abstinence. He is then

apparently sane, and you have to draw your conclusions from statements of interested persons.

There is always some danger in raising this plea, for there is naturally a prejudice against a man who has committed a crime while drunk. There are others besides the drunken who have been very immoral before the committal of the criminal act—such was the late Mrs. Pearcey—yet it might have been quite possible for such an one to be insane and immoral, and one must not hastily discard the plea of insanity because the prisoner is generally immoral. General principles are like averages, very bad particular guides; therefore in speaking on this matter I refer as often as I can to examples.

There are, however, certain conditions in which there can be no doubt about the right of raising the plea, but I think at present the method in which this is done is unsatisfactory. I think there ought, first of all, to be some sort of court of criminal appeal, where any point which has been neglected in the trial, or which has been discovered since, may fairly be brought forward. I think, too, this ought to be done in a systematic way, and not in the spasmodic way which is the rule at present. I shall have later to speak of the more objectionable ways of raising the plea. There can be no doubt that the plea of insanity is fairly raised in defence of a criminal when he has suffered from a distinct attack of insanity in his previous life, or when he is subject to some recognized form of nervous disorder, such as epilepsy. In some cases, where there had been previous attacks of insanity, the evidence that the patient at the time of the trial was unfit to plead was accepted, and he was detained at her Majesty's pleasure. This occurred in the case of the Ramsgate murderer. In some similar cases difficulty has arisen from the fact that after the crisis of the attack of insanity, marked by the committal of the act, the prisoner has rapidly subsided into his normal state, and one may have great difficulty in establishing the insanity as existing at the time of the crime, but if it can be shown that the prisoner has had previous attacks he will stand a good chance of escape, though he may, in his sane moments, fully recognize, from the legal standpoint, the nature and quality of his act (a patient at Bethlem threatened to kill me and said no jury would condemn him). Epilepsy, no doubt, has been found to be a very useful plea in the defence of criminals. First of all, there is no doubt but that the criminal classes have a large number of epileptics among them; next, epileptics are almost always without recollection of events that have occurred while they were in the fit, or in the automatic stage after the

fit; and in my experience prisoners are safest when they deny all memory of acts, and if they can be consistent in their denials they will baffle the most acute, for a time at least. Again, we know that epilepsy is associated with most extreme and apparently brutal violence. The plea of epilepsy was raised in two recent cases, in both of which I had to give an opinion. In the one, the man who shot his sweetheart was not hung; the other, Mrs. Pearcey, was. In both the statement of loss of memory of certain periods was asserted; in the man's case, however, he went to a police station and did not conceal the act; in the other concealment and denial went together. Epilepsy is, as I say, one of the most difficult points to clear up, and time should be allowed for the chance of the recurrence of the epilepsy.

The plea of insanity may be raised, as I said, before the trial, and may thus prevent the trial taking place. This is rare, unless the crime is committed by a person who is very mad, and who has been recognized to be such.

As a rule, the plea is raised, either after the trial before the Magistrates, or after the conviction. I think it would be very useful and satisfactory if when the plea is raised before the final trial, the prisoner could be in a specially arranged infirmary, where asylum attendants are in charge, and if here the government referee could, in conjunction with the prison official, see the prisoner, and a joint report be presented to the court, either before the trial or as the first plea of evidence for the defence. One of the greatest difficulties will be to avoid giving any grounds for the idea that anything is being done in an underhand way to screen a culprit; therefore, in most of these cases, the facts of the crime will have to be brought out clearly in court before the evidence of insanity is given. One of the dangers of the present day is the frequent raising of the plea of insanity in all sorts of cases. An energetic lawyer who sees that the client is almost certain to be convicted of the crime, looks round for some other way of escape, and it is to avoid playing into the hands of these men that I write. The real interest of society is neither to hang insane persons nor to let the criminal escape through an ingenious subterfuge. I heard, when in America, that the raising the plea of mental unsoundness has been raised almost to a special art, and that few millionaires die without an action being started calling in question the sanity of the deceased. I trust that we shall not run into any such vicious groove in connection with criminal trials, and that depends a good deal on us.

I believe it should be insisted that the plea of insanity

should be early and *formally* notified, and that if this were not done at the time, it should be only admitted later in very exceptional conditions. I would like to see some such process as this. The prisoner having been committed for trial, if the plea is to be raised, this should be done by a formal affidavit to the Home Office, which would at once depute a recognized specialist, such as the government already employs, to arrange with the gaol surgeon for a series of visits, if necessary, to the patient, who should now be under the asylum attendants' observation, and that in straightforward cases, if the report of the two agreed, the prisoner should at once be detained in an asylum at her Majesty's pleasure.

I see the dangers and difficulties of such a course, for the public would, in many cases, believe that prisoners, with social interests, might be quietly sent to an asylum till the storm had subsided. I admit the danger, and would therefore suggest that if the facts were in dispute the trial would have to go on, and the expert evidence would only be called in at the beginning of the defence. Even, on the other hand, if the facts were not in dispute, or the counsel for defence pleaded guilty, then the plea of insanity might at once be received.

When the trial is over, I think there ought to be a ready and certain, and, above all, a quiet way of settling the sanity or insanity of the prisoner.

Very few things, to my mind, are more demoralizing than letters to the papers. These so frequently are the outcome of either hysterical, maudlin sentimentality, or else of a desire to bring oneself before the world as a philanthropist. In either case they enter into details and suggest ideas which are morbid. If we are to have a Court of Criminal Appeal this will be altered, but till then it ought to suffice that the Home Office is notified by affidavit, that there are grounds for believing in the insanity of the prisoner, and these should be at once handed to a small committee of experts to report upon. I would suggest that there should be one recognized referee (such as Dr. Bastian is at present), who should have power to select a colleague according to the nature of the defence; thus in one case he might prefer to have one chiefly with experience of epilepsy and its mental disorders, and in another one with longer experience of county asylums than his own.

The referee, his colleague, and the gaol surgeon should at their own time report, and their report should be final. In many cases the report should not be published, or if published, the names of the physicians should not necessarily be added, as many object to public notoriety, and the best opinion might

thus not be obtained. There is still another way in which a satisfactory course might be formed. On notice being given to the Home Secretary he might request the President of the Royal College of Physicians and Commissioners in Lunacy each to appoint a man to join with the official referee.

Personally, I believe it would be a very good plan if the Commissioners in Lunacy had the giving the decision or appointing the committee of reference.

I know at present that they are not numerous enough to be able to spare time for such a duty themselves, but they are surely the proper authority. It has seemed to me each time when I have had to perform the function a very unpleasant one, and yet one from which I had no right to withdraw. If I was sure that the responsibility would be shared, *i.e.*, divided and lessened, if, too, I knew newspaper publicity would be absent, I should have felt more happy in performing a duty which, in most cases, is painful, and is generally harassing.

The points of this paper are: That we have duties as experts, that the present methods are clumsy, and that some plans for improving them are suggested.

P.S.—Dr. Orange pointed out, in the discussion which followed the reading of the paper, that provision does already exist for an official inquiry into the mental state of a criminal alleged to be insane. Therefore all that is needed is to set it or one of the processes above recommended in motion in all cases in which the allegation is made, whether before trial or after conviction.

CLINICAL NOTES AND CASES.

*A Case of Delusional Insanity.** By Dr. KEAY, Medical Superintendent of the Mavisbank Asylum, Edinburgh.

The following notes of a case of delusional insanity, in which recovery took place after nine years, may be of interest to the members of the Medico-Psychological Association:—

W. J., an unmarried lady, fifty years of age, was admitted into Mavisbank Asylum on 17th March, 1881. On both sides of her family there was a well-marked hereditary tendency to mental disease, but no exciting cause was known. Her temperament was somewhat reserved and suspicious. She was a woman of considerable intellectual ability, and well educated, being a good linguist and musician.

* Paper read before the Scotch Meeting of the Med. Psych. Assoc., Nov., 1890.

Her bodily health and condition were unsatisfactory. She was of small stature and feeble muscularity, very anæmic, and a constant sufferer from chronic rheumatism.

The attack of insanity commenced about a year before her admission into the asylum. At first her natural suspicious disposition seemed to become exaggerated, so as to amount to eccentricity, and later on definite delusions were evolved. There was no excitement. At the time of her admission she had the ordinary delusions of suspicion, believing that her father and other relatives were plotting against her, and that her food was poisoned. She had also delusions of unseen agency, complaining that people directed jets of noxious gases at her, and "worked on her" at night by some mysterious means. For several months she remained free from excitement, firmly believing in the treachery of her relatives, but on moderately good terms with those around her. She then began to suspect individuals in the asylum, particularly members of the staff, of trying to injure her, and became most irritable, excitable, and violent. She accused people of visiting her at night, sticking darts through her, and whipping her, and stated that on awakening from sleep she frequently felt that she had been beaten all over. Auditory hallucinations then began to trouble her, and when lying awake she had altercations with her imaginary enemies, and abused them to her heart's content. She continued in this state—irritable, suspicious, abusive, and delusive—for about five and a half years, that is, till four years ago, when she came under my care.

I found her the most troublesome and trying patient in the asylum. She accused members of the staff of assaulting her at night by stabbing her with darts, twisting her limbs, and "torturing her on the rack." She made constant demands for liberty, asserting that she was unjustly detained, there being nothing the matter with her. She was frequently extremely violent, striking and spitting at one without the slightest provocation. When out walking or driving, or when the door of her gallery was unlocked she constantly made attempts to escape.

This state of matters was so unsatisfactory that it became an urgent necessity to bring it to an end. First of all everything possible was tried to induce her to occupy herself in some way, but this was quite unsuccessful, she absolutely refusing to do anything while "in prison," as she called it. It then occurred to me that as her great craving was for liberty, it might probably make her less discontented and unhappy, and consequently less excited and violent, could it be granted to her. With this view the experiment was tried of giving her a room to herself in another part of the asylum, she being allowed to keep the key. I relieved her of all supervision by nurses, and gave her permission to go in and out of the house and grounds as she pleased, the only stipulation being that she was to keep her room in good order (thus ensuring her a little occupation), and was not to run

away. She refused to make any promise, and in about an hour it was reported to me that she had disappeared. She was found on the Edinburgh road, and brought back safely. A day or two afterwards she again escaped, and was brought back, and this was repeated a third time. After this, however, she gave us no trouble. Instead of leaving the grounds she went to the gardens and busied herself with the flowers, of which she was exceedingly fond. She became tolerably contented and happy, and the excitement gradually diminished, though she was still troubled by delusions of suspicion and of unseen agency, with hallucinations of hearing and of smell, and complained of being badly treated at night. At this period of her illness she exhibited a good deal of insane pride, spending a great deal of time in dressing and decorating herself, and appearing at the asylum entertainments arrayed in what she called a "Grecian costume," a fantastic attire scarcely suited to her age and style of beauty.

Her mental state now remained apparently unchanged for about two years, when the delusions seemed gradually to lose power. She complained less about them and the nightly persecutions, and in another six months they had entirely left her. At this point it is worth noting, I think, that as the delusions and hallucinations lost their force, she complained more of rheumatism. The rheumatic pains were not at this time really more severe, but she began to interpret them more correctly. She was discharged recovered in December, 1889, and up to the present date continues quite well.

In its mode of origin this case of monomania followed quite a common course. The patient had a strong hereditary predisposition to insanity, coupled with a naturally reserved and suspicious temperament. She had weak bodily health, being thin and anæmic; the brain, therefore, was badly nourished. For years she had been a sufferer from chronic rheumatism, the twinges of which in her joints and bones when misinterpreted easily became blows and twists inflicted by imaginary enemies. It would be impossible to fix the time when such a person becomes insane. Her suspicious disposition becomes more intensely so—is exaggerated. Delusions are evolved which she keeps to herself as long as she possibly can, being naturally reticent. It is only when they become so strong as to overcome her self-control that she expresses them, and is looked upon as insane. Cases of delusional insanity such as that here recorded, in which, without a preliminary maniacal attack, there is a slow and steady evolution of the disease, are looked upon as the most unfavourable of all.

The dovetailing of the different varieties of monomania, so well marked in this case, occurs in a greater or lesser

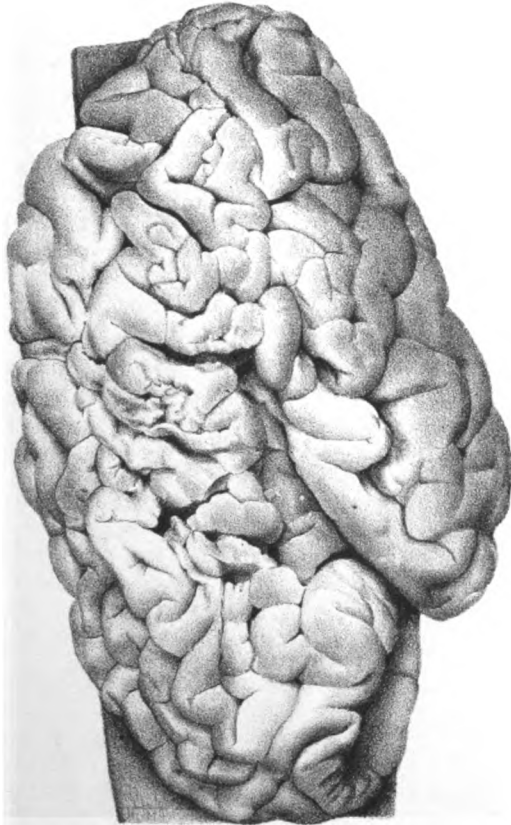
degree in nearly all, a pure case of any one variety being comparatively uncommon.

The attack of mania complicating the case is interesting. I believe the exciting cause of this was the irksome confinement in the asylum. She was a refined and over-sensitive gentlewoman, predisposed to insanity, and it seems reasonable enough to suppose that to be ordered about and controlled by nurses might have this effect. It is to be noted that when relieved of this confinement and control the acute symptoms abated.

Perhaps the maniacal attack was a fortunate complication, and led to the ultimate recovery of the patient from the chronic insanity. In delusional insanity there is probably an anæmic condition of the cerebral cortex generally, with ill-nourished cells in the sensory centres, lessened activity, and disturbed relations with the other centres. A diseased habit of cell nutrition is set up with irregularity of cell development. The acute maniacal attack takes place. Relaxation of the blood vessels and hyperæmia of the cortex occur with increased activity of cell nutrition and development, and when the acute symptoms subside the centres are left in a condition more nearly approaching the normal. The diseased habit has been, in short, changed by the stimulation of the cells affected. The same thing would probably have occurred had the patient been attacked by an idiopathic fever.

Post-Mortem Appearances (some of which were difficult to explain) of certain parts of the Nervous System in a Case of Spastic Hemiplegia. By EDWIN GOODALL, M.D.Lond., B.S., M.R.C.P., Pathologist and Assist. Med. Officer, West Riding Asylum, Wakefield. (With Plate.)

J. R., æt. 26. Diagnosis of mental state—idiocy. Degraded in habits, and of low degree of intelligence. He could appreciate simple orders, and express assent and dissent: speech possessed up to this amount only. The clinical notes of the physical state are unfortunately scanty. They are as follows:—Right arm generally smaller than its fellow, and wasting is more evident in certain places. The forearm forms an acute angle with the upper arm, the flexor muscles being rigid and prominent; passive extension possible only to the extent of a few inches. Muscles of upper arm evidently wasted, but those of the forearm and hand are notably so. The entire limb is held in close contact with the chest; passive abduction to a limited degree is



To illustrate Dr. Goodall's case.

possible. The forearm is held across the chest, with the hand flexed. The fingers, too, are bent upon the palm and thumb, are compressed, and folded on each other, so that the hand forms a cone. Patient could not use the hand for any purpose, though he could offer some slight resistance to attempts to abduct the arm. When the limb was pricked he showed signs of pain.

The right leg was much less affected. It was held stiffly and in somewhat everted position. In walking very little movement took place at the knee, the limb was dragged along with the inner margin of foot scraping the ground. A limited degree of flexion at the knee joint was possible when patient lay in bed; he was found at times with the limb slightly bent. Progression took place in jerky fashion, the left side doing the major part of work. The whole of right lower limb was wasted, as compared with its fellow.

Sight, hearing, sensibility of skin of face unaffected. Movements of eyes, of tongue, and of face unaffected. Sides of face symmetrical.

Death resulted from phthisis. At the necropsy no morbid changes were discovered in the bones of the skull or in the meninges of the brain. Such opacity as existed in the lepto-meninges—along the course of veins—was present in the same degree on the two sides. No unilateral changes were observed in the pia and arachnoid, such as are sometimes noticeable over a shrunken hemisphere. The pia was removed with customary trouble, no adhesions met with. After its removal the diseased state of the *left* hemisphere was apparent; as a whole, it was smaller than its fellow, and there was marked atrophy of certain convolutions, attention being particularly drawn to the state of the ascending frontal and ascending parietal, some of the features of which are illustrated by the accompanying photograph. In addition to the atrophied condition therein shown, the diseased parts exhibited notable pallor and (on section) density, and resembled gristle in consistence. The highest part of the ascending frontal gyrus preserved the normal size and shape, as did that part of the paracentral lobule (not exhibited in the photograph) which is formed by this gyrus. It may be added that, on examination with the microscope, the groups of "motor" cells—with their individual constituents—were found to be well-developed in this macroscopically-normal portion of the ascending frontal. In the corresponding part of the ascending parietal convolution, disease was evident; the naked eye noted diminution in size, and microscopically the morbid alterations of structure presently to be described were seen.

Taken in connection with the clinical observation—that a considerable amount of movement was possible in the right leg—the state of the cortical centre for this limb is of interest.

Those parts of the central gyri which correspond to the cortical centre for the arm, were found to be notably atrophied (middle third in each); and the ascending parietal displayed, on transverse section, a central channel surrounded by a thin wall of sclerosed tissue—the

original grey matter. The clinical note of the state of the right arm may here be recalled, almost complete powerlessness, with rigidity and atrophy.

In connection with the considerable amount of impairment of articulate speech, the sclerosed and atrophied state of the third frontal gyrus in its posterior part is noteworthy.

The transverse measurements of the sections of the left central gyri at their most diseased parts were, asc. frontal 4.5 mm., asc. parietal 3 mm. On the right side measurements at corresponding sites were, asc. frontal 9.5 mm., asc. parietal 6.5 mm.

Weight of whole brain (without membranes), 758 grms.; right hemisphere, 315 grms.; left hemisphere, 275 grms.; cerebellum, 145 grms.; pons and medulla, 22 grms.

The right hemisphere was small, but the convolutions, though below average size, were normal.

No inequality between the right and left halves of the pons; pyramids of medulla also equal.

The brain, spinal cord, and certain nerves from the right limbs (median and ulnar in arm and at wrist, posterior tibial at ankle) were hardened in bichromate of potash.

Peripheral nerves.—A number of transverse sections from these were stained, first in aniline blue-black, and then in logwood, the former stain picking out the axis-cylinders, and the latter the connective-tissue nuclei. Examination of these sections under a low power showed a marked degree of lateral compression of the entire nerve with its individual fasciculi. Instead of rounded bundles, all sorts of oval and angular ones appear. Epi- and peri-neurium are considerably increased in thickness, the perineurial sheath being plicated. Nuclei are plentifully distributed. There is marked inequality of staining of the connective tissue of different bundles; in some, too, axis-cylinders are well stained, whilst in others only c.t. nuclei, with faint yellow spots indicating nerves, are visible. The amount of c.t. is very striking; instead of a collection of round nerve fibres, supported by a delicate framework, the field shows a mass of c.t., in comparison with which the nerve-element is quite insignificant. Although the nerve-fibres are greatly reduced in size, many of them retain axis-cylinders. Sections stained by the Weigert-Pal method and examined with a low power show well the degree in which the nerve-tubules are diseased. In some fasciculi these are indicated by well-marked—though small—oval rings of dark-brown or black tint; the nerve-fibres, though compressed, are yet distinct. In other bundles only a few of such comparatively healthy nerves are seen, a large part of the space within the perineurium showing merely scattered traces of nerve-fibres of the faintest yellow colour, scarcely distinguishable from the light yellow ground substance. In other fasciculi, again, no dark rings occur, and even faint yellow ones are few in number, the eye encountering a field of yellow ground substance. (These specimens

were compared with the corresponding ones, stained with aniline and logwood, in order to check the results obtained by the Weigert-Pal method).

In sections stained with aniline and logwood examined under a high power, the most striking features are the shrunken and diseased nerve-fibres and the altered endoneurium. The fibres least diseased show curious shapes (lozenge, spindle, pear, and simple oval), and are much reduced in size, but their axis-cylinders are distinct, and these, surrounded by the yellow-tinted medulla, form prominent objects. The most diseased fibres, however, are mere relics of nerve-tissue; they are no longer compact bodies, but present themselves as parti-coloured collections of granules, lying between their healthier fellows. The yellow tint of the former fibre is mixed with blue, from imbibition of the stain by diseased tissue. In many fibres of fair size no indication of axis-cylinder is appreciable. Those adjoining the perineurium show extreme degrees of lateral compression. These various structures are scattered in a homogeneous (slate-coloured) ground substance, the appearance of which is very suggestive of the uniform matrix of hyaline cartilage.* Strongly-marked bands of fibrous tissue pass in from the periphery of the bundle in places, obscuring and doubtless compressing the nerve-fibres.

As regards the blood-vessels, measurement showed that the thickness of their walls was much above the average in healthy specimens; and the nuclei of the muscular coat were very considerably increased in number.

In the Weigert-Pal specimens—examined under the same power—the rings which appear oval under a low power are seen to be irregular in shape (as just described). Some extremely small rings (nerve-fibres) are seen, and the relics of nerve-tissue above mentioned appear strewn about the field as brownish-yellow granules. Certain fasciculi present a striking appearance, showing, in one part of their area, sharply defined, black rings, and elsewhere faint yellow ones, which, at the borders and extremities of the oval (compressed) bundle, give way to granules scarcely distinguishable from the ground substance. Apart from the corroboration afforded by the other stains, it would seem quite impossible that such appearances, repeated in numerous specimens, should be due to anything but advanced disease of the medullary sheath.

Longitudinal sections of the nerves showed (a) increase of epi- and peri-neurium, (b) irregular staining, some fasciculi staining well, others badly, and parts of the same fasciculus exhibited these variations, (c) nerve-fibres diminished in size, (d) plentiful and irregular distribution of nuclei. In places it is impossible to make out the

* In a paper in "Archiv. f. Psych. u. Nervenkrankheiten," xxi. Band, 2 Heft, Dr. A. Adamkiewicz figures nerves the roots of which had been compressed by the organized exudation of pachymeningitis hypertrophica. In these similar alterations of endo-neurium and nerve-fibre had occurred.

individual nerve-fibres, their borders being blurred and ill-defined, and the structures themselves having a faded appearance. With the Weigert-Pal method the shrunken and poorly-stained fibres can be followed a considerable distance; those immediately beneath the perineurium are especially diseased, being shrivelled and of a faint yellow tint.

It may be added that these morbid appearances are pronounced in the nerves from the upper limb particularly, in the posterior tibial the changes are less advanced.

Transverse measurements of fibres of a healthy nerve in two diameters, at right angles to each other (in a large number of instances), 11, 13 and 15 μ .

Similar measurements of diseased nerve-fibres, 7-12 μ length, 3 μ breadth, and the length is in many below the figures given.

Spinal cord.—On naked-eye examination of hardened pieces from various regions, no changes in the crossed pyramidal tract were detected. Sections were taken from cervical, dorsal, and lumbar districts—several from each—examined and compared with healthy sections. No asymmetry was observed in any, measurements with a millimeter rule giving equal results on the two sides. Naked-eye examination of the sections failed to reveal inequalities of staining (increased staining with aniline, or want of staining with Weigert-Pal) in the lateral columns. Microscopical examination failed to show any increase of connective tissue, loss or atrophy of nerve-fibres, disease of nerve-cells, vascular alterations, or, in fact, any lesion whatsoever. The crossed pyramidal tract in the cervical enlargement was particularly examined, with the negative result stated; it could not even be determined that a greater number of small nerve-fibres was present on one side than on the other (the results were confirmed by an independent observer). The granular ("fatty") bodies occurring in early stages of sclerosis could not be seen here.

A series of vertical transverse sections, stained with aniline blue-black and Weigert-Pal, failed to show any evidence of disease, the naked eye could detect no inequalities in staining or in shape of corresponding parts, and the microscopical appearances on one side of the cord were, so far as could be judged, similar to those on the other. There was no proof of increase of c.t. or atrophy of nerve-fibre in the lateral tracts, no noteworthy disparity in numbers of cells in the grey matter of the two sides; the cells appeared normal (comparison with similar longitudinal sections from a healthy cord was made).

Medulla.—With regard to the pyramids, a difference in size and amount of fibres on the two sides is first appreciable in sections cut from the portion of bulb which lies above the upper pyramidal decussation (decussatio lemnisci). Both in specimens stained with aniline and those double-stained (Weigert-Pal—alum-carmin), the nerve-fibres appear to be more scanty in the left pyramid. Under a high power more minute fibres are seen on the left than on the right side,

and connective tissue nuclei—as brought out by alum-carmine—are in stronger evidence on the former side. But these differences are by no means pronounced, and it is clear that the changes in the left pyramid are slight.

Pons.—The pyramidal bundles were carefully examined, and found to be more scanty on left than on right side. With a low power fewer nerve-fibres appear on the former side than on the latter, and the high power shows that connective tissue is more plentiful between the fibres on the left, and that these fibres are smaller than those of the opposite side. The differences were apparent only on scrutiny, and were exceedingly slight, viewed in the light of the clinical facts. The pons itself was below the average size (though equally proportioned); the individual fibres were smaller than those of an adult pons, hence the differences were the less striking.

The nuclei of the cranial nerves were found to be healthy (in medulla and pons); fillet and post. longitudinal bundle also normal on each side.

Crus.—There is an unequivocal difference between the crura. On examining the middle third (pyramidal tract) it is found that in this part on the left side—in comparison with the right—the number of nerve-fibres is diminished, and particularly that the remaining fibres are small. The connective tissue between the fibres is increased in amount on the left side, and here a large number of “amyloid” bodies is apparent. No “granular” bodies were seen.

Internal capsule.—On examining those parts of the capsule which transmit the upward continuation of the pyramidal fibres, differences are observed between the regions of left and right side, analogous to those obtaining in the case of the crura. Whereas transverse sections of the right capsule (aniline) exhibit closely-packed nerve-fibres in the pyramidal tract, those of the left show, in the corresponding part, an excess of intermediate supporting material, which everywhere separates the fibres from each other; to this the deep blue tint which strikes the eye is due. In certain portions of the affected area no nerve-fibres at all are visible. “Amyloid” bodies are not so much in evidence as in the corresponding crus; no fat granules are to be seen, such as have been described in cases of degeneration of the motor tract. The Weigert-Pal stain gave unreliable results, especially when sections treated with it were submitted to the high powers of the microscope. Even in the right capsule nerve-fibres were unequally stained, such variations being observed as are noticeable in the fibres of healthy peripheral nerves stained in a similar way. No minute comparison between left and right sides could be instituted by aid of this stain; only so much was ascertained under the low power, that, on the left side, processes, of faint yellow colour (*i.e.*, connective tissue) jutted out from the outer limit of the capsule and projected into the pyramidal tract, an observation which corroborated, so far as it went, the more exact results of inquiry by means of aniline blue-black.

Convolutions of motor area, left side.—A great number of sections were taken from frozen brain, and stained with aniline blue-black.

The *outermost* layer of the cortex presents an excess of deeply-stained connective-tissue elements. Instead of a delicate, pale zone with few cells, this layer has a blue appearance, and the cells are densely packed together: the unusual depth of colouration is largely due to the abnormal degree in which the homogeneous matrix is stained. The predominant c.t. cell belongs to the smaller of the two kinds described;* the larger, flask-shaped element is by no means prominent. Skirting the entire convolution is a belt of condensed tissue of deep blue colour, in which no structure is to be made out beyond indications of fibrillation here and there. The vessels in this layer show no peculiarity.

In the *second* and *third* layers the small, round c.t. cell is again prominent to the comparative exclusion of the angular nerve-cell. The delicate upward prolongations of the pyramidal cells—so numerous in healthy specimens—are here exceedingly rare. The nerve-cells are few in number and stunted, with scanty and shortened processes, and such cells as are present show abnormality of staining; the nucleus is not sharply defined, as in health, but appears almost insensibly to blend with the surrounding protoplasm. The neuroglia matrix is throughout these layers—as, indeed, throughout the cortex—much too deeply stained, and clumps of tissue are here and there visible which are still more deeply coloured. Since the sections were of average thickness, and the staining process lasted the customary time, the uncommon depth of staining must have been due to disease, a conclusion amply borne out by the appearance of individual elements of the specimens.

Fourth layer.—The average size of a considerable number of motor cells on the left side (mostly contained in sections from the ascending frontal gyrus) was $48 \mu \times 24 \mu$. On the right side the average size of an equal number was $59 \mu \times 32 \mu$. The average on left (diseased) side is greater than the lowest limit assigned to the motor cells in health ($30 \mu \times 12 \mu$, Bevan Lewis), though the average length of the diseased cells is much less than that of healthy ones— 60μ . But the diminution in number and the deformity of these cells are here more striking than the diminution in size. In some sections from 3-6 cells only are available for measurement, and even when comparatively numerous they are stunted and misshapen, and their primary processes are shortened or altogether absent, the cells then appearing as more or less rounded bodies. Scarcely any of them exhibit lateral processes.

Fifth layer.—But little remains of the cell-formation peculiar to this layer; an occasional spindle or tri-radiate cell meets the eye, but these rare specimens are almost lost in the wealth of round c.t. elements. In many sections a separate spindle-cell layer can no longer with propriety be spoken of.

* Bevan Lewis.

On examining the central cone of medulla and the region immediately beneath the cortex, one sees a homogeneous ground-substance of deep blue colour, and great numbers of small round cells, instead of the scattered round and flask-shaped cells, the vessels and fibrillæ, and the faintly-coloured matrix of the healthy specimen. The paucity of vessels in the diseased parts (grey and white matter alike) should be mentioned.

To summarize the appearances in the cortex, examined by the fresh method, there is atrophy of nerve-cells and overgrowth of c.t. cells; in some specimens—especially from asc. parietal gyrus—the morbid state is so advanced that were it not for the presence of a few pyramidal cells, which, though deformed, yet give evidence of being nerve-cells, there would remain no proof of the real nature of the tissue.

Central convolutions, right side.—In fresh sections obtained from these parts the proper structure of the cortex was fairly evident, though imperfections could easily be detected; in the brain of an idiot it could scarcely be otherwise. The cortical layers could clearly be distinguished, although their individual elements were, in comparison with perfect specimens, scanty and small. This observation did not, however, apply to the case of the motor-cell layer, the elements of which—as is evident from the average stated—were well-developed. The cell-groups, in fact, were numerous, and the cells of fair size, with well-formed processes. In the outermost layer of the cortex spider-elements were unduly large and prominent.

These results, obtained by the fresh method, were compared with and supplemented by others got from examination of sections from the hardened brain, which were stained with aniline and Weigert-Pal respectively. The former sections show that diminution in size and number of the axis-cylinder processes in the central cone of medulla is very marked on the left as compared with the right side. More vessels are seen in sections from the left side than were apparent in similar sections in the fresh state. Corrugating action of hardening reagents may explain the difference, as a result of which the cells of connective-tissue are diminished in size and number; hence more capillaries come into view. On the right side, where no excess of c.t. cells existed, and where, therefore, the shrinking action of reagents has not had such scope, the difference between fresh and hardened specimens, in respect of wealth of vessels, is less marked. In general, much less information is obtainable from the hardened than from the fresh sections. With the Weigert-Pal stain marked differences are again visible between the convolutions of right and left sides. Disease of the left is strikingly shown by the state of the medullated fibres in the central white matter: they are shrunken and scanty, being separated also by tracts of unstained connective-tissue. The sheaves of fibres which radiate outwards into the cortex are, on this side, few and small, and the intra-cortical meshwork is in great measure destroyed.

Returning for a moment to the fresh sections, each, from the ascending parietal gyrus of the left side, exhibited a small hole at the base of the grey matter (the section of the channel which was described as traversing the length of the gyrus). Microscopically, this aperture was found to be bounded by dense connective-tissue, and on the outskirts of the band so formed numerous spider-cells were found. The function of the part must necessarily have been seriously damaged by this loss of tissue.

These morbid appearances of the motor area of the left hemisphere and the peripheral nerves of the right side have been described in some detail because, in view of them, the (apparently) normal state of the spinal cord is of much interest.

In connection with the observations made in this case it will be seasonable to refer to a paper in "Brain," Vol. ix.,* in which the relationship between the cortex of the brain and the lateral pyramidal tracts is dwelt upon. It appears from this article that the common assumption—that "the motor area of the cortex coincides with the 'cord-area,' *i.e.*, with the area of cortex destruction of which causes degeneration in the cord"—is not altogether justifiable. Sherrington has, in fact, found that a lesion lying behind the "motor area" of the best authorities causes degeneration in the lateral pyramidal tract, and he and Langley came to the tentative conclusion that the cord-area stretched further posteriorly than the described motor area. Now, in the case under notice, disease existed at the two ends of the nervous system, in the cortex and peripheral nerves, but the connecting tract in the cord was apparently unaffected. The loss of power in the limbs was due to disease of the motor area of cortex: the wasting of limbs to disuse. How is the apparently intact state of the cord to be explained? May we not assume that it was due to the influence of the cord area of the cortex, which remained unaffected, or in large measure so?

A case permitting of comparison with the present one is quoted in an article in "Brain," Vol. ix.† It affords an instance of disease at centre and periphery co-existent with integrity of the intermediate connecting tract. Whilst the muscles showed extensive degeneration, and the anterior cornua of the cord were diminished in size and contained

* Recent observations on degeneration and on nerve-tracts in the spinal cord. A critical account by J. N. Langley, F.R.S.

† J. A. Ormerod. "Amyotrophic Lateral Sclerosis."

atrophied nerve-cells, the nerve-trunks "showed no well-marked pathological change."

But in the present unsettled state of our knowledge of the course of the motor-fibres in the cord speculation of a different order may be permissible. The fibres of each pyramid of the medulla may proceed to their destination not only by way of the direct pyramidal tract of the same and the lateral pyramidal tract of the opposite side, but also through the direct tract of the opposite and the lateral tract of the same side; and they may favour a particular tract or tracts; possibly may be distributed amongst the four tracts, proceeding to their termination by way of cross-connections. One might, therefore, in seeking an explanation of the present case, entertain the supposition that the nerve-fibres connected with the affected limbs, being scattered in the manner suggested, failed, though individually shrunken, to attract that attention which would have been drawn to them had they been collected together in a single tract of the cord.

OCCASIONAL NOTES OF THE QUARTER.

Koch's Lymph as a cause of Mental Disorder.

In a special number of the "Berliner Klin. Wochenschrift" is the report of a contribution to the discussion on Koch's treatment by Prof. Jolly, the well-known alienist, who has succeeded Prof. Westphal at the Charité. Prof. Jolly's contribution is on the development of certain psychoses as an after-effect of the injections by Koch's method. We feel inclined to exclaim "Et tu Jolly!" for of all recent impeachments of the "cure" surely this was the least to be expected. Prof. Jolly must, however, be read, for we shall then find that what he says is, in all respects, most reasonable, and that his statement may be said to amount to an impeachment of some degree of seriousness. He first points out the well-established fact that pyrexia does not affect the mind, during its presence only, in the form of the delirium of fever, but that any and every kind of fever is liable to be followed by certain psychoses. He then states that it was most reasonable to expect that the fever artificially excited by Koch's method would not prove an exception to this rule, and proceeds to detail three cases in which as a sequel to the injections a definite insanity arose.

The first case, a man of about 35, was admitted under Prof. Leyden for the new treatment. He was suffering from an obstinate pleurisy, together with slight apical signs on the right side, but bacilli were not found in the sputa. Between November 23rd and December 8th he received five injections, beginning at the dose 2mgr, and mounting up to 7.5mgr. The highest temperature recorded was 104°, the lowest 101°. On two occasions the injection was followed on the next day by a return of the fever. From the end of the last febrile reaction the temperature remained normal, therefore during the whole period of the symptoms about to be detailed. There was for each febrile reaction, corresponding to each injection, considerable heaviness of intellect, with confusion of thought. On the second day, after the last injection, the psychosis began in the form of a delusion as to a statement in a letter. Thereupon followed distinct ideas of persecution, and in the end the patient became so excited that he could not be kept in bed, and he was then transferred to Prof. Jolly's wards. On several occasions whilst in this department of the Charité he required isolation on account of the excitement. The whole period of insanity lasted about 14 days, and then suddenly ceased.

The second case was that of a workman, aged 27, the subject of phthisis, the signs of which, including numerous bacilli in the sputum, were quite distinct. This patient was slightly weak-minded, and, moreover, he stammered and was dull of hearing. Four injections were given within the space of eight days, the dose rising from 2mgr. to 1cgr. Very little rise of temperature followed each injection, but on the other hand very severe headache resulted each time, and for this reason the injections were discontinued for the time. Subsequently, at the patient's request, they were resumed, and within the space of four weeks 15 injections were given, the dose rising from 1cgr. to 1dgr. Again the temperature effects were slight, the highest record being about 102.4°, but again the intense headaches occurred, and the patient lost weight. On discontinuing the injections, Delusional Insanity with ideas of persecution, set in, and, though apparently abating, this state persisted at the time of Prof. Jolly's communication. In this instance, as the Professor points out, the subject was strongly predisposed to mental aberration. It is to be further noted that the actual fever was but slight.

In the third case, a woman, a neurotic subject, developed phthisis with pyrexia, and as a result of the fever, the natural

product of the disease, there occurred delirium on several occasions, the delirium lessening with the fall of temperature. By injections the pyrexia was now started artificially, and a delirious state resulted, for which the patient was admitted into hospital. The injections were not repeated, but the fever, once started, continued, and during 3-4 weeks the above mental condition persisted; then it ceased. The fever latterly was, of course, that due to the tuberculous process.

It is but too clear, as Prof. Jolly states, that these results will almost certainly be again witnessed, although they may occur in only a small minority of patients treated by "Koch's method"; that when they do occur they will probably be of temporary duration—the prognosis in febrile psychoses being favourable—but that there will always be the *danger* of a permanence of the mental aberration; that such accidents are to be guarded against by carefully administering the drug, both as to quantity and as to interval, and by further avoiding all cases that are mentally predisposed to Insanity.

We have little to comment on, but much to commend in Prof. Jolly's communication. It is essentially a reasonable and temperate caution, and suggests the frame of mind we should bring to the examination of this much-extolled and much-defamed—wholly trusted and as wholly distrusted—remedy. *In medio tutissimus ibis.* If, as some hint, a like danger attends the use of Hypnotism, it is very desirable that the same frame of mind should be brought to bear upon its study.

There is another and entirely different psychological aspect of Koch's remedy for tuberculosis which we cannot pass over in silence. It is quite certain that a very considerable allowance must be made for the beneficial effects of Suggestion, in estimating the apparent benefit which has been witnessed in many cases after the injection of the new remedy. It is surprising to us that English physicians have in their reports of Koch's cases, seen by them in Berlin, taken no account of the influence of expectant attention and the sanguine hopes suggested by the enthusiasm generated by Koch's famous announcement. It has been left to the acute mind of Virchow to perceive and point out this potent source of fallacy in estimating the improvement in the symptoms and the supposed cure of cases of Phthisis. If these good effects follow the injections, and are, in some instances, due to Suggestion, it is a very happy circumstance, but let the true element in the process of treatment be recognized in a certain proportion of cases and a possible factor in most.

There is a third aspect of the remarkable excitement following Koch's announcement of an antidote for tuberculosis. Whatever degree of success may eventually attend the employment of the bacillary lymph, the flocking of so many thousand persons to Berlin, medical and non-medical, from all parts of the world, will form the subject of another chapter in the history of Epidemics, not unlike those of the Middle Ages, which the psychologist cannot fail to study with interest.

Plea of Insanity in Criminal Cases.

The most effectual mode of bringing the knowledge of mental experts to bear upon the plea of insanity and alleged consequent irresponsibility has from time to time been brought before, and considered by, the Medico-Psychological Association.

So far back as 1868, Professor Laycock read a paper at the annual meeting, entitled "Suggestions for the Better Application of Psychological Medicine to the Administration of the Law," and moved the appointment of a committee to consider the subject. The proposal was carried, and the following members were placed on the committee:—Dr. Laycock, Dr. Rhys Williams, Dr. Christie, Dr. Sankey, Dr. Lockhart Robertson, and Dr. Maudsley, with power to add to their number.

The report was presented at the annual meeting of 1869.* The incompetency of a jury to understand scientific evidence was pointed out. "It is impossible to believe that a jury can, even under the guidance of the best judge, who has not special knowledge, be instructed to the requisite point within the short period of the trial." The proposal made by the committee was to pursue the course adopted in Admiralty cases, in which "the judge is assisted by assessors of competent skill and knowledge in the technical matters under consideration." It was further urged by this committee that a Royal Commission should be appointed to inquire "into the relations of mental science to the administration of justice, with a view to a revision of the existing system of criminal jurisprudence in its relation to insanity." The result was that the Government replied that they saw no necessity for taking any steps in the direction indicated.

* See "Journal of Mental Science," Vol. xv. No. 71.

In February, 1880, at a quarterly meeting of the Association, held in London, a debate took place on the same subject, in which Dr. Maudsley recalled the attention of the members to the foregoing recommendations of the committee in 1869, and advocated them. It was urged by the writer of the paper * which led to the discussion, that the ground of complaint was the utter uncertainty as to what course would be pursued when a prisoner, regarding whom suspicious of mental unsoundness were raised, came before the magistrate, and he urged that this was precisely the period when it was all important to discover his condition of mind. He maintained that magistrates should obtain at least one expert in addition to the gaol surgeon, full powers being given them to make a careful examination of the prisoner. If committed to trial their report should be presented to the Court, they being subject to cross-examination. It was not proposed to take away from the defence and prosecution the right to call medical witnesses. The most important Act of Parliament, viz., 27 and 28 Vict., c. 29, s. 2, was cited, although it did not contemplate the prisoner, when brought before the magistrate, fresh from the commission of the crime. An extension of the provisions of this Statute was proposed as the best means of carrying out an improved system of ascertaining the mental condition of prisoners for whom the plea of insanity was raised. Dr. Nicolson pointed out that prison-surgeons were in many instances induced to report that there was no indication of insanity in cases which were found to be clearly of unsound mind, and detained in consequence at Broadmoor during her Majesty's pleasure. And why? Simply because "the great bugbear of cross-examination stuck in their throats. They did not like to raise the question of a man's insanity, knowing that they might be had up and pestered with all sorts of questions for which they were not prepared; so they preferred to go on quietly till the end of the sentence, and then let the man be discharged in the usual way. The Chairman, Mr. Mould, observed that "barristers did not want assessors any more than they wanted experts, because they would find that they knew too much for them." The discussion ended with the reference of the subject to the Parliamentary Committee of the Association. The question was considered at the next meeting of this committee, but it did not see its way to make

* "Mental Experts and Criminal Responsibility," by D. Hack Tuke, M.D. (See "Journal of Mental Science." Ap., 1882.)

a definite proposal to the Government, partly in consequence of the refusal of the latter on a previous occasion to consider the propositions of the Association or even receive a deputation.

In 1883 Dr. Orange, the President of the Association, made the criminal law in relation to madness the fitting theme of his Address—fitting, for no member, surely, had so great a right as he to expound this difficult relationship—and although he dwelt mainly on the test of legal responsibility, especially as expounded by Mr. Justice Stephen, he brought forward after the delivery of his discourse a suggestion as to the best means of ensuring a medical examination of a prisoner charged with crime. Before reviving it we may cite one passage here as containing the expression in the fewest possible words of what is theoretically desirable, whether attainable or not. “In a more ideal state of society than that which now exists, the class of criminal lunatics would disappear, because no one would be sentenced to punishment without *his mental state being ascertained before sentence*, instead of, as now so generally happens, afterwards; and, furthermore, because persons known to be insane would then be placed under control before, and not, as now, after, they had committed some alarming act of homicide or violence.”

Dr. Orange's suggestion was this:—That the following persons should examine and report upon the mental condition of a prisoner charged with crime and suspected to be insane: “The medical officer of the prison, the medical officer of the county asylum or hospital for the insane in the neighbourhood, and a physician of standing in the town where the prison is situate.” Appended to this was the recommendation that the examination should be made “as soon after the commission of the crime as possible.” Dr. Orange observed that these examiners would be appointed either by the Treasury or the Public Prosecutor. The proposition contained the recommendation that the three medical men should, after consulting together, draw up a *joint* report to be given to the prosecuting counsel. The resolution, which was moved by Dr. Yellowlees and seconded by Dr. Hack Tuke, was carried *nem. con.*—(Journal, Oct., 1883, p. 451.)

This resolution, brought under the notice of the Government, appears to have exerted some influence, although not in the precise form indicated.

The Attorney-General (Sir Henry James) directed "that whenever an accused person should be brought before justices on a capital charge the magistrates' clerk should communicate with the solicitor of the Treasury, and that that officer should take charge of the prosecution unless he finds that some competent person or local body has the conduct of it." Moreover, "in these cases in which insanity is alleged, full inquiry shall be made, and in the absence of his or her friends' ability to produce witnesses, the Treasury Solicitor shall secure their attendance."

The expression "full inquiry" is understood to include any medical examination which may be thought needful. It is to be noted, however, that the Attorney-General's directions apply exclusively to capital cases, whereas the crimes committed by persons sent to Broadmoor during her Majesty's pleasure are of various kinds.

The next step forward was the appointment of a "Crown referee in cases of supposed insanity." Dr. Bastian was the first to hold, and still fills, this responsible office.

Whether the action which the Government has taken is sufficient, and whether the remedy provided is systematically employed, is a question worthy of consideration. Anyway, very few persons appear to be aware of what has already been done in order to insure expert examinations of and reports on prisoners accused of crime and suspected of insanity.

At the last Quarterly Meeting of the Association, held at Bethlem Hospital, Dr. Savage read a paper (see the current number, p. 238) on the "Plea of Insanity," in which he commented on the unsatisfactory state of the law in the matter we are discussing, and proposed several alternative remedies for the alleged defects in the practice of the Treasury and Home Office in criminal cases connected with insanity. To this communication and the discussion which followed upon it (see report of the Meeting in "Notes and News") the reader is referred. Whatever course may be adopted—the existing one or a better—let it be uniform and definite, and let it cover all forms of crime, and extend to the examination of a prisoner before trial, and to a man after his conviction.

PART II.—REVIEWS.

La Folie chez les Enfants. Par le Dr. PAUL MOREAU (de Tours). Paris : Baillière. 1883.

In the little book before us Dr. Moreau has published, for the first time, a complete essay upon insanity in children. That children are subject to this affliction has been shown with more or less fulness by several writers, English and foreign, so that this liability, long either doubted or unnoticed, has been established as a definite proposition. Still, the proofs hitherto have been but occasional or incidental, and Dr. Moreau has done good service in formally presenting the whole matter before us in a systematic way.

“De nos jours le doute n'est plus permis : oui, l'enfant peut être atteint de folie, et cette affection présente dans le jeune âge les mêmes caractères généraux que ceux que l'on observe chez l'adulte” (p. 2).

On entering upon this study we may begin by pointing out one quality which makes it a very useful training for the psychologist. We are, all of us, too ready to assume that like acts signify like mental processes: for instance, if a patient dash through a window and fall thirty feet to the ground, so injuring himself that he dies, we too often record the case, simply and without misgiving, as suicide. Now an analysis of motive might have proved such a case to be one of accidental death, and that the patient dashed away not to destroy his life, but to save it from some imaginary danger. Thus insane acts of children, similar to insane acts in adults, if thus more carefully analysed, may prove to have a different nature, or, at any rate, to have different associations, and the working out of such problems will help us largely also in the general study of insanity.

Dr. Moreau, in his first chapter, decides approximately the limit of age within which patients are to be regarded as children—limits which do not necessarily coincide with legal definitions, and which vary, indeed, with varying climates and customs.

The second chapter deals with the history of the discovery of insanity in children, and, although brief, it is instructive and accurate so far as it goes. The only two essays which preceded his own, he tells us, are “*Le Paulmier, Des affections mentales chez les enfants,*” a thesis of Paris in 1856, and less directly to the purpose, a work by M. Bernard Perez; “*Psychologie de*

l'enfant" (F. Alcan, 1886), which Dr. Moreau considers a remarkable one, but which the present writer has not seen.

Dr. Maudsley's excellent chapter on the subject in his "Pathology of Mind" is, however, well known.

The author next considers the causes of infantile insanity. In general terms he sketches the characters of infancy and childhood, the absence of reflection and of self-control; the spontaneous and capricious forms of action; the domination of immediate sensual impressions and the absence of regard for the future; the desire of power and the tyrannical use of it. In some cases it is well said that arrest of development "attaque moins à l'aptitude intellectuelle qu'aux instincts qui n'arrivent pas à se spiritualiser" (p. 20).

The influence of heredity is then discussed, and those of imitation, of education, of strong impressions, and again of sex, temperaments, climate, puberty, onanism, and so forth, and again of sunstrokes, intoxications, injuries, fevers, tuberculosis, dentition, and digestive derangements. All these parts of the study are written tersely and ably, and well deserve perusal.

The second section of the work deals with the more physical side of neurosis, such as eclampsia, and with the psychical side—with somnambulism, hallucinations, mania, melancholia, and concludes with a chapter on "Enfants prodiges."

The third section is concerned with diagnosis, prognosis, medico-legal procedure, and therapeutics. These latter chapters are very brief—too brief—but are written with acuteness and intelligence.

The chapter on "Épidémies Psychiques" may be cited especially as an example of these qualities, and we confidently recommend our readers to obtain this little treatise. It costs a very small number of francs, but which has given us a great deal of interesting material and thought, put together in that clear, symmetrical, and engaging form which is the endowment of the French people.

T. CLIFFORD ALBUTT.

Étude Anthropométrique sur les Prostituées et les Voleuses. By Dr. PAULINE TARNOWSKY. Progrès Médical, 1889.

The author has recorded in this volume the results of his researches in the Hospital of Kaliukine and the Prison of Litowski Zamok. His observations extended over four years, and were made on a great number of prostitutes and habitual female thieves. The methods of Broca and Topinard were adopted, and are set forth in great detail by means of draw-

ings and comparative tables. The book constitutes another valuable contribution to the science of criminal anthropology, and is the more valuable in that it consists mainly of definite ascertained facts.

Dr. Tarnowsky holds that it is necessary to know the origin and history of each individual case, and the stock from which she has sprung, before a conclusion of any value can be presented. He is of opinion that the parents, and even the forefathers, should have belonged not only to the same race, but also to the same country and province. The difficulties are still further augmented when it comes to be a question of the preponderance of morbid heredity, or the condition of both the parents at the moment of conception, or of the psychological alterations that may exist in the person examined.

It is, in fact, impossible to present the results of complete investigation. Impediments are inseparable from researches of this nature, and serious deficiencies in the chain of evidence must occur.

Dr. Tarnowsky sets forth the reasons which have influenced him in his decision to study these persons in spite of the drawbacks above mentioned. These are, briefly, the uniformity of the race under observation, the anthropometric measurements, the anthropological characteristics, the hereditary influences, the extinction of the stock in the case of prostitutes as signs of degeneration, and the mental manifestations exhibited by these persons.

The following points of difference between prostitutes and thieves are noted :—

Prostitutes.

Neater in personal appearance; comfort, good food, gewgaws, pleasures and distractions are necessities of life.

Work is abhorred by them; they live from hand to mouth.

They are expansive and sentimental.

General characteristics—laziness and absence of moral sense.

Thieves.

Neither coquettes nor gourmands. They think little of comfort.

They work in prison and accumulate a little money against the day of their release.

They display energy and firmness, are more stable-minded, and do not drink to such an excess as prostitutes.

A certain prudence, reserve, defiance, a want of sincerity, and absence of remorse are characteristic.

Denial of turpitude, and a certain amount of modesty is shown.

Dr. Tarnowsky's observations on these two classes have been made on the same lines, and he arrives at the following conclusions :—

1. Professional prostitutes are incomplete beings, having been arrested in development, tainted with a morbid heredity, and presenting signs of mental and bodily degeneration in connection with their imperfect evolution.

2. The signs of physical degeneration due to an imperfect organization are manifested by the frequency of malformation of the head, anomalies of the skull (41.33 per cent.), of the face (42.66 per cent.), of the ears (42 per cent.), and by defective teeth (54 per cent.).

3. Their mental anomalies are shown by more or less pronounced weakness of intellect, by a neurotic constitution, or by a notable absence of moral sense. These anomalies are confirmed by the abuse of the organs of generation, by the taste they show for their horrible business, to which they return voluntarily after having been set at liberty.

4. The signs of degeneration are more marked in the cases of those prostitutes and thieves whose mothers were habitual drunkards, and this confirms the theory that it is chiefly the influence of the mother that is re-echoed by the organism of the child.

5. The sterility and extinction of the stock of prostitutes depends in great measure on their abnormal condition—fertile in hereditary blemishes—which seems to confirm their degeneration.

6. Habitual prostitutes, who cannot be classified with the sane and normal, since they make a business of such a life, fill up the two large gaps that criminal statistics establish in favour of women.

7. Habitual thieves, although also presenting a great number of the physical and moral signs which distinguish them from respectable women, nevertheless are not so far removed from the normal type as prostitutes. Because :—

- a. The thieves are laden with a less pernicious heredity than the prostitutes.
- b. The signs of physical degeneration are fewer in number in thieves than in prostitutes.
- c. The number of births is greater among the thieves.
- d. The principal diameters of the skull, as well as the total horizontal circumference, are greater amongst thieves than amongst prostitutes.
- e. The zygoma and jaw are larger among the prostitutes.
- f. The moral and intellectual level of thieves is higher than among the prostitutes. The thief has a greater self-respect—a more lively intelligence. She is more energetic, and brings a greater resistance into the struggle for life. She is much less lazy, and does not fear work.

g. However incorrigible the thief, however numerous her faults, she could not commit them and repeat them at all hours like the prostitute, it being granted that thieving and sexual vice are equal units—admitting for the moment that the two faults are of equal value. In every case the thief only steals at intervals, with the opportunity; while the prostitute traffics with her body without respite, and abandons the right to choose or to refuse—she does not wish to change her abject occupation.

8. Anthropometric results, as well as researches into their heredity, the circumstances of their birth, their subsequent social life, as well as the study of their intellectual and moral level, concur unanimously in proving that prostitutes and thieves belong to a class of women which is abnormal, degenerated, or degenerating. They are the products of the lower strata, of the refuse of society, and their number diminishes in proportion as evolution ameliorates mankind.

The work of Dr Tarnowsky has cost him great labour and much time, and if it has not led to the results desiderated by the author, it nevertheless constitutes a highly meritorious production. It is apparent that these studies deserve every encouragement, and are of great importance from a medico-legal point of view.

La Folie à Paris. By Dr. PAUL GARNIER. Published by Baillière et Fils. Paris, 1890, p. 421.

This is a statistical, clinical, and medico-legal study of insanity, as seen in Paris at the special infirmary, du Dépôt de la Prefecture de Police.

The statistics show that insanity has increased in Paris 30 per cent. between 1872 and 1888, that there is a great predominance in the prefecture cases of the male insane, and that this is rapidly increasing. The two essential factors of increase are alcoholism and general paralysis, other forms resting almost stationary. The largest number of cases are received in April and May, of general paralytics in June, and of the alcoholized in July. The alcoholic cases are of a more severe type than formerly, and this is attributed to the greater toxicity of the popular forms of alcoholic beverage—absinthe, vermouth, etc.

The clinical section is interesting throughout, but especially in the alcoholic cases. The author gives

examples of drunkenness, which he describes as α Excitomotor (maniacal, furious, convulsive); β Hallucinatory; γ "Delirante" (psychic). These he considers to be complicated or anomalous forms of alcoholism.

In the medico-legal division of the work, Dr. Garnier makes the satisfactory statement that in Paris the weight accorded to the opinions of the medical expert by the legal authorities is scarcely inferior to that which could be legitimately expected.

The author is especially impressed with the difficulty of dealing with the alcoholic insane, who oscillate between the prison and the asylum, and whose detention is of insufficient duration to effect any real improvement under existing conditions. He advocates a special asylum for the criminal insane and the "instinctive" criminals.

The "instinctive" criminal Dr. Garnier illustrates by the case of I. Lepage, *æ*t. 16, who murdered a sleeping woman to obtain a purse containing a few francs. In the medico-legal report on this case the opinion was expressed that Lepage was not affected by mental disorder, but presented in his disposition and tendencies the defects (the anomalies of feelings and inclinations) met with in the instinctive criminal.

This youth was condemned "aux travaux forcés à perpétuité."

Lepage was not, says Dr. Garnier, a born criminal (*criminel-né*), since he showed no criminal tendencies until the age of fourteen, but had latent "evil instincts" in his organization, derived from an intemperate father.

Lepage had not the anatomical characters of the born criminal of Lombroso, and does not appear to have had the defective appreciation of the moral insane; he rather took pride in the immorality of the act and the consequent publicity.

The term, says Dr. Garnier, contains its definition in itself, but it is doubtful if this or the description given is quite satisfactory, even if the type be accepted.

The work terminates with a number of medico-legal cases, some of great interest. It is well worthy of perusal, and of a place on the book-shelf of the medico-psychologist.

Familiar Forms of Nervous Disease. By M. ALLEN STARR, M.D., Ph.D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, New York. Wm. Wood and Company. New York. 1890.

Within the compass of little over three hundred pages, Dr. Starr has included a great deal of information, put very clearly. The book is illustrated very freely, but the illustrations are well selected, and are decidedly helpful to the text.

Of necessity, we meet with many very familiar diagrams, but unfortunately they cannot be dispensed with. In Chapter V., on the visual area and its affections, is an excellent whole page diagram showing the entire path of the visual tract from the right occipital lobe to the retina, and the projection of vision on to the external world. In this diagram hemianopsia is understood at a glance, and the general plan of sensory crossing which holds for the surface of the body is seen to hold also for these specialized portions of the surface, the eyes; here we perceive at once how, *e.g.*, the right brain is in visual touch with the left half of the world, and *vice-versâ*.

The chapters on the cortical areas governing language are carefully written. The term apraxia is first defined as that loss of memory of the nature and purpose of objects in general, which is so "frequently associated with aphasia, and which, in fact, may lie at the basis of aphasia." Apraxia has been chiefly studied for vision, and for such variety the term mind-blindness has been used; but it has also been studied for hearing, and the absence of the power to recognize objects by the sounds they emit has been named mind-deafness. Objects are further capable of recognition by touch, and taste, and smell, but apraxia has been little studied in these directions. Aphasia introduces a new element; we are now concerned not merely with the right perception of objects, but with the power to rightly name them, by speech, by writing. Aphemia, agraphia are such varieties of aphasia. Language being able to do duty for the objects themselves, by sounds or by characters, the failure may be in the power to recognize the thing named or the thing written—we have then word-deafness or word-blindness. A series of very descriptive diagrams accompany these chapters. In the diagram on page 68 the seat of motor agraphia is placed in the posterior part of the second left frontal convolution, *i.e.*, immediately over Broca's speech-centre; but the author says that the lesion of motor

agraphia is still unsettled, and he suggests that the more exact localization by Horsley, of the fine movements of the thumb and fingers in the posterior central convolution, may lead to the discovery of the writing-centre near by. The term paraphasia represents a condition in which patients are capable of understanding perfectly when spoken to—their powers of utterance are also unimpaired; but the power of uttering that which they hear is lost; they cannot say words *after* a person. Such patients also frequently use words in their wrong place, and talk jargon; but paraphasia strictly, as here defined, is the loss of the power of repetition. Alas! aphasia remains a complicated subject—we almost need a special centre for its comprehension.

In a short chapter the author describes the parts of the brain, whose functions are still unknown. These unknown areas include about two-thirds of the entire cortical area. Still undetermined as to their position are the functions of smell and taste.

The tracts within the brain—the system of projection fibres, connecting the cortex with parts below, and the commissural and association tracts connecting either one hemisphere with the opposite hemisphere, or one part of a hemisphere with another part of the same hemisphere—are next dealt with. In connection with this, Dr. Starr refers to the diagnosis of subcortical lesions, *i.e.*, of lesions of the centrum ovale, and he repeats Nothnagel's statement that we know of no symptoms localizing disease in this region; but Dr. Starr is hopeful that we may yet detect such lesions by studying the association of cortical memories. A case in point is given, but it would lead us too far to take it up critically.

In Chapter XIV. we have an interesting description of multiple neuritis. Etiologically the following list of agencies is given: Alcohol, arsenic, lead and bisulphide of carbon; further certain poisons of infectious nature, *e.g.*, diphtheria, variola, etc., and tuberculosis; the poison, whatever its nature, productive of the diseases known as Kakké and Beriberi; lastly, exposure to cold, over-exertion. In respect of this list we would ask whether tuberculosis should stand as a cause. According to Gowers, who admits that many sufferers from multiple neuritis die of phthisis, the association is obscure. Ross, however, in a recent paper in this Journal (April, 1890), enumerates tubercle among the poisons causal of multiple neuritis. In the description of the disease, Starr practically limits himself to that form of multiple neuritis which is most commonly pro-

duced by alcohol. Amongst the symptoms or signs, he lays stress on the electric reactions, viz., great diminution or loss in the foradic excitability of the muscles, along with great diminution in the galvanic excitability. It is this latter element which, according to the writer, is almost pathognomonic of multiple neuritis, and serves to distinguish it from anterior polio-myelitis, in which the reaction of degeneration is well marked. Is not this perhaps another illustration of the peripheral character of the lesion—which affects suddenly the actual nerve endings instead of, as in polio-myelitis, creeping down the nerve trunk from the spinal cord?

In Chapter XX. we have the ordinary forms of insanity compressed into the smallest possible compass. This chapter is by Dr. Frederick Peterson. In a few words the writer sketches the outlines of a classification of cases of insanity which he describes as a “practical grouping,” and which he conceives to be such as the student would, within a very short time, unconsciously arrive at from his own observation. The classification is first into defective brains (I.); diseased brains (II.)

Class I. would next undergo subdivision into the following groups:—

- a. Idiots.
- b. Imbeciles.
- c. Feeble-minded.

In Class II. the first division would be into cases of excitement (a) and cases of depression (b). We should in these two groups have included the subjects of acute mania and of melancholia. Another natural group would be constituted by those whose minds, *once normal*, had become permanently enfeebled; these would be the subjects of dementia (c). Finally, there would be the group of the general paralytics (d), whose *physical* and *psychical* symptoms would entitle them to a distinct clinical entity. There remain for classification the cases described in general now as paranoiacs, formerly described as monomaniacs, or the subjects of delusional insanity (even now so called by the “all-too-conservative English”), examples of the primäre Verrücktheit of the Germans. In these cases, besides the peculiarity of the psychosis, a hereditary taint is generally discovered. On the ground of this taint pointing to a congenital instability of the intellectual centres, paranoia is classed under the heading of *defective brains*.

To quote the author here:—“The student or general

practitioner needs no further classification. As his experience ripens he will, of course, learn to recognize associated conditions or causes, hysterical, toxic, pubescent, puerperal, lactational, climacteric, senile, hypochondriacal, epileptic, organic, cerebral; and to distinguish acute, subacute, chronic stages and primary, secondary, periodical, recurrent, circular, stuporous or frenzied forms."

For the beginner, at least, we must recognize the value of this brief statement.

With a cordial recommendation of Dr. Starr's work, we must close this notice.

The Modern Malady, or Sufferers from Nerves. By CYRIL BENNETT. London: Edwin Arnold. 1890.

This little book aims at reforming our notions and treatment of nerve prostration in all its manifestations. It quarrels much with our present methods of dealing with this malady, and no doubt there is much room for regret at, if not dispraise of, the means at our disposal for treating hysteria, alias nerve-prostration, alias neurasthenia. We think, however, that the author cannot be abreast of present mental science if he thinks that much which he states is not very familiar to those who treat nerve disease—nor can it be said that the physician who labels a disease neurasthenia has made great progress over his colleague who writes it down hysteria. Physicians who have paid attention to diseases of the nervous system have long since ceased to regard hysteria as synonymous with malingering or even with self-will; they recognize a disease cloaked with a garment as changing in its aspect as the skin of the chameleon, or the views of the politician, but none the less real because of its multiplicity of seeming. That they know little of its pathology is very true, but that they have little to learn on this point from the author of this book is equally true. That their treatment is, in many cases, sadly ineffective must be granted; but, alas, the author is too silent on this subject, and the expectant reader does not find his expectations realized. Surely we are not advanced by the statements that the etiology of neurasthenia is to be sought in the family tree, in an imperfect social system, and an imperfect system of education! Mr. Cyril Bennett's strictures on the two latter evils are, many of them, much deserved, but they can scarcely be called new.

We think the author is felicitous in his description of monotony as a mode of over-strain, and as a cause of nerve failure, and with much else that he has written we should cordially agree; but the book teaches, or assumes to teach, from too high a platform, and it fails us altogether when we would learn how to treat the case of neurasthenia which has unfortunately arisen. With regard to the Weir-Mitchell treatment which comes under the author's censure, we might allow that it is not suitable in all cases, but that in a large number of such it is a very successful and rational treatment, we feel convinced, and that an essential in this treatment is the removal of the patient from the ill-judged sympathy of friends and relations we are persuaded. It is not necessary, however, that either doctor or nurse should be unsympathetic.

Soul Shapes. ANONYMOUS. London: T. Fisher Unwin. 1890.

The author of this book explains in the preface that his peculiarity is "seeing people's souls in shapes and colours," and the interest of the book consists in the extremely definite ideas with which the author connects forms and colours with the mental and moral qualities.

The writer describes four typical souls—the surface soul, the deep soul, the mixed soul, and the blue soul—and he divides his soul colours into five—yellow, red, blue, brown, and grey. The surface soul is represented as entirely yellow (which colour denotes shallowness), with the exception of two promontories, which are bright-red; one of them is named religion and the other a sense of duty, and red is employed as the colour which expresses anything "unnatural or that has been forcibly developed." This yellow soul is divided into large tracts of land, representing the intellect, morals, and affections, which are again broken up into smaller portions like counties and named according to the qualities they depict. A thin, grey line marks these divisions, which is called by the author will-cement, and is either thick or thin, pale or dark, according to the character of its owner. If it be lumpy the prejudices are strong, and if it be dark there is much self-will.

The region of the affections is most ingeniously studded by curious little coils, representing the emotions, and by thin,

short red lines at intervals, representing the skin of conventionality, which is described as a thin, red, opaque, moveable skin, more or less under the control of the will, and expanding or contracting at pleasure. The author remarks, with a certain amount of sarcasm, "There are various kinds of coverings, and every soul with a sense of decency has, at least, one. But there are fashions even among souls, and I have lately observed a tendency to dispense with them. Once, indeed, I saw a soul with none at all."

The deep soul is described as much smaller than the surface soul, and a dark brown in colour; it has no emotion-coils, but here and there are dark patches to denote hidden passions.

A blue band round the edge, together with blue crossway lines over the surface, represent the mist of reserve. The author must again be allowed to use his own words in his graphic description of how the nature of a soul may be changed: "It sometimes happens in cases where the will cement is very weak that a deep soul may be changed into a surface soul, or *vice-versâ*, by their surroundings. I once saw a deep soul made as flat and uninteresting as a pancake by being, so to speak, sat upon by other souls. And I have also seen a very promising surface soul buffeted and kicked into a very dull, little, deep soul. Both these souls might have turned out well if they had been let alone; as it was they were completely spoiled."

The third type of soul described is the mixed soul, which is both yellow and brown in colour. Orange and brown lines are to be seen at intervals over the whole surface of this soul. These represent the skin of affectation and the repellent skin—the latter skin having the power of producing little pricks should other souls draw too near.

The last type, the blue soul, the author remarks, is exceedingly rare, being "entirely devoid of egoism or coarseness." It is surrounded by a white crystal film, which acts as a soul protector, and has an iridescent look, caused by the tendrils of sympathy, which dart in and out at pleasure, and when at rest leave eye-spots at the edge of the soul, "which show great acuteness of perception."

The truly perfect soul, which, of course, is not a type of an earthly soul, is described as having neither divisions nor colour; it is of a pure white.

Everyone has, no doubt, a certain amount of association with colours and qualities, and it would be an interesting

inquiry to endeavour to trace the source from which these associations arise. Sometimes, no doubt—as in the case of the book under review—purely from a fertile imagination, still more often from a knowledge of the poets, and amongst the general run of commonplace people it may, perhaps, be entirely due to the habitual use of such phrases as “a brown study,” “in the blues,” “the pink of perfection,” a “green-horn,” etc.

Very probably “the blues” is merely a corruption of the blue devils; blue lights are often connected with some satanic agency. In Spencer’s “Fairy Queen” we find the lines :—

From his infernal surface forth he threw
Huge flames that dimmed all the heaven’s light,
Enroll’d in dusky smoke and brimstone *blues*.

And Shakespeare says :—

O, coward conscience, how dost thou afflict me !
The lights burn *blue*. Is it not dead midnight ?
Cold, fearful drops stand on my trembling flesh.

It is affirmed by some writer that indigo dyers are especially subject to fits of melancholy, and dyers of scarlet are choleric. Double meanings are often curiously connected with colours, and blue is an instance of it, for besides being typical of melancholia it is, of course, a symbol of love and purity, and is the virgin’s colour in France.

Pink seems to mean an acme or beau-ideal. The Welsh word *pwnic* means a point, and our term “pinking,” of course, means cutting into points. Shakespeare uses the expression, “I am the very *pink* of courtesy,” and Young has the lines :—

. . . and be content to reign.
The *pink* of puppies in some future strain.

Green is naturally connected with the spring time, and may thus denote anything youthful or immature. Shakespeare speaks of “My salad days, when I was *green* in judgment, cold in blood.” It may also imply anything sickly or pallid, as “*green-eyed* jealousy,” and in the same sense it is used by Lady Macbeth when she says :—

Was the hope drunk
Wherein you dress’d yourself ? hath it slept since ?
And wakes it now, to look so *green* and pale
At what it did so freely ?

White is interesting as being again typical of very opposite qualities. To be white-souled is synonymous with purity and spotlessness.

The Japanese, in speaking of a white soul, mean a man not necessarily virtuous, but pleasant to do with and agreeable to those around him. By a black soul they mean a disagreeable, contumacious fellow. Milton says :—

Welcome pure-eyed faith, *white*-handed hope,
Or that crown'd matron sage, *white*-robed truth.

On the other hand, of course, white denotes fear or cowardice. Dante uses the expression, "*White* with envy." We speak of a white-livered man, and use the term, "Showing the white feather." Lady Macbeth says :—

My hands are of your colour ; but I shame
To wear a heart so *white*.

And Macbeth says :—

Go, prick thy face and over-red thy fear,
Thou *lily-liver'd* boy. What, soldiers, patch?
Death of thy soul! those linen cheeks of thine
Are counsellors to fear.

And again :—

Reason and respect makes *livers pale*, and lustihood dejected?
Let *pale-fac'd* fear keep with the mean-born man
And find no harbour in a royal heart.

In connection with moral qualities black seems invariably the symbol of anger or wickedness. Pope speaks of "the morals *blackened*," and Shakespeare says, "*Black* is the badge of hell, the hue of dungeons, and the scowl of night." Red is naturally associated with war and bloodshed, and also with shame. Purple seems a type of nobility. We speak of "being born in the purple" and "blue blood" (probably synonymous with purple in this case), and we find the four cardinal virtues often represented as clothed in purple.

In conclusion, we must leave our readers to get "Soul Shapes" for themselves, as the diagrams must be seen to be appreciated. They forcibly remind one of George Herbert's lines :—

O, what a sight were man, if his attire
Did alter with his mind,
And, like a dolphin's skin, his clothes combined
With his desires !

Les Aliénés et les Asiles d'Aliénés. Par le Docteur JULES FALRET. Paris : J. B. Baillière et Fils. 1890.

A number of articles, fifteen in all, comprising contributions to the "Dictionnaire Encyclopédique des Sciences Médicales," "Archives Générales de Médecine," and

"*Annales Médico-Psychologiques*," together with discourses delivered before the "*Société Médico-Psychologique*," and an article, "*La Colonie d'Aliénés de Gheel*," being a report drawn up in the name of a commission nominated by the "*Société Médico-Psychologique*," are here collected together to form a useful volume by their author, le Docteur Jules Falret, physician to the Salpêtrière, which cannot fail to be of the deepest interest to the alienist.

These articles all appeared at one time or another between 1862 and 1876. They are, therefore, not new to the profession, nor are they the less interesting on that account. One thing that can be said is that we have here, in one volume of some 560 pp., some of the experiences and ideas of an eminent alienist physician, who has devoted many years of his life to psychological medicine.

The work opens with an account of "*La Colonie d'Aliénés de Gheel*" (1862), its organization and the regulations which govern it, its advantages and disadvantages. The little Belgian village of Gheel has been of service in making people see that a good deal more liberty can be permitted the lunatic than was formerly supposed to be possible.

The first serious attempt at internal organization dates from 1838, when the local authority issued laws to regulate the connection which should exist between the inhabitants and the lunatics; a commission of inquiry was nominated in 1841 by the Belgian Government. The law on lunatics in Belgium was promulgated in 1850, and a special regulation on the establishment of Gheel in May, 1851.

M. Falret does not see in this mode of giving aid to lunatics a system completely different from that of asylums, but that it is another application of the same principles which preside over both, at the same time pointing out two important points in which the colony of Gheel differs from other modes of treatment, namely, the great liberty of circulation and the life in the midst of families not insane.

"*Des Divers Modes de l'Assistance Publique Applicables aux Aliénés*" (1864) is the title of the next article, which M. Falret proceeds to discuss under the following heads:— Keeping lunatics in their families before placing them in special establishments, or after a more or less prolonged stay in an asylum; placing them in isolated houses, and in the families of strangers; the formation of lunatic villages after the manner of the colony of Gheel; and, lastly, the formation of agricultural farms.

M. Falret lays stress on the great difficulty of distinguish-

ing in practice whether a lunatic is dangerous or not, and if only dangerous lunatics are to be admitted into asylums it would be difficult to decide what cases come under this category. He thinks that an official inspection of private lunatics ought to be instituted in France as it is in England, but he condemns the system of placing lunatics in the houses of people far in the country "without control or sufficient security, without proper inspection, without medical or administrative centralization." He considers that the only way it can be tried is by placing them in houses near an asylum, where they may be under continual observation, and cites the experiments made by Dr. Roller, of Illenau; Dr. Bucknill, in Devonshire; and Dr. Robertson, at Haywards Heath, where such an attempt was attended with a certain amount of success. When the doctor can select his cases and the class of people amongst whom he will place them, when he can have them under his immediate supervision and can bring them back to the asylum if circumstances make it necessary to do so, then is the plan worthy still further trial. Under the formation of lunatic villages, on the plan of the colony of Gheel, he sets forth the advantages and disadvantages of the colony; the former being the greater liberty of circulation permitted to the insane, their greater moral well-being resulting from a less monotonous and a more social life, and that work is made more attractive and easier for them, the disadvantages to be taken into account being the difficulty of treatment and of supervision, the delivering of lunatics, without sufficient control, into the hands of peasants, who may, perhaps, sometimes abuse this charge, and that in case of illness they would not be able to get the same amount of treatment which a well appointed asylum would afford. Fourthly, M. Falret discusses the formation of agricultural farms as branches of lunatic asylums, and thinks that such ought to be attached to all asylums in every country. But it remains yet to be proved whether the colony system would be more economical than asylum farms. Can the expenditure be diminished by the work of the lunatics on the farms? What proportion of the lunatics in an asylum would be capable of agricultural work? And what relation would the amount of work done by them bear to that done by average farm labourers?

The article "*L'Asile Médico-Agricole de Leyme pour le Traitement des Aliénés*" (1863) will well repay perusal, in conjunction with the two foregoing.

"*Responsabilité Legale des Aliénés*" (1876) is a forcible

article which has been contributed to the "Dictionnaire Encyclopédique des Sciences Médicales," and in which M. Falret gives an historic account of the laws of England on the responsibility of the insane, and compares them with those of the United States, France, and Germany. He traces the changes which took place in the English law, remarking how changeable were the principles of legislation, and how variable and uncertain in their application. He quotes from the reply of the judges to the third of a series of questions submitted to them by the House of Lords in the case of MacNaughten for the murder of Mr. Drummond, and adds, "Such is the actual state of English law. It is not astonishing that with a criterion so arbitrary and wavering as that of discerning right from wrong, in each particular case, the judgments given were uncertain and contradictory, and often dependent on hazard rather than on a sound interpretation of the facts." In France, Article 64 of the Penal Code decides the matter of responsibility thus: "There is neither crime nor offence if the accused was in a state of insanity at the time of the act." Then follows a lengthened refutation of the medico-legal doctrines of partial responsibility.

To the "Affaire Jeanson" eighty-eight pages are devoted. It is a complete examination of the reports and documents in the case of the youth Jeanson, tried for setting fire to the seminary of Pont-à-Mousson, in which he was an ecclesiastical student, and for the homicide of one of his comrades in 1868, and sentenced to twenty years' hard labour at the Assize of Nancy (which sentence was annulled by the Court of Appeal, and the case then went before a jury at Metz), together with an analytical exposition of the facts of the case, in which M. Falret maintains that the accused was totally irresponsible for his acts.

Dr. Falret deals ably with the subject treated of in the article "La Consanguinité" (1866). He gives a concise account of the arguments adduced for and against consanguineous marriages, and points out the errors likely to occur in compiling statistics relating to this much debated question.

With the articles "L'Amnésie" (1866), "L'Aphasie" (1866), "La Fonction du Langage Articulé" (1866), and "L'Emploi du Bromure de Potassium" (1871), this valuable work concludes. It is written in M. Falret's customary forcible style, and will command the attention of alienists in England as well as on the Continent.

The Origin of the Aryans: An Account of the Prehistoric Ethnology and Civilization of Europe. By ISAAC TAYLOR, M.A., Litt.D., Hon. LL.D. London, Walter Scott.

Such is the title of a recent publication of the Havelock Ellis Contemporary Science Series, unfortunately without date. "This series," says the author, "is intended to present in popular form an account of the progress of contemporary science, especially in those departments where our knowledge has recently been enlarged, either by the accumulation of fresh facts, or where new theories have taken the place of others hitherto accepted.

"This has been notably the case with the subject of the present volume. The last ten years have seen a revolution in the opinion of scholars as to the region in which the Aryan race originated, and theories which not long ago were universally accepted as well-established conclusions of science now hardly find a defender."

The collection of the latest results of scientific research in respect of this subject, and their arrangement and publication in a popular form could not have fallen into better hands. The task is by no means an easy one, demanding, as it does, the comprehensive and intimate acquaintance of the author with all the most recent European writings bearing on the subject; in addition to his careful study of the latest translation of the inscriptions of Egypt, Mesopotamia, Arabia, Syria, and Asia Minor; and also a thorough knowledge of the sciences of philology, anthropology, archæology, and a formidable list of other 'ologies. But Canon Taylor is to be congratulated upon the successful accomplishment of this task.

He commences his work with a chapter upon "The Aryan Controversy." In the first place he states that although "Aryan" is on many grounds an objectionable term, yet as no other term is without equal or greater objections, and in default of a better, he has decided to employ it throughout this work. By "Aryan" he means "the great linguistic family, which embraces seven European groups of languages, the Hellenic, Italic, Celtic, Teutonic, Slavonic, Lithuanic or Lettic, and Albanian, and three closely related Asiatic groups—Indic, containing fourteen modern Indian languages derived from Sanscrit; Iranian comprising Zend, Persian, Pushter or Afghan, Baluchi, Kurdish, and Asetic; and thirdly, Armenian." A linguistic connection does not necessarily imply a racial one,

as Aryan languages are now spoken by peoples of various races and different craniological structure. But as it is also necessary to have some term to denote the racial family who were probably the primitive speakers of the Aryan language, he uses the term Aryan race for this problematic people, as Prof. Sayce does in an article in the "Contemporary Review," published more than a year ago, although their speculations as to the racial affinities of the primitive Aryans differ. Canon Taylor proceeds to show that the theory until recently held by all the greatest scholars of Europe, Pott, Lassen, Grimm, Schleider, Mommsen, and Max Müller, "that the origin of the Aryans must be sought in Asia, whence, in successive migrating hordes, they wandered to the west," is no longer tenable. "In spite," he says, "of the intrinsic improbabilities of the case, in spite of the enormous difficulties of any such migration, this opinion was universally accepted on no solid grounds whatever; at first merely from the general impression that Asia was necessarily the cradle of the human race, and afterwards on the authority of a late Iranian legend, aided by the belief which now proves to be baseless, of the more archaic character of Zend and Sanscrit. A general abandonment of this theory has taken place within the last ten years. First, among the causes which have led to this change of opinion, must be placed the evidence as to the antiquity and early history of man supplied by the new sciences of geology, anthropology, craniology, and prehistoric archæology."

"To the late Dr. Latham belongs the credit of having been the first to call in question the prevalent belief." As early as 1851 he maintained that a European origin for the Aryans was far more probable than an Asiatic one. Not till sixteen years later did Latham obtain any adherents to his views, and then only the qualified support of Prof. Whitney, who merely denied that either language, history, or tradition had as yet thrown any light on the cradle of the Aryan race. It was not till 1868 that Latham found his first real disciple in Fick, whose book, with a preface by Benfrey, appeared during that year. "In this memorable preface Benfrey may be said to have originated the science of linguistic palæontology." The great archæological discoveries which took place between 1860 and 1865, together with the publications of such works as Lubbock's "Prehistoric Times," and Lyell's "Antiquity of Man," could not fail to modify the ethnological assumptions which have been hitherto unquestioned. Benfrey's argument that the absence in the various Aryan languages of common names for

Asiatic animals, and the presence of common names for European animals, was a proof of a non-Asiatic origin for the Aryans, was strengthened in 1871 by Gieger, who showed the northern origin of the Aryan people by an examination of Aryan tree names. In the same year Cuno demolished the assumption that Aryan blood must be co-extensive with Aryan speech. The whole theory of the successive migrations of Aryan tribes from the east was swept away in 1872 by Schmidt. He showed that the various Aryan languages had gradually developed around certain centres, which have hardly changed their relative positions, and that these languages slowly lost part of their original resemblance, owing to natural internal or external causes. His principle has recently been ably developed by Prof. Paul. In 1873 H. Müller admitted the force of the arguments for a European origin, adduced by Benfrey and Gieger from the names of animals and plants common to Aryan languages. About the same time Speigel placed the cradle of the Aryans between the 45° and 60° parallels of latitude. Pösche, in 1878, was the first to bring forward the anthropological argument, since developed by Peuka, that although many races speak Aryan languages, only one is the true Aryan race. This race he considered to be the tall fair race of the Row Graves of South Germany. In 1880 the European hypothesis received the adherence of Lindenschmit, and in 1881 Fligier endorsed Cuno's views. In 1883 Dr. Schrader published an exhaustive treatise, which contains a cautious and judicial statement of the whole case. He considers that two fixed points may be considered settled. "At the earliest period to which the evidence of history, tradition, or linguistic archæology extends, we find European Aryans in Northern Europe, and Asiatic Aryans on the Janortes. The only question which remains is, whether the European Aryans came from Asia, or the Asiatic Aryans from Europe? This, he thinks, does not admit of a positive answer . . . but is unable to conceal his conviction that the European hypothesis appears to be far more in accordance with the facts." Canon Taylor entirely endorses Schrader's arguments. Prof. Sayce was the first to announce his conversion to the new view, after the appearance of the works of Schrader and Peuka. He was soon followed by Prof. Rhys, and on the Continent by Tomaschek, Von Löher, Wilsce, and H. Müller. While Ujgalvy, Hommel, Fesse, Prof. Max Müller, and two American writers, Hole and Morris, still advocate various forms of the Asiatic hypothesis. Prof. Max Müller, the only surviving scholar of

the old school, has recently given a final pronouncement on the subject. In 1887 he wrote: "If an answer must be given as to the place where our Aryan ancestors dwelt before their separation, I should still say, as I said forty years ago, somewhere in Asia, and no more."

In the next chapter, "The Prehistoric Races of Europe," the author proceeds to show the immense age of Palæolithic man in Europe, as revealed by geological research. The primitive European, "long-headed hunting troglodytic man," is now assigned an age of from 24,000 to 80,000 years. Craniologically considered the long-headed peoples of Europe and Africa are his modern representatives. European neolithic remains yield another type of skull, the brachycephalic or round-headed type, which appears first in caves and river deposits, and later in the remains of lake dwellings on the Continent. This type almost certainly possesses a minimum antiquity of 6,000 years in Europe, but is probably many centuries older. The length of that portion of the neolithic period during which the brachycephalic peoples inhabited Europe, he considers, would allow sufficient time for the development of the Aryan languages *in situ*, even from an earlier Altaic stock.

Canon Taylor divides the early peoples of Europe into four races, both from a craniological and linguistic point of view. Two, he thinks, may be the later representatives of Palæolithic man, while the other two are probably varieties of the round-headed man. After describing the "methods of anthropology," he proceeds to treat the prehistoric races of Britain. Only two of the four European races are represented, he says, in this country, in prehistoric times—the Celts and the Iberians.

He classifies the four European races as follows:—

I.—The Celts, who must not be confounded with the Celtæ of Gaul referred to by Cæsar, appear to have invaded Britain about the end of the Stone age. They were of fair height and powerful build, with brachycephalic skulls, prominent cheek-bones, and prognathous mouths, red-haired, with a florid complexion, and inclined to freckle. They lived in round huts, were nomadic herdsmen and hunters, and buried their dead in circular barrows. They talked an Aryan tongue, and may be identified with Celts or Cymri of Britain. This type may be traced in Northern France and Italy, and throughout the greater part of Europe north-eastwards. Their skulls are classed by Thurnam as "Turanian," or as "Mongoloide" by Pruner-Bey. The lake dwellers of Europe had skulls of a

similar shape. The Celts may be considered as one of the races descended from the early neolithic brachycephalic European.

II.—The Iberians appear to have been the aborigines of Britain. Short and slight, peculiar structural characteristics of tibia and femur, with dolichocephalic skulls, with orthognathous faces, black haired and eyed, bronze-skinned people. They originally dwelt in caves, lived by fishing and hunting, and buried in long barrows, and are supposed to have talked a Hametic language. This race extended in early times throughout Britain along the Atlantic coast, and south of France throughout Spain and the whole of the Mediterranean seaboard. They were probably a Hametic people, allied by blood and language with Etruscans, Egyptians, and Phœnicians, possibly relations of the negroes of Africa, and descendants of the palæolithic European. Their modern representatives in Europe are the Spanish Basques.

III.—The Scandinavian did not appear in England until historic times, very tall and of powerful frame, with dolichocephalic low flat skull of inferior intellectual capacity, and prognathous face. A fair-haired, full-bearded, blue-eyed people, with pink and white complexions—the “kitchen midden” man, who lived by hunting and fishing, and buried in the row graves. His original language is an enigma left to be solved. Apparently a lineal descendant of the palæolithic European, he ranged in neolithic times from the mouth of the Rhine to the Neva, as far south as Galicia, and throughout Scandinavia. In no country had this type been so well preserved as in Sweden. The Ainos of Yezo, the long-headed races of North Eastern Asia, and the Tollas of the Neilgherries are supposed by De Quatrefages to be representatives of this race, possibly a variety of the Iberian one.

IV.—The Ligurians whom Canon Taylor identifies with the Aquitani of Gaul and the Celtæ of Cæsar, the last of the four European races, do not appear in Britain. Very short, small people, with extremely brachycephalic skulls, narrow at the cheek-bones, black haired and eyed, and with swarthy complexions, who spoke an Altaic language, and imposed it upon the Iberian Basques. They are the Furpoz race, and apparently lived by the chase of the reindeer, and dwelt in caves, burying in caves and dolmens as the Iberians did. They seem to have extended west from Switzerland to Southern France, their descendants being the Auvergnats and French Basques, as well as the Lapps in North Europe. The narrowness of their

cheek-bones makes it difficult to assign them to the Turanian family, but they have many other points in common with it. They seem to have preceded the other brachycephalic race in Europe.

The next chapter is devoted to neolithic culture, and is written with the object of showing how the stage of civilization, revealed by archæological discoveries in the earliest lake dwellings of Europe, corresponds with that depicted by names of things and animals, which are common to the various Aryan languages. Also how, with varying rapidity and in a different manner, language and civilization gradually developed side by side. Further, how the language and civilization of the various tribes were affected by contact with more civilized alien races, such as the Etruscans and Phœnicians.

(To be continued.)

Evolution and Disease. By J. BLAND SUTTON. "The Contemporary Science Series," with 136 engravings.

The author gives no clue beyond his name to his identity, but the medical reader, even without this, might decide the question of authorship from the characteristic originality of view, the frequent terseness of expression, and the general suggestiveness which pervade the work. The book is as interesting as a novel, without sacrifice of accuracy or system, and is calculated to give an appreciation of the fundamentals of pathology to the lay reader, while forming a useful collection of illustrations of disease for medical reference.

The author only claims in this work to indicate, by examples, the natural history of disease, to point out its evolution *pari passu* with that of animal forms, and the regulation of its manifestations, by the laws which govern physiological processes.

The consideration of the enlargement of parts from increased use, overgrowth and irritation, is followed by that of disuse and its effects, in which the author states the conclusions he has arrived at from pathological and embryological bases of the probable origin of the central canal of the nervous system, from the intestinal canal of an invertebrate ancestor. This view Dr. Gaskell has coincidentally and independently worked out, and although it is not yet generally accepted, may ere long receive the attention it merits.

In the chapters on vestigia, he endorses Darwin's view that their persistence is relative to their original importance, this being further indicated by precocity of development, *e.g.*, the appendix of the cæcum is often as long at birth as in the full-grown man.

Atavism he defines as "the attainment of a functional or more or less full development of parts which for a given animal are suppressed during embryonic life, or undergo great modification;" and he endorses Gegenbaur's view that "atavistic parts do not belong to forms palæontologically remote or systematically far distant."

In chapter eight the transmission of embryonic defects of development is illustrated, and the non-transmissibility of mutilations proven. Cretinism (endemic) is not, however, a satisfactory example of transmission.

In treating of the causes of disease, the author remarks that infectious diseases do not depend so much on the presence of micro-organisms as on the existence of suitable conditions in the living bodies affected, a view that seems to have been neglected of late.

Tumours are ably described, and cancer is tritely defined as a biological weed. This part of the work and the concluding chapter on the zoological distribution of disease are full of interest, and fitly conclude a most satisfactory addition to popular science.

Twelve Lectures on the Structure of the Central Nervous System : For Physicians and Students. By Dr. LUDWIG EDINGER, Frankfort-on-the-Main. Second revised edition, with 133 illustrations. Translated by WILLIS HALL VITTMUM, M.D., St. Paul, Minn. Edited by C. EUGENE RIGGS, A.M., M.D., Professor of Mental and Nervous Diseases, University of Minnesota. Philadelphia and London: F. W. Davis. 1890.

The title of this octavo volume of 230 pp. will describe its scope. The subject will always be of great interest to the physician and psychologist, and any addition to its literature, giving a concise and clear description of the morphology, histology, and comparative anatomy of the brain, is welcome amongst our already numerous treatises on the subject. It is an extensive study, and to be treated fully would require much more space than is here given to it; but the author does not

claim for his book the rank of being an exhaustive work, nor is it intended for beginners, "a general acquaintance with the coarser anatomy of the brain" being considered necessary before studying these lectures, which were originally delivered "before an audience composed of practising physicians," and are to be looked upon as an introduction to a more minute study of the central nervous system.

The methods of investigation by series of sections, by degenerations resulting from division of nerves, by atrophies in the still developing brain and cord due to the removal of peripheral or central nerve substance, by the study of the development of the medullary sheath, and the embryology and comparative anatomy of the brain of vertebrates are lightly touched upon in the first two lectures. The general histology of the brain, and a description of the convolutions and fissures of the surface of the cerebrum, occupy the third and fourth lectures, and then we come to the more minute histology of the different regions. The structure of the brain cortex, its connection with the deeper lying structures, and the distribution of the fibres of the corona radiata, together with its structures at the base of the brain, are more fully described in subsequent lectures.

The following extract from p. 109 will give a good idea of the style in which the book is written:—

"The connections between the cortex of the occipital lobe and some of the points of origin of the optic nerve have already been discovered. These connecting fibres make up the optic radiation, which passes from the occipital lobe to the most posterior part of the internal capsule, and from this point can be traced into the thalamus and the brachium of the anterior quadrigeminal body. It is shown in Fig. 44. Its fibres, however, do not end, as there represented, in the lateral portions of the occipital lobe, but trending toward the median line, in planes which lie outside of this section, extend as far as the cuneus. In destructive disease of the occipital lobe, and of the posterior part of the internal capsule, the same symptoms appear as in similar lesions of the optic track on the same side. The outer half of the retina of the eye on the injured side, and the inner half of the retina of the opposite eye, degenerate."

The last four lectures are devoted to the medulla oblongata and the spinal cord, and form, we think, the best part of the work. The course of the fibres in the cord, the transition of the cord into the medulla, and the changes which take place in the arrangement of the fibres are clearly described. The

results attained by Starr are given in a useful table of the localization of function in the different segments of the cord, and throughout the work we are made acquainted with the effects of lesions of the various parts of the central nervous system. The book is well got up, printed on good paper, and in clear type, and the diagrams are numerous and well selected. The phraseology is forcible, but we trust that such modes of expressing position as "dorsad of," "further caudad," and "ventrad into" will never commend themselves to English readers on this side of the Atlantic.

An Illustrated Encyclopædic Medical Dictionary: Technical Terms in Medicine and the Collateral Sciences in the Latin, English, French, and German Languages. By FRANK P. FOSTER, M.D., Editor of the "New York Medical Journal." New York: D. Appleton and Co. 1890.

The Editor expresses the hope in his Preface that this work will commend itself to the medical profession. Speaking for the first two volumes which have now appeared, we have no hesitation in saying that the Editor's hope has been amply fulfilled.

The labour bestowed on this work must have been enormous. The information it contains is trustworthy, and covers a most extensive range of subjects. The illustrations are excellent.

We recommend every public library, and especially medical libraries, to possess themselves of this remarkable dictionary. For private individuals it will form a library in itself. We shall look with great interest to succeeding volumes, and hope that the appreciation of the medical profession and the public for the work will encourage the Editor to proceed in the same praiseworthy manner to the end.

Why Does Man Exist? By ARTHUR JOHN BELL. Isbister, London. 1890.

The book is described as the continuation and conclusion of a preceding work, entitled, "Whence Comes Man?" already noticed in this Journal.

A systematic analysis of the present work would require much space and time. The key-stone of the elaborate ideal arch, erected by the author, is represented at page 175 in

the sentence that "every cell is capable of being conscious and that evolution is fundamentally psychological."

This thesis is supported by very numerous and lengthy quotations from many of the most recent writers on biology; but it is singular that a writer who inscribes on his title-page "try all things, hold fast that which is good," should have omitted to notice the antagonistic conclusions of Pfeffer, Verworn, and others.

The germ-cell, the author assumes, becomes "the parent of the other cells" in a multicellular organism, which last is really a "cell patriarchy." Then follow chapters discussing: "Where is the patriarch cell situated?" "Every cell has a will of its own;" "Wills of child egos subordinated to will of patriarch ego;" "Man's moral relations to his child egos;" and, lastly, "The moral relations between God and man." These indicate, better than any analysis, the character and line of the inquiry.

However defective the author's modes of investigation may be considered, his work demands admiration for the extent of his reading and for the ingenuity of his theories. It were a disagreeable and uncongenial task to condemn the result of so much labour and reflection.

Over the Teacups. By the Author of the "Autocrat of the Breakfast Table." London: Sampson Low, Marston and Co. 1890.

Needless to say that a book from the pen and brain of Oliver Wendell Holmes is an acquisition to our literature, and that it adds to the works which charm and instruct all, especially the medico-psychological reader. We would, in commending the last product of our honoured *confrère*, draw attention to the remarkable coincidences which he records, and which must always possess an interest whatever their explanation may be. We will not anticipate the pleasure our readers will receive in reading "Over the Teacups" by quotations, but would strongly advise all to add it to their library. It will not be long, we hope, before the author, who has so many warm friends in this country, makes us once more his debtors for the intellectual enjoyment he affords us. We would press upon him that it is as true now as in the days of Cicero: *Senectus non impedit quominus literarum studia teneamus usque ad ultimum tempus senectutis.*

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Retrospect.**(Continued from p. 175.)*

Middlesex, Wandsworth.—The arrangements for extinguishing fire have been improved. With the object of obtaining special training for idiot and imbecile children, the Committee propose to send them to the Eastern Counties Idiot Asylum at Colchester.

Dr. Gardiner Hill's report contains a short history of the asylum, accompanied by a plan of the buildings.

The Commissioners state:—

We were asked by Dr. Hill whether we considered it to be seclusion to obstruct the exit of a patient from a single room by placing a patient in a chair before the door, so as to give notice to the attendants in the ward when he overcame that obstruction. So much depends on the strength of the patient so, as it were, placed on guard (apart from the risk which might arise from a conflict between the two patients) that we think that practice is to be deprecated, and if followed up it is too near seclusion not to be recorded.

Mid-Lothian and Peebles.—It is quite evident that Dr. Mitchell is rapidly improving the condition of this asylum. Perhaps in future reports he may be good enough to introduce the statistical tables recommended by the Association.

Montrose.—In Dr. Howden's report the following case is mentioned:—

One of the men when admitted suffered from violent mania, associated with general paralysis. He was a pointsman at a station on a single line railway, where he had to exchange bâtons with the drivers of the passing trains. He went off duty only a fortnight before admission owing to having sustained a sprain of the wrist. Up to that time he was looked on as one of the smartest pointsmen on the line, although, from inquiries I have since made, I have little doubt that he laboured under brain disease for nearly a year before his final breakdown. He had the optimist frame of mind usually associated with the disease, and boasted among other things that he could change bâtons with a fast passing train quicker than any other man, indeed, it was in showing his skill in this way that he sprained his wrist. He continued to do his duty to the satisfaction of his employers, and none of his fellow-employés seemed to have suspected that he laboured under any physical or mental disease, though, when questioned afterwards, they recalled circumstances which indicated the existence of both; his gait was unsteady, and his speech became embarrassed, especially when hurried, and his conversation had the characteristic boastful tendency.

A case like this shows to what risks the travelling public are sometimes unconsciously exposed. It may be some comfort, however, to know that a man may labour under advanced brain disease and be actually insane, and still be capable of doing his duty correctly in an automatic way.

The new infirmary is in occupation, and it is stated by Sir Arthur Mitchell that "no more complete asylum hospital can anywhere be seen."

Mullingar.—This asylum is much over-crowded. The admissions continue to increase, although the population of the district as steadily diminishes.

Concerning the discharge of incurable cases Mr. Finegan says:—

Although I have at all times considered it desirable that the inoffensive chronic insane should, when feasible, be under the immediate guardianship of their own relatives, and thereby enjoy the advantage of home comforts, still we are confronted with occasional instances in which the line should be drawn in the interest of ethics and unborn humanity. Unfortunately the law is such as to deny you the power of detaining for a prolonged period any patient whose relatives choose to enter into a recognizance bond for their future good behaviour. Under these circumstances young married women, often irreparably insane, are removed from the asylum by their husbands, who, being either ignorant or indifferent of the consequences, re-enters connubial life, and becomes the parent of a family who are destined by hereditary influence to perpetuate and increase the defective humanity which demand the very existence of lunatic asylums.

Norfolk.—The number of admissions during 1889 was the greatest since the opening of the asylum. The increase was confined to the women, and Dr. Thomson is unable to give any explanation of it.

Northampton.—A second assistant medical officer has been appointed.

Concerning the idiot children and the special arrangements for their training, Mr. Greene makes some interesting remarks, which we regret to be unable to quote for lack of room.

Northumberland.—A clinical clerk has been added to the staff, and the appointment is reported to have been of service. The senior students attending the University of Durham College of Medicine attend in small parties for clinical instruction in mental diseases.

Nottingham (County).—The Commissioners strongly recommend the abandonment of the present building and the erection, in a suitable place, of a new asylum. A recreation room has been provided for the nurses, and a similar place, containing a billiard table, for the attendants and male servants.

Oxford.—Post-mortem examinations were made in every case of death with one exception.

Perth.—Successful efforts are being made to reduce the number resident by boarding-out all suitable cases.

The decoration of the wards and renovation of furniture are receiving special attention.

Portsmouth.—The estate has been increased by the purchase of land at a cost of £3,649 16s. 11d.

Richmond (Dublin).—Dr. Norman presented a special report on boarding-out. It is an exceedingly well-prepared document, and gives a most impartial view of the whole subject.

The asylum is much over-crowded, and the providing of additional accommodation is under consideration.

One hundred and fifty-four patients were discharged relieved. Dr. Norman remarks that the number is unusually high, a fact

which was due to two causes: "First, owing to the over-crowded state of the asylum, a strong endeavour was made to send out to workhouses, etc., cases that did not seem to require special care. Secondly, increasing experience seems more and more to show that among a large number of the uncured there are many individuals who, though far from sane, can yet safely be at large. In many such cases nothing save a trial will show whether prolonged detention in an asylum is necessary. In connection with this subject it should be mentioned that within the last four years a considerable and annually increasing number of patients have been discharged on probation, under the provisions of the Act 38 and 39 Vic., c. 67. This enactment would appear to have been formerly made little use of here or elsewhere in this country. It is satisfactory, therefore, to note that so far no untoward results have followed its application."

A clinical assistant has been appointed. The medical staff is numerically very weak; an addition to the paid officers seems urgently required.

Roeburgh, etc.—Only 43 patients were admitted during the year. This is the smallest number since the opening of the asylum. The overhauling of the drains is continued.

Salop and Montgomery.—The Commissioners remark:—

It is with regret we hear that 320 patients are usually confined to the airing-courts for exercise. We are fully alive to the demented helpless condition of many of the patients here, but we cannot think that there are as many as 120 men and 200 women physically incapable of going beyond the airing-courts, and destructive, troublesome patients can easily be taken out in small parties with a strong staff, in almost every case to the great advantage both of their mental and bodily health.

There is no system of daily exercise within the grounds. We think that this ought to be instituted, and we find that only 173 patients in all are taken weekly beyond the grounds.

To this Dr. Strange answers:—

The desires of the Commissioners that more patients shall be taken for walks beyond the airing-courts shall receive attention, and be carried as far as possible into effect, but I fear that with our present staff one result will be that many patients will be confined to the wards whilst others are out walking.

The very obvious answer to Dr. Strange's objection is that the staff should be increased. This can easily be done, as the weekly cost is low, only 7s. 9½d. To employ at least three extra attendants and the same number of nurses would not be a very serious expense.

Somerset and Bath.—This asylum is overcrowded. The means by which accommodation should be provided has been carefully considered, and it was decided: 1st. That under no circumstances would it be desirable to enlarge the present asylum. 2nd. That it would also be undesirable that any of the lunatics should be sent for care to any of the Union Workhouses in the county.

The proposal to erect an asylum for idiots, imbeciles, and harmless chronic lunatics was rejected.

On this very important subject some of Dr. Wade's remarks are so definite, and are evidently the result of careful consideration, that we reproduce them, though with some abridgment:—

It has been suggested by some that if fresh provision is to be made it should take the form of an asylum for the chronic patients, and Wells retained for the acute cases. To any such plan I have personally a very strong objection, and I am glad it was rejected at the Highbridge Conference. I think that it is wrong to brand any establishment for the treatment of mental disease with the words: "Abandon hope all ye who enter here." I have found the insane very sensitive on the subject of chronic wards, and ever since I have been an Asylum Superintendent I have made it a positive rule to have no wards for chronic patients only. From every ward in this asylum and from all the detached blocks patients are from time to time discharged. But this setting apart of a place for chronic patients, which is bad in an asylum, would be ten times worse in case of a distinct institution for the class in question.

Practically, however, the experiment has been tried several times and has never succeeded. Many chronic patients have their periods of acute excitement, when they require all the arrangements of an acute asylum, while a very large number are at all times dangerous to others from the presence of fixed delusions, and though apparently, and as a rule, quiet, are not on that account to be regarded as harmless or requiring any less expensive style of asylum. The removal from this asylum of the quieter class of inmates will leave accommodation for a similar class only, the present building being constructed for a certain proportion of each type of insanity, and to remove one type of case would not leave room for a totally different class. That is to say, if you remove from the asylum quiet patients requiring only accommodation in associated dormitories, you will not thereby leave the building in a better position to receive an increased number of turbulent and dangerous patients requiring separate rooms at night. Nor, if such a scheme as separating acute and chronic cases were feasible, would it be found to be economical. It is true that many of the cases now here could be cared for at a lower rate than that now charged, but as a matter of fact they are now so maintained. Acute cases treated in a separate building would prove much more expensive than they do now, where the expense is distributed over many heads. It must not be for a moment imagined that our more serious and acute cases, requiring a larger proportion of attendants, extra diet and medical comforts, and in some cases being active agents in the destruction of property, could be maintained at the present low rate were it not for the presence in the asylum of a large number of patients who do not cost nearly as much for their support.

But, speaking from a purely medical point of view, I should deeply regret the separation of the different classes of the insane into different asylums. The well-ordered routine of an asylum is in itself a valuable element in the treatment, and to this routine the chronic patients largely contribute. Often do we see patients who have had the most skilled treatment in their homes, without avail, improve rapidly in an asylum, perhaps with scarcely any special treatment at all. Insanity is characterized in all cases by a very exaggerated *egoism*, and I am confident in some cases excessive attention is positively injurious. At the same time, every asylum ought to be so built and arranged that special wards suitable to acute and infirm cases and of reasonable size should be set apart in each division.

If the separate provision were to be only for the quiet and so-called harmless, leaving the dangerous chronic patients for treatment here, it would be found that the number who could be removed would be few. Any institution for harmless patients would contain a very undue proportion of feeble and helpless,

as well as of those incapable of useful employment; for the care of these a much larger proportionate staff of paid employes would be necessary, not alone in the wards, but in the workshops and laundry, where, in a mixed asylum, many patients are employed with profit to themselves and the asylum.

I must confess that personally I am very sceptical as to harmless lunatics. Few lunatics who have strength left to do harm can be counted upon, and in the history of every asylum will be found instances of homicidal and suicidal outbreaks on the part of those considered harmless. But outside of asylums, does not almost every daily paper tell of suicides that might have been prevented, and too often of homicides that never would have taken place had the unfortunate persons who committed the offences not been regarded as perfectly harmless? I therefore hope no future actions of our local authorities will remove any large mass of our insane population from the safe custody in which they are now to any place where they are less efficiently cared for, or under less close supervision.

Dr. Wade proceeds to point out the uselessness of attempting to make room by removal of the idiots and imbeciles, nearly all of whom are adults.

Stirling.—The sanitary arrangements are receiving special attention. They appear to be defective in many respects. The water supply is deficient. During the year no fewer than 59 unrecovered patients were discharged to the care of friends, to be boarded in private houses, or to the lunatic wards of workhouses.

Dr. Macpherson's report is a very carefully-prepared document, and discusses: 1st, the requirements of the district; 2nd, care of the patients; 3rd, medical treatment; 4th, results of treatment. Under the first head some interesting statistics are given. These show a great increase in the number of registered lunatics.

Concerning the effect of food and drugs, Dr. Macpherson says:

From what I have said, it follows that within reasonable limits no expense should be spared, no time should be lost, in providing for recent cases of insanity a liberal, highly nutritious, and suitable dietary. Apart from higher motives, a policy based upon economy which would curtail the dietary of recent and curable cases of insanity would be a short-sighted and pound-foolish policy. If there is any extraneous aid which science can supply to nature in these cases it is in this direction and through this channel.

You will observe that I have specially referred in the immediately preceding remarks to recent and curable cases. The subject of the dietary of asylum inmates has, however, a wider interest. Wherever the patients in any asylum are well fed, so certainly there is in that asylum a corresponding decrease in the excitement of the chronic patients, a corresponding improvement in their habits, and a corresponding reduction in the expense of management and providing of clothing and furnishings. I therefore hold most emphatically that a saving of money in asylum administration at the expense of the proper dietary of the inmates will be doubly compensated for in the column of loss.

Our knowledge of the use of drugs in the treatment of the insane increases correspondingly with the knowledge of the use of medicines in general and hospital practice. With certain great exceptions their application is only of use in an indirect and a general manner, but there is one class of drugs, viz., sedatives and hypnotics, of special value in the treatment of the insane, regarding which our knowledge is only beginning to develop. Within the last three years many new drugs in this class have been discovered which have the marvellous power of producing sleep and quietness, while interfering but little with the general nutrition of the body. To some extent, however, they do so

interfere, and it is the desideratum of physicians in the specialty to discover a drug which will have such beneficial effects without at all interfering with nutrition.

Sussex.—To provide accommodation for recent cases, it has been necessary to send to other asylums a large number of male patients.

Dr. Saunders comments on many of the provisions of the new Lunacy Act. He is of opinion that :—

It will certainly throw a vast amount of extra work on the Medical Superintendent, for very inadequate results, and merely to pander to a popular outcry, for no case of improper detention has ever yet been proved to have occurred in any public asylum in this country.

Warwick.—This asylum is greatly overcrowded, and a detached hospital is urgently needed for the treatment of infectious diseases. Its sanitary condition is eminently unsatisfactory. Forty-four cases of dysentery occurred during the year; of these 13 died. Two cases occurred among the staff, but they recovered. Eight patients and nine nurses were affected with typhoid.

Wonford House.—It has been decided to enlarge and improve the asylum by the erection of villa residences, by heating the building throughout by steam, and by the provision of a recreation and dining-hall.

Concerning restraint, Dr. Deas writes :—

In two cases especially the morbid impulse to self-injury was so strong that I did not hesitate to resort, for a considerable time, to the employment of what is termed "mechanical restraint," in the form of a dress constructed so as to restrict the free use of the arms and hands. This I did both for the sake of the additional protection thus afforded to the patients against themselves, and also, I feel bound to say, to give some relief to the great, almost intolerable, strain and responsibility devolving on those having the care of such cases. One of these patients is now convalescent, the other is much improved.

Restraint of some kind is the basis on which all treatment of the insane, whether legal or medical, is based; and the enlightened modern treatment of the insane does not lie so much in the abolition of restraint as in the carrying out of the various kinds of restraint, under constant and humane supervision. "Manual" restraint; the restraint of drugs, or what has been called "chemical" restraint; and the restraint of discipline and restrictions need as much care and discretion in their use, and are as liable to be abused, as "mechanical" restraint.

A physician, having the responsible care of the insane, ought to be as free to employ "mechanical restraint," when he deems it the best treatment in a particular case, as he is to use powerful drugs, or any other recognized mode of treatment.

The special advantages of confining the hands by mechanical means in certain cases are that the restraint is continuous while in use, it is always vigilant, it does not lose its temper, and it avoids the many risks attendant on manual restraint.

For myself, I do not hesitate to say that there are cases in which "mechanical" restraint is not only the best and most humane treatment, but in which there is grave responsibility attaching to the man who refrains from using it. I have never regretted the use of "mechanical" restraint when, after full consideration, it has been resorted to; but there have been, in the course of my experience, cases in which afterwards I regretted that I had *not* used it.

Worcester.—The water supply is very unsatisfactory, As the result of a well becoming contaminated with sewage, a serious outbreak of typhoid fever occurred. From an elaborate report prepared by Dr. Cooke it is only too evident that it will be an exceedingly difficult matter to obtain a sufficient supply of good, wholesome water.

The Committee report that the weekly charge has been reduced to 7s. The cost is 7s. 6½d. The Commissioners thought the dietary scale rather low, but the Committee are quite satisfied with it, though there are only two solid meat dinners per week. A great increase in the asylum population has occurred during the year.

Yorkshire, North Riding.—An epidemic of measles occurred, but the disease was mild. This occurrence has shown the visitors the necessity of providing a detached hospital for infectious diseases. The asylum is now full, and the Committee fear that "it will be necessary very shortly to consider how further to enlarge the present building, unless in the meantime the County Council should determine to erect a second asylum in the northern part of the Riding, a course which, although possibly entailing a greater outlay at first, the Committee would strongly recommend, as being likely to prove more economical eventually, besides being more advantageous to the patients whose friends reside in that district."

The recent addition to the accommodation is occupied by female patients; and the workshops for men are in use.

Yorkshire, West Riding. Menston.—This asylum, so recently opened, is rapidly filling up.

In his report, Dr. McDowall says :—

The proposal recently made to erect a hospital for the insane has caused much attention to be directed to the general management of asylums throughout the country. It is objected to the present system that patients are allowed to recover rather than attempted to be cured, and that the medical officers have their time too much occupied by administrative duties to allow them to devote sufficient attention to their purely medical work, or to carry on independent scientific investigation.

Whether patients suffering from insanity would recover in greater numbers in a hospital situated in a large town, and provided with a staff of visiting physicians, than in an asylum in the country without such a staff, there is great room to doubt; but there can be no doubt that such a hospital would afford the visiting physicians very valuable opportunity for the study of insanity, opportunity not otherwise to be obtained.

That the amount of individual attention paid to recent cases could with advantage be increased there can be, I believe, no doubt, and this can only be attained by a corresponding increase not only of the medical, but also of the nursing staff. The duties of a medical officer, as at present arranged, are such that much of his time is occupied in purely clerical work, the keeping of the records of the cases alone, where there are numerous admissions, requiring several hours a-day. In some asylums clinical assistants relieve the medical officers to some extent, but I believe the difficulty is to be more satisfactorily overcome rather by an increase of the permanent and responsible staff. The work and anxiety of the medical as well as the nursing staff vary rather with the number of admissions than with the numbers resident; but it is difficult to

see how, even with an increased staff, the admissions are to be more equally apportioned to each medical officer. As the value of work done in the pathological laboratory must often to a great extent depend on the clinical observation which has preceded it, it seems desirable that both clinical and pathological work should, if possible, be carried out by the same observer.

Yorkshire, West Riding. Wadsley.—An estate walk, a little more than a mile long, has been completed. Improvements continue to be made in all departments of this asylum.

Dr. Kay says:—

To carry out the idea of the hospital scheme, which has been so much discussed of late, and has for its aim and object the more scientific study and treatment of insanity, some increase of both the medical and nursing staffs would require to be made. Should such a desirable increase of the staffs be decided upon, then the cases generally could be more fully studied, receive greater individual care and attention, and so tend to the best possible results.

Yorkshire, West Riding. Wakefield.—Strenuous efforts continue to be made to improve the structural and sanitary condition of this asylum, and with great success, as can be seen by the list of alterations, additions, and improvements effected during the year.

The following are among Dr. Bevan Lewis's views on asylum medical work:—

That the large county asylums should eventually become receptacles for the hopelessly incurable chronic class, officered and managed upon a far more economical system than the present; that special hospitals for dealing with the acute insane, with a well-trained staff of experienced alienists, and affording facilities for a development of clinical teaching, should be instituted; and that they should constitute centres for scientific investigation and research, are facts so self-evident that they require no further emphasis here.

Devon.—This asylum is much overcrowded. A low death-rate and a low recovery-rate tend to increase the evil. A new ward for males is nearly ready for occupation, but when opened it will be at once filled, and further accommodation will be required. The additions to the female blocks will probably not be ready for two years.

Wilts.—A hospital for infectious cases has been built at a cost of £2,581 17s. 7d. This sum includes furnishing. Two dormitories have been erected, each holding 25 beds.

All officers and servants engaged at this asylum since 1st January, 1890, enter the service on the condition that they are not entitled to any pension or gratuity, except in the case of personal injury arising during the actual course of the service without contributory negligence. The Visitors are of opinion that this resolution of the County Council does not deprive them of the power of granting pensions. That is probably quite true, but as no pension recommended by the Visitors can be paid until confirmed by the Council, the Council remains master of the situation.

The staff has been increased by the addition of two attendants and two nurses.

Inverness.—Chronic cases continue to accumulate, and the patients in delicate health and suffering from acute bodily disease are so numerous that they cannot be accommodated in the infirmaries. To keep down the numbers, twenty patients have been discharged on probation.

An interesting though brief account is given of the epidemic of influenza:—

. . . In five of the cases there were distinct mental symptoms. In two of the attendants there was wandering, and for one night a condition bordering on delirium; whilst in three female patients, one—an old epileptic—refused her food, believing that poison was introduced into it, and became restless and suspicious; another, an aged woman recently admitted, who had previously suffered an attack of influenza in another asylum, of a pleasing and gentle nature, became a profound melancholic; whilst the unsettled condition of another female patient passed into active excitement, which passed away with the attack.

Additional precautions have been taken against the spread of fire, and the projections containing the lavatories, etc., have been much improved.

2. *Retrospect of Criminal Anthropology.*

By HAVELOCK ELLIS, L.S.A., etc.

Les Habitudes des Prisons de Paris. Étude d'Anthropologie et de Psychologie Criminelles. Par le Dr. ÉMILE LAURENT.
("Bibliothèque de Criminologie"). Paris and Lyons. 1890.

This volume is the most interesting and the most remarkable record of a single worker in this field which has appeared since Marro's "Caratteri dei Delinquenti." It cannot be ranked with the latter book, for Dr. Laurent has not accumulated the large body of minute facts concerning his subjects which Dr. Marro used in so admirable and judicial a manner, making a distinct advance in our knowledge of criminal anthropology. Being, however, less dry and technical, Dr. Laurent's work is much more generally attractive, and it also opens up some of the wider aspects of the subjects with which Marro was not directly concerned. His style, also, possesses in a high degree that lucidity and charm, holding the reader's interest through six hundred pages, which is so common among French scientific writers, and so rare in England and Germany. This remarkable record of his experience was produced by Dr. Laurent as the fruit of some years spent at the Infirmary of the Prisons de la Santé, its publication becoming possible by the enlightened policy of the French administration. How long will it be before we may expect similar records of their experience from English prison surgeons?

The criminals here dealt with are those who have undergone from

twenty to thirty sentences, and who are regarded by Dr. Laurent as the subjects of degeneration, presenting an abnormal mental and moral condition. He first considers their heredity. That criminality is itself hereditary he is not prepared to assert; he has observed numerous cases of crime among the parents of criminals, but he regards the connection as accidental. On the other hand, he attaches great importance to the condition of the nervous system in the parents, and he passes in review alcoholism, insanity, epilepsy, and hysteria. To hysteria in this connection he attaches unusual importance; "an incredibly large number of criminals are the sons of hysterical mothers;" he has found it much oftener, even, than epilepsy. Alcoholism, alone or in conjunction with other neurotic conditions, may, he declares, be found almost always.

His classification of criminals is as follows: the *accidental criminal* who yields to opportunity by a sudden impulse before reason has had time to intervene; the *occasional criminal*, on the other hand, yields to opportunity deliberately and as the result of reflection; prison usually has a more beneficial influence on the latter than on the former; if, however, he becomes a recidivist he becomes the *habitual criminal*, with whom Dr. Laurent associates the professional criminal; there is again the *vagabond*, a person too feebly armed to succeed in the struggle of life; and there is finally the *morally insane* or *instinctive criminal*; Laurent agrees with Lombroso that these two are the same, both born with hereditary degenerative taint, and morally colour-blind. The histories of various cases are given in detail; the subjects are not, however, studied anthropometrically to any great extent.

An interesting chapter is devoted to the malformations and abnormalities which Dr. Laurent has most commonly found among prisoners. "I may say," he remarks, "that I have met one or more signs of physical degeneration among most true criminals, but these may exist in any organ, the skull or the genital organs, the ears or the hands, the jaws or the feet; on the other hand, I have never found in any organ any constant or, as one might say, pathognomonic, sign of criminality. Any malformation of any organ may be met with among criminals." Cranial malformations he found "remarkably frequent," especially the acrocephalic or "sugar-loaf" form. He agrees, also, with other observers in finding prominence of the frontal bosses common; in one head which he figures they appear almost like nascent horns. Prognathism he found frequently, as also among prostitutes. He confirms the observations of previous investigators as to the extreme frequency of large, prominent, or ill-made ears; and he refers to the frequent persistence of the first teeth to an advanced age: this observation seems to be new. There are some noteworthy pages on the occurrence of gynecomasty (*i.e.*, exaggerated development of male breasts at puberty with arrest of development in sexual organs)—a subject with which Dr. Laurent's name is already associated; this condition is often accompanied by some degree of mental debility.

Hypospadias was found to be the most frequent malformation of the genital organs. Dr. Laurent also attaches considerable importance to "infantilism" in criminals. There is a subsequent chapter dealing with physiological degeneration; strabismus, incontinence of urine, stammering, and various other muscular inco-ordinations are found to be frequent.

While attaching great importance to epilepsy in this connection, and holding, with Voisin, that there is no clear distinction between epilepsy and insanity, Laurent does not agree with Lombroso in assimilating the epileptic and the morally insane: "the morally insane person is always perverse and wicked; he is never open to a good sentiment or sympathetic emotion. To-morrow will find him what he was yesterday; loving evil and hating good, he never varies. Epileptics, on the contrary, often present periods of intermittence, during which they become good, sympathetic, capable of generous actions, accessible to remorse, weeping over the faults of the past." The importance this writer attaches to hysteria in this connection has already been noted; he observed six unmistakable cases of hysteria in the male in less than a year, and a great number of cases would have escaped his notice. He remarks the unhappy influence which the prison has on such cases; they emerge far more dangerous and perverted than when they entered. In the course of a long chapter on the insane in prison, Dr. Laurent remarks significantly:—

To anyone who, relying on the official statistics, would say to me, "There have been one hundred cases of madness during such a period in the Seine prisons," I would reply, put down three hundred, and you would be below the truth. In fact, this is what passes at the Prisons de la Santé, and I have every reason to believe that it is the same in other prisons, and probably worse where the medical staff is less numerous. Out of three cases of madness one at most is recognized, and figures in the official statistics; the others pass unperceived. At first I used to report these cases to the authorities, but the reply was, "Let the matter alone; it does not concern you." This reply was unanswerable. So the poor creatures finished their sentence, and were allowed to depart in peace. Sometimes I found them a fortnight afterwards in the Asylum of Saint-Anne.

Among other subjects dealt with in this volume, there are specially interesting chapters on the "Sexual Development and Habits of Criminals," "Prison Literature," "The Fine Arts in Prison," "Tattooing in Prison," "Suicide among Prisoners," and "The Influence of Education and Environment." The illustrations are numerous and all excellent; and the volume is prefaced by an introduction by Prof. Lacassagne, as thoughtful and suggestive as everything written by the Lyons professor.

Mitteilungen der Internationalen Kriminalistischen Vereinigung. Berlin, Guttentag. 1890.

The Report of the International Association of Criminal Law (No. 2; second year, July, 1890) is printed partly in German, partly in French. Although this Association does not directly concern the

student of morbid psychology, the question of the treatment of the criminal is now being found so closely connected with his mental state that such questions as these become a matter of interest and importance. This Association is truly international in character (although England is not largely represented), and now consists of nearly 500 members, most of them occupying responsible positions; it seeks to bring into practice, so far as that may safely be done, the results of criminal anthropology. Among the reports in this number is one by Prof. Foinitzki, of St. Petersburg, as to whether it is desirable to make the treatment of youthful criminals (14-18 years of age) dependent on their knowledge of their culpability. The answer is, No. Baumgarten, of Budapest, and Prof. Zürcher, of Zurich, deal with the desirability of compulsory labour without imprisonment in certain cases. Dr. Bernardino Alimena, of Naples, presents a report on the question of reparation in civil cases. K. von Lilienthal, of Marburg, deals with the very important question of the methods of dealing with incorrigible and habitual criminals. In most of these discussions, insanity, moral insanity, alcoholism, epilepsy, hysteria, and other matters with which morbid psychology is concerned, are constantly brought in; and it seems very desirable that the alienist and criminal anthropologist should be acquainted with the probable applications of his science to practical life. His ignorance under this head has in the past frequently led to unnecessary friction and confusion.

A. Loucura : Estudos Clinicos e Medico-legaes. Por JULIO DE MATTOS. S. Paulo. 1889.

Dr. Julio de Mattos is already favourably known in Brazil and Portugal, and this book is likely to add to his reputation. Under the general head of insanity he deals with various questions, psychiatric and medico-legal, which are of as urgent interest in South America as they are in Europe. The volume includes studies on megalomania, remissions in general paralysis, the relation between crimes of violence and epilepsy, the criminal responsibility of the insane, insane criminals, and psychiatry in the law courts. Dr. de Mattos is familiar with the most recent literature in France, England, Germany, and Italy, and while his own conclusions are not perhaps very novel or startling, he brings forward many fresh cases, and discusses each subject lucidly and judiciously. He is thoroughly in sympathy with the revived study of criminal anthropology.

Criminalité et Médecine Judiciaire en Cochinchine. Par le Dr. L. LORION, Lyons. "Bibliothèque d'Anthropologie Criminelle et des Sciences Pénales." 1887.

This is another of the excellent monographs inspired by Prof. Lacassagne. It is the work of a navy surgeon who has spent five years among the Annamites, and it belongs to the same class as the

standard work of Chevers on Indian medical jurisprudence and of Kocher on Arab criminality, the latter, again, a pupil of Lacassagne. Dr. Lorion's book is not so large or so interesting as Kocher's, because very much less is known of Cochin China than of North Africa, but all that is known is here well brought together. Various geographic, meteorologic, demographic, and statistical considerations are brought forward at the outset; then the ethnical and sexual characters of the various races are dealt with, the various forms of criminality, of mental disease, and of intoxication; the sexual instinct and the reproductive functions among the Annamites are investigated, as well as the various questions in medical jurisprudence likely to arise. Apart from its practical value for French surgeons whose duties may lead them to Cochin China, the book contains facts of all kinds which will be welcomed by students of medical, psychological, and anthropological science. It would be well, indeed, if all medical men who are brought in contact with remote and lower forms of civilization had so high an opinion as Dr. Lorion of their mission, and made such good use of their knowledge and experience. As he remarks in conclusion, "Without going out of his rôle, which is before all the art of healing, the medical man who is called to exercise his functions in our colonies ought to study the various general modifications of human activity as well as the more concrete phenomena he will have to investigate. He will then in his work associate legal medicine and anthropology with exotic pathology. These studies, far from injuring one another, will give a mutual support, and he who possesses them will be truly fitted to exercise his vocation."

La Femme pendant la Période Menstruelle. Étude de Psychologie Morbide et de Médecine Légale. Par le Dr. S. ICARD. Paris. 1890.

This book is by a pupil of Prof. Ball, to whom it is dedicated. Dr. Icard possesses nothing of the singular lucidity and charm with which his *très savant maître* discourses of complex mental phenomena at Sainte-Anne. His manner is bald, formal, a little old-fashioned, and he has few original observations to bring forward. The work is, however, one that needed doing, and Dr. Icard has done it in a thorough and systematic way, reproducing from various countries a very large number (two hundred and sixty-one) of typical illustrative cases. In the first part he deals with menstrual psychoses in general, with the history of the subject from the time of the Bible and the Zend-Avesta, with the proofs of the existence of the connection between the nervous system and the menstrual functions, the relations of insanity and various neuroses to menstruation, and the etiology of menstrual psychoses. In the second part he deals with various menstrual psychoses—kleptomania, pyromania, dipsomania, homicidal and suicidal monomania, erotomania, and nymphomania—each being

illustrated by numerous well-chosen cases showing the significance of the menstrual factor. There are also interesting chapters on various forms of religious delusion, ancient and modern, and on various minor varieties of morbid mental phenomena found in association with menstrual irregularities. Finally the medico-legal bearing of these investigations is pointed out. The menstrual function is capable of producing a mental state varying from simple moral *malaise* to insanity, these mental states necessarily modifying the responsibility of the subject. Dr. Icard advocates careful attention to the hygiene of the menstrual functions, especially in schools, and argues that—their modifying and disturbing influence being recognized—the presence and state of these functions should be taken into consideration when a woman is brought before a court of law. In short, his conclusion is that of Prof. Stolz: "We must know how to pardon much to a woman who is suffering and who has become, exceptionally, more impressionable." It should be added that while in the case of serious crimes associated with the menstrual functions Dr. Icard would give relief from prison, he would substitute the asylum until the menopause was safely passed.

Criminal Anthropology. By HAMILTON D. WEY, M.D. A paper read before the National Prison Association, at Cincinnati, Sept. 30, 1890.

The able physician of the famous Elmira Reformatory here brings forward a number of valuable notes with which his experience enables him to confirm the researches of other investigators in criminal anthropology. As evidence on these matters coming from America has a considerable amount of novelty, it is worth while to quote here some of Dr. Wey's observations. In regard to left-handedness: "Among 90 boys, all thieves, recently selected for another purpose, I found 14 or 15 per cent. were left-handed and two ambidextrous, My acquaintance with normal individuals yields no such percentage of left-handedness." Dr. Wey brings forward interesting evidence with reference to feminilism and the tendency to gynecomasty which, as he found had been observed in English prisons, and which Laurent has recently studied in detail at Paris.

"I have repeatedly noticed," he remarks, "at the period of adolescence large and prominent nipples surrounded by areolæ that were pigmented beyond what is usually seen in the male. Mammary glands as large as a hickory nut, generally lateral, occasionally bilateral, have been observed. In some subjects there was a periodicity of turgescence of this rudimentary organ, accompanied by the secretion of an opaque fluid, and a sensation of fullness and weight referred to the region of the nipple. It was the subject's complaint of the latter symptom that first called my attention to this phenomenon."

Gynecomasty, while occasionally met with, is distinctly rare outside prisons. It would be interesting to know whether it is at all prevalent among idiots; there is not, so far as I am aware, any evidence under

this head at present. In regard to what Benedikt terms disvulnerability, Dr. Wey says: "There seems to be in the composition of the nervous system an absence of that which predisposes to shock in accidents involving injury to, or destruction of parts. A hand detached at the wrist, with a tearing of many of the muscles of the forearm from their attachment, by a centrifugal clothes-wringer, produced absolutely no depressing symptoms, and only by the exercise of authority was the patient kept in his bed. A blow upon the head with a hammer fracturing the skull and forcing a fragment of bone $\frac{1}{4}$ by $1\frac{1}{4}$ inches against the *dura mater* produced unconsciousness that lasted not to exceed five minutes. Following the prompt removal of depressed bone there was uninterrupted progress towards recovery." With reference to the absence of mental depression and home-sickness, "In a service covering the admission of over 3,000 criminals the cases of nostalgia have been so few and of such a mild type that I am unable to recall more than half a dozen. The outside world with its habits and associations is left behind, and the routine of prison life entered upon without any manifestation of emotion or sacrifice of sleep."

Physical and Industrial Training of Criminals (Monographs of the Industrial Education Association). By HAMILTON D. WEY, M.D. New York. 1888:

In this brief but important monograph Dr. Wey has chronicled in detail the beginning of a movement in the treatment of criminals which probably has a large future before it. He starts with various observations concerning the mental peculiarities of the criminal, his low cunning, his lack of remorse, etc. "Generally under weight, with repulsive features in some one or more lines, and asymmetrical head, he is coarse in fibre and heavy in his movements. His mind, while not diseased, is undeveloped, or it may be abnormally developed in certain directions, the smartness resulting therefrom partaking of low cunning and centering about self. He is deficient in stability and will-power, and incapable of prolonged effort and application. His intellect travels in a rut and fails him in an emergency. His moral nature shares in the imperfections of his physical and mental state." He has, in short, "a perverted moral nature, a blunted mind, and a crude body." The problem before us is how to deal with these peculiarities, and it is, as Dr. Wey points out, analogous with the problem which confronts us in the case of the insane; "self-protection, primarily, and secondarily, the well-being of the convicted felon, and his subjection to influences that will modify and correct his abnormal tendencies." The chief part of this little book is taken up by an account of remarkable experiments in the physical training of forty-three criminals of the "dullard" class. This is a class of individuals who "cannot be considered as mentally unsound or representative of the feeble-

mind group, yet are incapable of any prolonged mental exertion, whose efforts in the workshop are spasmodic and unsatisfactory, requiring constant spurring on to hold them to their tasks." They had been convicted of burglary, rape, larceny, etc., and for the previous period of detention—one to two years—had made no appreciable progress. During sixteen months they were subjected to a course of physical training, concerning which Dr. Wey gives very careful and minute details. The main points in the treatment were baths at frequent intervals and with regularity, in conjunction with passive exercise, as kneading the muscles, working the joints, and friction applied to the entire body through rubbing by a professional trainer, as employed in the Turkish bath. Later on in the day there was a course of manual drill and calisthenics, to furnish exercise and supplement the routine task previously performed in the shop daily. After various experiments it was found that three baths a week (one tub and two vapour one week, followed by two tub and one vapour the next week) gave the best results. The drill occupied two hours in the afternoon, and consisted at first of that employed in the case of raw recruits. The results of this experiment were most satisfactory in all respects, and Dr. Wey furnishes the necessary charts and statistics to enable the reader to judge of it accurately. There was a three-fold line of advance in physical, moral, and intellectual improvement, more pronounced in some cases than in others, and not always uninterrupted, but which continued after the treatment had ceased. Further experiments have only confirmed the importance of physical training in dealing with criminals, and Dr. Wey's monograph cannot be neglected by anyone who is concerned with this difficult problem.

Dr. G. GRADENIGO: *La conformazione del padiglione dell' orecchio nei normali, negli alienati e nei delinquenti.* "Archivio di Psichiatria," Fasc. iii.-iv. 1890.

Dr. Gradenigo, who has previously studied the hearing of criminals, here gives the result of careful observation of the conformation of the pinna in 230 normal men, 230 normal women, 402 insane men, 350 insane women, and 222 criminals. He alludes at the outset to the difficulty of deciding what constitutes a perfectly normal pinna, a difficulty he tried to resolve by the previous examination of many thousand persons. He finds that the percentage of regular ears among normal men is 56.2, among normal women 65.6, among insane men 36.5, among insane women 46, among criminals 28.2. Criminals, therefore, stood lowest morphologically in this respect. These results are in accordance with those of previous observers, who have not, however, always exercised so much care as Dr. Gradenigo. The outstanding ear *ad ansam* was found equally common in insane men (26 per cent.) and in criminals (25.2); and rare in women, whether normal (3.1) or insane (4.2). The Darwinian tubercle was found most frequent in insane men, but only a little less frequent in normal

men. Adherent lobule, either simple or prolonged along cheek, was found specially common in women; so also prominent antihelix. Not only were the anomalies noted in the insane and criminal more in number than those found in normal persons, but they were also of greater gravity.

L'Enfance Coupable. Par M. RAUX. "Archives de l'Anthropologie Criminelle," 15 May, 1890.

This is a portion of a book on criminality in childhood, which has since been published in the "Bibliothèque de Criminologie," as a companion to Laurent's work on male adults; another volume is to follow, dealing with criminality in women. M. Raux is the Director of the Circonscription Penitentiaire of the Rhone, the Loire, and the Ain. He here studies the 385 children in the "Quartier Correctionnel" (to which somewhat more serious offenders are sent than to the "Ecole de Reforme") at Lyons. Of these 385 children, 223 (58 per cent.) were without either father or mother, or both. This is a very large proportion. In the case of 356 of these young offenders it has been possible to classify according to character the families to which they belonged; 42 belonged to families in which the father or mother, or both, had undergone imprisonment; 187 belonged to families of bad or doubtful reputation; only 127 (36 per cent.) belonged to families of good reputation. M. Raux points out, however, that the real number of families of good reputation would be very much smaller; many parents of drunken or disorderly character would be found in these families of "good reputation," although no formal condemnations were recorded against them. The number of parents having undergone imprisonment is also really much larger. In regard to the moral situation of the child in the family, it was found that 51 (13 per cent.) were under normal supervision; 158, or 41 per cent., were submitted to weak, powerless, or brutal supervision; 145, or 38 per cent., were more or less completely abandoned; 31, or 8 per cent., committed the crime from the example, or by the instigation, of parents. M. Raux refers to the large number of young criminals with malformed heads received into the establishment; he considers this the result rather than the cause of vice. With reference to the degree of instruction of these offenders, it was found that 184, or 35 per cent., were quite illiterate; 93, or 24 per cent., could read; 119, or 31 per cent., could read and write; 30, or 8 per cent., could read, write, and calculate; 9, or 2 per cent., had received good primary instruction. The 184 illiterate children are almost the same, M. Raux remarks, as those who in another table appear as 125 recidivists, and in yet another table as 145 abandoned children. As to professional education, out of 291 criminals between the ages of 13 and 16, 57 (scarcely 20 per cent.) had begun to learn some occupation, and this was chiefly as servants or errand boys; 80 per cent. had received no kind of apprenticeship except to vice. M. Raux finds

that those children whose offences are of a grave character are less vicious than the young habitual vagabonds, and much easier to reform—"the criminal is worth more than the simple delinquent." This corresponds to the experience of most observers among adult criminals. M. Raux has not much to say of the anatomy or psychology of his young criminals, but his study of them is full of valuable statistical facts, clearly arranged.

L'Anthropometrie Judiciaire à Paris en 1889. "Archives de l'Anthropologie Criminelle," 15 Sept., 1890.

This is a full and illustrated study of M. Alphonse Bertillon's method of measuring, registering, and recognizing prisoners, as it is worked under his superintendence at the Palais de Justice in Paris. It is a paper that is specially deserving of study in England, where the force of official inertia, notwithstanding the energetic efforts of Mr. Spearman and others, has so far successfully resisted the introduction of this most admirable method. It has been adopted in many of the United States, and is rapidly spreading elsewhere. No one who has not seen it working can realize its marvellous simplicity. Ten minutes initiation at the hands of M. Bertillon or one of his assistants would enable any person of fair intelligence to take charge of the establishment, and unmask the identity of the cleverest rogue in France.

Etude metrique du crâne de Charlotte Corday. Par le Dr. BENEDIKT. "Archives de l'Anthropologie Criminelle," 15 May, 1890.

At the time of the International Congress of Criminal Anthropology at Paris, the skull of Charlotte Corday, which had been exhibited by Prince Roland Bonaparte, excited a lively controversy between three prominent experts from different countries—Lombroso, Topinard, and Benedikt. Prof. Lombroso maintained that this skull, being platycephalic, asymmetric, exhibiting the rare median occipital fossa, etc., was thoroughly abnormal. Dr. Topinard attaches no importance to the abnormalities, and held that on the whole the skull was quite normal. In a recent number of his own journal, "l'Anthropologie," he has published a very lengthy and detailed study of the skull, with numerous illustrations, in support of his view. Now Prof. Benedikt brings forward on his side an elaborate contribution to the subject, illustrated by tables and complicated diagrams. His general position may be fairly described as midway between those of Lombroso and Topinard, and may be accepted at present as the last word on the subject. He points out that the little occipital fossa to which Lombroso attaches considerable importance (a quasi-paternal importance, as Tarde once remarked), and the rarity of which is unquestioned, has a very limited significance. It tells us more about the development of the venous system, with which it is in intimate rela-

tion, than about that of the cerebellum, and even if its presence could be taken as arguing a large vermis, it would still possess little or no psychological significance. (It must be said, however, that, in view of the progressive disappearance of this fossa in passing from the lower apes up to man, its presence is a valuable guide in estimating morphological rank.) He finds some portions of the skull to be somewhat masculine in character, and recognizes various deviations from symmetry. But while there are thus numerous anatomical peculiarities not corresponding to typical perfection, he does not consider that they warrant us in classing this specimen as pathological or atypic. The amount of study which has now been given to this skull is perhaps greater than even the fame of Charlotte Corday warrants, but it has certainly not been fruitless. It brings out clearly the difficulty of generalizing about so complicated an object as a skull. There appears to have been no discussion as to the presence of the various abnormalities; the question was merely as to their significance, as to how many abnormalities it takes to make an abnormal skull, or as to how many millemetres of difference constitute an abnormality. It is clear how much room there is here for individual taste and judgment to play a part, and that it is impossible to be too cautious in arriving at a generalization.

3. *German Retrospect.*

By WILLIAM W. IRELAND, M.D.

Soul-blindness.

Dr. H. Lissauer ("Archiv. für Psychiatrie," xxi. Band, 1 Heft) details a case of soul-blindness (Seelenblindheit), and then sets himself to clear up our conception of what this deficiency really is. It is through the hope of this latter promise being fulfilled that I have pored through the fifty pages of the "Archiv.," and after performing such a task one feels reluctant to admit that his labour has been in vain. Munk, whose experiments first led to the conception of soul-blindness, believes that the power of receiving the impression from visual images as well as the seat of the memory of these images is located in the occipital lobe. Reinhard thinks that the perception of space and form is dependent upon the integrity of the superficial layer of the visual zone. Wilbrand assigns to one spot in the cortex the recognition of optical images, and to an adjoining part of the cortex the memory of such images. In the published cases describing the results following injury to the occipital lobe, there is noted a loss of visual power, but it is not clearly defined what this loss consists in. The case described by Lissauer was a man 80 years of age, of a neurotic constitution, but

good general health considering his age. He had suffered for two years from attacks of giddiness, and sometimes fell on the ground. The intelligence seemed on the whole to be well preserved, though there was some loss of memory, and in relating old stories he confused the sequence of time. There was presbyopia and complete right-sided hemiopia. The parting line of vision lay a little to the right of the fixation point, so that central vision was preserved in both eyes. The sense of colours remained good, and he could write quite well, but he had in great part lost the faculty of recognizing objects by sight, though when he was allowed to use his other senses he soon made them out. The vision of stereoscopic objects was destroyed, but when one needle was laid upon another he could tell which was the nearest to him, and he generally took the measure of objects correctly. The power of reading was nearly destroyed; he could not even read what he had written a short time before, and the capacity for drawing known objects was much impaired. The old man was interested in his own case, and readily lent himself to inquiries and experiments, the results of which are given in detail. For example, a candle was held before him; he said it was a drawing pencil, and at last made it out correctly. A clothes brush being shown to him, he said it was a cat, and it being objected that it was too small for a cat, he said it was an artificial cat. He then pointed out where the head, tail, and four paws were; but on touching it he at once said that it was a clothes brush. On being shown a cow and calf, he said it was a young and old animal; then he said "cattle." On being asked, Where is the head? he pointed to the hinder part of the cow. On being asked where the horns were, he indicated them correctly. On being shown a coffee mill, he said it was an ink bottle; but when the handle was turned he immediately recognized it. Being shown a picture of the Emperor William, he said it is "our Kaiser, the old one." He also recognized at once a picture of Napoleon.

I have taken these instances out of a list of seven pages without any intention of confusing the reader, but, indeed, it is very difficult to make out wherein lay the visual deficiency of this old gentleman. Dr. Lissauer's own interpretation is that his patient had no aphasia or paraphasia, and that the deficiency in vision was something quite different from dimness of sight. It consisted in a want of the power of recognition of seen objects, though the memory of visual images and the use of the other senses were not impaired. Dr. Lissauer distinguishes between what he calls apperception and mental recognition. He defines apperception as the highest grade of perception, in which the consciousness of a sensual impression has reached its utmost intensity. A further process consists in the comparison of the seen objects with former impressions, and the recognition of the relations of the seen object to other things in time or space, which, Dr. Lissauer tells us, is an act of association. Bearing this in mind, soul-blindness might consist in an

injury to the faculty of perception, or an injury to the power of association, through which the import of visual objects is recognized by the mind, or lastly, both these processes might be injured. Dr. Lissauer confesses that he scarcely expects to find pure examples of the two first forms. In connection with injuries to the brain, they may be either subcortical injuries implicating the optic tract and the optic ganglia, or cortical lesions of the visual zone in the occipital lobe, or transcortical owing to injury to the connections between the visual zone and other parts of the hemispheres. The first of these lesions may cause loss of sight or hemiopia, but not soul-blindness, which must be owing either to a cortical or transcortical lesion. He observes that the memory of images realized by the exertion of all the senses must be spread over all the cortex. This would hold good of the conceptions of space and form which are not wholly deranged from visual impressions.

Dr. Lissauer considers his case one of transcortical blindness, as the power of recognition was greatly impaired, while that of perception did not suffer so much. As the case did not come to a post-mortem examination, the actual lesion was but a matter of inference.

Dr. Lissauer tries to lay down all the possible categories into which the impaired faculty of recognition of visual objects might fall. There is, he observes, so much relation between the object and the conception that we can understand how the error in representation could have arisen.

(a) There may be a resemblance in form, as when a pencil is mistaken for a candle, or a paper basket for a wicker one.

(b) There may be a resemblance in some particulars, as when one mistakes the image of a swan for that of a giraffe, owing to the length of the neck, or when one takes a maned lion for the picture of a wild unshorn man. It might also be that the patient drew wrong conclusions from what he saw, that he was misled by false inferences from optical impressions or from false images drawn from a perverted memory.

(c) Where there is some internal correspondence without external likeness, as when a bunch of grapes is taken for a pear, the idea of fruit being common to both. This was not often observed, but sometimes the patient would name an object rightly, and then hesitate and guess at something else, as when he named a watch, and then said it was a watch holder. Sometimes illusions were observed, as in the case where he thought the hair-brush to be a cat. This looked as if around the real object there gathered images of an imaginary object, and the patient judged wrongly, because he saw more than he really should have normally done.

Another Case of Soul-blindness.

Dr. Siemerling's paper, in the same number of the "Archiv.," at least shows us how complicated the subject is. He observes

that cases of soul-blindness, as described by Munk, are extremely rare. At first he thought the case described by him might prove one instance of it; but a more careful study showed some marked differences.

The patient was a labourer, 54 years old, a steady, healthy man. In the middle of December, 1888, he was aware of a dimness of sight, with giddiness and heaviness in the right arm. He thought that he could see better with the left eye. On the first of January he complained that sight with the left eye was 'also becoming difficult. There were no other symptoms save a slight failure of memory.

On admission to the Charité, at Berlin, on the 7th of January, there was found to be no aphasia or paralysis, and his understanding seemed to be good; but he had lost the power of seeing flame or colours. He saw everything in dark or shade, like in a photograph. Objects held out before him, as a key or a candle, he recognized with difficulty. He wished always first to handle them. On examination of the eye there was found to be some emmetropia on both sides, and right-sided hemiopia on both sides, which, however, was not equal in extent. In the right eye the deficiency of vision slightly passed the middle line; on the left side it was smaller. There was some mental dulness with deficient memory. After being eight days in the hospital, he said he had been only one day. He persistently complained of bad sight, and used the sense of touch to distinguish objects. Careful experiments were made, in which regard was paid to the existence of hemiopia. It was ascertained that the patient had lost the capacity of reading, and had some difficulty in writing, but the most marked deficiency was the total loss of the sense of colours. He had never previously been colour-blind. Under the use of iodide of potassium the dimness of sight in part passed away, and the colour sense in part returned, first that of blue, then of red, then of green; but the right halves of the retinae remained hemiopic. Along with the improvement in the sharpness of vision, the symptoms of soul-blindness vanished. The patient was able correctly to name the objects which he saw, and the agraphia and alexia disappeared.

Dr. Siemerling, in conjunction with Dr. König, now resolved to try some experiments with a view to determine the nature of the so-called soul-blindness. Through dimmed glasses a vision of $\frac{1}{10}$ was obtained, and the light in the room in which the objects were exposed was rendered monochromatic by natrium light. Dr. Siemerling now found that he was in much the same condition as his patient; he was unable to recognize single objects held before him. He knew that there was something, and had a conception of its size, and felt the desire to handle it in order to ascertain what it was. Thus through monochromatic light and artificial dimness of vision he was able to induce a condition similar to soul-blindness. Dr. Siemerling is inclined to think that the lesion

in the patient described must have involved both occipital lobes. It was thus not a case of soul-blindness, but of partial cortical blindness. Willard holds that the recognition of a seen body and the formation of an image of it in the memory are two distinct mental processes.

At present there is little unity in the conception of the symptoms of soul-blindness. Many of the patients studied are more or less deranged in mind, some even in a condition of dementia, so that examinations as to the diminution of sight or the perception of colours are carried on under difficulties. Nor can the experiments on animals on which the doctrine of soul-blindness was built up give us clear results as to the sharpness of vision and the sense of colour, factors which, as we have seen, are of importance in the consideration of the affections of vision that may go on under the name of soul vision. Dr. Siemerling cites Charcot's and Wilbrand's cases as good instances of real soul-blindness in the sense that Munk described it. In neither of these cases was the sharpness of vision or the perception of colour injured to any notable degree, but in both there was a loss of memory of the images of seen objects.

In conclusion, Dr. Siemerling cites a case observed by Schoeler Uhtoff similar to the one described by himself. The patient was suddenly seized with severe headache and tendency of blood to the head, so that the face assumed a dull red hue. He became blind in both eyes. This lasted for 24 hours, after which the power of sight returned so that he could see objects dimly. On further examination it was found that he had complete right-sided hemiopia, and in the upper part of the left field of vision there were two spots of scotoma. The perception of colours was lost in both eyes. The sight continued to improve, though the hemiopia remained and the perception of colours did not return. The patient died a year after "of a complication." A case was also described by Steffan, in which the power of sight and the field of vision suffered no injury, but a total colour-blindness invaded both eyes.

Cortical Hemiopia with Degeneration of the Optic Nerve.

This is a case taken from the "Archiv. für Augenheilkunde," Band 19, and reported in the "Neurologisches Centralblatt," 15th January, 1890, of a man 33 years of age, who in his ninth year lost the sight of his left eye. In February, 1882, he received a blow with a spade which fractured the right temporal bone. The dura mater was torn and driven in. Several pieces of bone came away, and there was an abscess in the brain which required opening. The patient was comatose, and there was a transient paralysis of the left arm and leg. The wound healed in May. When the patient regained consciousness he remarked a loss of visual power towards the right, and on examination there was found nasal hemiopia

which lasted till the death of the patient. In the central papilla the power of vision remained normal, though a small portion of its under border seemed to become paler in the course of years. Towards the close of the patient's life the action of the pupil to light thrown upon the temporal side of the retina became less marked. After the wound healed the man returned to his business. He noticed that the feeling in the left hand was somewhat diminished. He sometimes felt warm in the head, otherwise there were no cerebral symptoms.

The man died in September, 1887, of consumption. On examination after death there was a tight cicatrix at the posterior portion of the right temporal bone, under which there was some wasting of the convexity of the brain implicating the cortex, and at one place some of the white substance, so that the greater portion of the temporal convolutions were destroyed or had become grey and sclerotic. The right optic nerve where it passed through the foramen was pale white at the one side, and grey in the rest of its calibre. On microscopic examination the tissue was found to be atrophied more or less throughout its whole extent of the nerve. A very attentive study of the atrophied and sound portions of the optic nerve confirmed views already laid down by previous observers of the position of the nerve fibres. In the neighbourhood of the eye the fibrous bundle lies at the temporal side of the nerve trunk. The fibres of the temporal side of the retina lie at its upper and under circumference. The fibres of the nasal side of the retina occupy the centre and middle third of the inner circumference. These bundles afterwards change their position during the backward course of the optic nerve. The assertion that the fibres which do not cross lie upon the right side of the nerve was not borne out by this case. The author explains the gradual diminution in the reaction of the pupil by the consideration that at first the optic nerve fibres remained healthy up to the corpora quadrigemina, but in time became degenerated.

4. *Therapeutic Retrospect.*

By HARRINGTON SAINSBURY, M.D., M.R.C.P., Physician to the Royal Free Hospital.

Spermin and Piperazidin.

Brown-Séguard asserted, in 1889, that testicular extracts (from young animals) exerted marked stimulating powers on the nervous system when injected subcutaneously. His statements were confirmed by numerous observers. No bad effects resulted, but certain local manifestations suggested the separation of the base spermin, present in the testicular extract, and the use of the base

alone. Parke, Davis, and Co., in America, and Prof. Poehl, in St. Petersburg, have prepared this spermin. It is an organic base which forms a well-defined crystalline salt with phosphoric acid. The crystals of this salt appear to be identical in form and composition with the crystals found by Charcot in the spleen and in the blood of leukæmia; in the marrow of bones in the same disease (Neumann); and in the expectoration of asthmatics (Leyden). Schreiner, in 1878, separated these same crystals from semen and from various organs of the body, and determined the chemical formula of the salt. Kobert, experimenting with spermin, declared it to be non-poisonous. Prof. Tarchanow, however, experimenting with the hydrochlorate of spermin, prepared by Prof. Poehl, found an increased force of the heart's contraction and a rise of blood pressure; other observers have confirmed his results. Kobert, objecting, maintains that in those diseases in which spermin is found in excessive quantity, the stimulant effects described are lacking. The firm of E. Schering has of late introduced a preparation to which they gave the name spermin in the first instance, but have now replaced it by "Piperazidin." This body has been investigated by A. W. V. Hofmann, who finds it to be diethyl-diamine. Experiments with this body give very divergent results as compared with those of Tarchanow, for no stimulant action can be recognized after subcutaneous injection in rabbits. Piperazidin, therefore, does not suggest usefulness as a nervine or cardiac stimulant, though it remains to be seen whether this body is identical with that previously experimented with under the name of spermin. One interesting property belongs to piperazidin; it has a great solvent action on uric acid, far surpassing that of lithia. Failing, then, its use as a nervine tonic, piperazidin may yet prove serviceable in another way.—"Therap. Monatsh.," p. 88, Jan., 1891.

The Treatment of Sitiophobia amongst the Insane by Washing out the Stomach. By AUGUSTE VOISIN, Médecin à la Salpêtrière. "Bulletin Général de Thérapeutique," Jan. 30, 1891.

The author refers to previous statements respecting this treatment by Régis, in Dec., 1880 ("Annales Médico-Psychologique"), and by Moreau, in the same year ("Inaugural Thesis"), also to a further more recent notice by Marie, in the above annals, on a case treated by M. Mabit. M. Voisin urges that the simple soft rubber nasal tube of Faucher is all that is required. After washing out the stomach the patient may be fed by the same tube without any removal. The soft tube can do no damage to the stomach and œsophagus, and, if sufficiently large to just pass with ease along the nose, it does not move about in the nasal passage and cause an unpleasant tickling, nor, when used of this size, is there the danger of its passing unperceived through the rima glottidis.

The patients treated were mostly cases of melancholia, in all 15 cases. The author concludes, from the results obtained, that it is in cases of insanity, chiefly of melancholia associated with gastric troubles, that the treatment is indicated. He thinks that a catarrhal state of the alimentary tract is at the bottom, in most cases, of the hallucinations in respect of food, and of the refusal of the same, and that this condition is met directly by the washing out of the stomach.

Ferric Bromide.—Treatment by iron finds its place in all sections of medicine, and the alienist, not less than the general physician, has recourse to it; hence we may here refer to the above-named compound of iron, which Dr. Hecquet, formerly physician to the Abbeville Hospital, recommends as of value in all those cases in which it is desirable to soothe without depressing, and to strengthen without exciting. The compound is well borne by even irritable stomachs. It is administrable either in solution or in lozenge, and the dose is from 3 to 5 grains. Its hæmatinic action is said to be more rapid than that of most iron compounds. Dr. Hecquet gives preference to the ferric salt Fe_2Br_6 , over the ferrous salt FeBr_2 , ("Lancet," Feb. 14, 1891).

The value of iron in the treatment of epilepsy is, as is well-known, a moot point, many authorities condemning its employment, as liable to increase or aggravate the fits. It would be of interest to know whether this compound, the ferric bromide, could be given without fear of such result; from its structure we might expect that it might.

Whilst on this subject of iron we would draw attention to Clifford Allbutt's letter in the "Brit. Med. J.," for Feb. 14th, in which he maintains that the very favourite iron preparation—Blaud's pill—does not owe any of its virtues to the carbonate of potash present. A statement like this would require very definite proving, but we feel convinced of the truth of Dr. Allbutt's further statement that the failures in the treatment of anæmia by iron result from its insufficient dosage. The sulphate is, according to Dr. Allbutt, the best preparation of iron—the most efficient—and it should be given, according to him, in doses of one grain thrice daily at the start, and then increased till from nine to twelve grains are given each day. He refers to the *dried* sulphate of iron. In obstinate cases of anæmia he adds gr. $\frac{3}{10}$ of strychnine or gr. $\frac{1}{4}$ of zinc phosphide, and finds these additions invaluable. In most cases gr. $\frac{1}{4}$ – $\frac{1}{2}$ of the extract of aloes must be included in the pill to avoid the constipating effect of the iron.

On the subject of hypnotics and sedatives, we find, in the February number of "The Therapist," a journal recently started, some interesting records of the total consumption of this class of remedies. "In the year 1880," so it is stated, "the only standard sedatives in use were the bromides and chloral hydrate. The

approximate yearly consumption of these two products then stood as follows:—

Bromides	...	Average number of doses	43,000,000
Chloral hydrate...	"	"	" 12,000,000 "

In the year 1890, with a much longer list of sedative remedies, the following is the computation of the consumption of individual members of the group:—

Chloralamide	...	Average number of doses	224,000
Sulphonal	...	"	" 1,400,000
Paraldehyde	...	"	" 765,000
Chloral hydrate...	"	"	" 8,500,000
Bromides	...	"	" 92,000,000
Total ...			102,889,000

It would be interesting to learn how these figures have been arrived at, and it must be noticed that the results are given in *doses*, and not in bulk, and that hence we can only use the figures as very rough statements of, say, bromide *treatment* as compared with chloral hydrate and other *treatment*. In this comparison it is at once apparent that the bromides take the lead so strikingly, not simply because of a superior efficacy and safety, but because they hold a position quite distinct from the others. They, the bromides, are the sedatives *par excellence*, and their use in the treatment of one disease alone, epilepsy, is on a huge scale. At the same time, it must be admitted that the bromides do owe much of their prominence to their undoubted harmlessness, and to the fact that their use does not lead up to the production of a habit. Comparing the other members of the above group together, we may say that the use of sulphonal will probably grow still further and seriously rival chloral. Paraldehyde *would* probably distance both its competitors, for it is one of the safest of drugs, and in hypnotic doses does not impair the working of the respiratory and cardiac centres, but just as the dropping of the aspirate is reckoned unpardonable in polite society, so the taste of paraldehyde, and its offensive persistence will ever prevent its fashionable use. It is to be observed, moreover, that it is alienists who are loudest in its praise, *i.e.*, those who practise amongst a class less sensitive in this respect.

Will chloralamide replace chloral hydrate? This it is impossible to forecast. The drug has been introduced because of the presence of the group NH (CHO), a replacement derivative of amidogen, NH₂, and because of the reputed stimulant action belonging to it in virtue of this amido-compound. Its more correct name is chloral-formamide. The drug has already been considerably used, as is shown by the above table, and so far as the trial goes, the results are favourable. There are some points to remember in administering

it—1. Alkalies decompose it. 2. It is decomposed by hot water, and is only slowly soluble in cold water. 3. It is more soluble in spirit, and the best vehicle is a weak alcoholic solution. Strahan, among English observers, has especially testified to the value of chloralamide. He reckons it equal to paraldehyde, but in no way superior, except in taste and in not imparting a disagreeable odour to the breath. It acts in about $\frac{1}{2}$ -2 hours, on an average in about one hour. The dose is 30-45 grs. Other drugs advancing the same claims as chloralamide are chloral ammonium, in which the group NH (CHO) is replaced by NH₂ (Nesbitt, in the "Therap. Gazette," 1888, speaks favourably of this compound); chloralimide, containing the group (NH); chloral urethane, etc. The doses of all these are about the same as the dose of chloralamide, viz., 15-30-45 grs., beginning with the lowest dose.

The Systematic Use of Sulphonal in the Treatment of Insanity. By Dr. VORSTER, of Königsutter.

Fifty-six patients were treated with sulphonal, to the extent of 9,000 grammes (139,500 grs.) in all. Dr. Vorster praises the treatment highly. The drug causes motor depression, and it produced quiet in cases of violence and restless activity and shouting. In several cases dirty patients became clean in their habits. Motor quiet was obtained in the following states: the stages of excitement in secondary delusional insanity (Wahnsinn), whether acute or chronic; of acute, periodic, and chronic mania; of senile dementia; of general paralysis; of idiocy; of epilepsy. In most cases 30 grs. sufficed; in a few cases 45 and 60 grs. were given for a short time (we presume this means *pro die*); the individual dose was 7.75-15.5 grs. In periodic excitement, sulphonal given uninterruptedly rendered the attacks milder and shortened them; it proved of special value in acute melancholia and acute insanity; it rendered the attack of epilepsy milder, but did not cure severe cases. Toxic effects were of two kinds—motor and sensory; in each class depression was witnessed. Motor depression showed itself in some cases as a paresis, first of the legs, subsequently of the tongue and arms. Sensory depression appeared as a somnolence, and this symptom preponderated in cases of continued dosage, a soporific state ensuing, in which general sensibility was much impaired, and the superficial reflexes abolished. The motor stage is unimportant; the late sensory stage requires careful watching. On lessening the dose the symptoms will soon depart. Pulse and respiration did not suffer. Digestive troubles of various kinds were observed; in two cases there was a skin eruption. No habituation occurred.—"Therap. Monatsh.," Jan., 1891, extracted from "Allgem. Ztschr. f. Psych.," B. 47, H. 1, 1890.

Observations on the Employment of Chloralamide, Hyoscin, and Amylene Hydrate. By Dr. P. NÄCKE (Hubertusburg).

Chloralamide was found very useful as a hypnotic in doses of 15-45 grs. It acts well, not merely in agrypnia, but also in excitement. It is much less valuable when there is pain as the cause of insomnia. It is best given soon before bedtime. Habituation frequently obtains. It is quite as sure as chloral hydrate, though rather less rapid in action; it is certainly safer. (These results are confirmatory of previous experience of the investigators).

Hyoscin the author found of no use.

Amylene hydrate is spoken well of by Dr. Näcke in the treatment of epilepsy, even of long standing; and he says it does not produce dangerous bye-effects. The dose given was 2.5 dessertspoonfuls of a 10 per cent. watery solution. Unfortunately the author has to append to this account the results of further treatment, viz., failure in 35 cases!—"Therap. Monatsh.," *loc. cit.*, extracted from "Allgem. Ztschr. f. Psych.," *loc. cit.*

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A quarterly meeting of this Association was held on Thursday, February 19th, at Bethlem Hospital, London, Dr. Yellowlees, President, in the chair. There was a large attendance.

The following gentlemen were elected members of the Association:—Charles Edward Saunders, M.D., M.R.C.P.Lond., Medical Superintendent Haywards Heath Asylum; John Alfred Ewan, M.A., M.B., C.M.Edin., Assistant-Medical Officer Dorset County Asylum; Charles Caldecott, M.B., B.S.Lond., M.R.C.S.Eng., Assistant-Medical Officer, Holloway's Sanatorium, Virginia Water; John Brooke Ridley, M.D., C.M.Edin., Assistant-Medical Officer Darenth Asylum, Dartford; Algernon Wilson Lyons, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Assistant-Medical Officer City of London Asylum, Dartford; Harry Corner, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Assistant-Medical Officer Bethlem Royal Hospital.

The PRESIDENT—There are two sections under the microscopes of interest exhibited by Dr. Hyslop. One shows the condition of the nerve after amputation; it is a section of the left anterior crural nerve six months after amputation of the leg, showing the degenerated nerve fibres. The second is a section of the nerve of the arm three years after amputation, showing the generation of nerve fibres and increase of connective tissue in the perineurium. I have now to call upon Dr. Savage to read his paper on "The Plea of Insanity." (See Original Articles.)

Dr. ORANGE—I am sure that everyone present will join with me in expressing our thanks to Dr. Savage for his very instructive paper. I wish to occupy the attention of the meeting only a very few moments to speak upon one point which was particularly mentioned by Dr. Savage, but which perhaps has not hitherto attracted as much attention as it deserves, and that is with respect to a

systematic way of inquiring, before trial, into the question of insanity. It may be within the recollection of some of the members now present that seven years ago, at a meeting of this Association, a resolution was passed in favour of submitting a recommendation to the Secretary of State to the effect that, before trial, in those cases where there was any reason to suspect the existence of insanity, steps should be taken to have a medical examination made by the authorities, and that the evidence so taken should be laid before the jury, and that this should be done without involving any expense to the prisoner. The resolution was passed at the annual meeting of this Association in 1883; and, on the 18th of March, 1884, the *Times*, in its report of the proceedings of the House of Commons of the previous day, contained the following:—"Mr. Mellor asked the Attorney-General whether it was true that the Government had determined that the prosecution in all capital cases should be conducted by the Director of Public Prosecutions, and whether he had given any directions to that effect." In reply to this question, the Attorney-General (Sir Henry James) said: "Perhaps it will be the better course for me, in answer to the question of my honourable friend, to state what directions I have given to the Director of Public Prosecutions. I lately received a communication from the Home Office to the effect that in some recent cases great inconvenience, if not injustice, had resulted from no responsible person being in charge of cases when the life of the accused was at stake. I was also informed that the Home Office had found great difficulty in dealing with cases of alleged insanity, in consequence of the facts not being brought before the jury, and being only suggested after the trial. It seemed to me, therefore, advisable to take steps to insure that all evidence bearing upon the case, whether tending to prove the guilt or innocence of the prisoner, should be placed before the jury; and with that object I have requested that whenever an accused person is brought before justices on a capital charge, the magistrates' clerk shall communicate with the Solicitor of the Treasury, and that that officer shall take charge of the prosecution, unless he finds that some competent private person or local body has the conduct of it; but in the absence of such proper conduct it will be the duty of the Treasury Solicitor, acting as Director of Public Prosecutions, to see that the evidence in every capital case be fully brought before the jury. I have also requested that in those cases where insanity in the accused is alleged, full inquiry shall be made, and in the absence of his, or his friends', ability to produce witnesses, the Treasury Solicitor shall secure their attendance." I have no doubt that this statement of the Attorney-General's may have been noticed by many now present, but whether it has been so fully taken notice of as it deserves I am not quite sure. The result of such an instruction as that from the Attorney-General to the Solicitor of the Treasury, who is now the Public Prosecutor, is this:—If there is reason to suppose that the accused is insane, or if he is alleged to be insane, the Solicitor of the Treasury applies to two or more medical gentlemen residing in that part of the country where the trial is to take place, one of whom is usually the Medical Superintendent of the County Asylum, and the other of whom is often the medical officer of the prison, and requests them to examine the accused and to draw up a report as to his, or her, mental condition; and then, if those gentlemen are willing to comply with this request, they are afforded every facility for obtaining the fullest possible information with regard to the whole of the antecedents of the accused. They have only to express a wish to the Solicitor of the Treasury that certain investigations should be made, and those investigations are instituted immediately and fully. It has been said that a prisoner is not fully protected unless he has a solicitor as well as a medical adviser appointed for him. That, of course, is a difficulty; but the Solicitor for the Treasury, when acting in the way now referred to, is virtually the solicitor for the prisoner as well as for the prosecution. It is his practice to appoint a solicitor, as his agent, in the assize town where the case is to be tried, and that solicitor will always take any amount of trouble in obtaining full information as to the antecedents of the prisoner in those cases

where the prisoner is not provided with a solicitor. In this way a knowledge of all the facts bearing on the case is obtained by those who are charged with the duty of drawing up the report as to the mental condition of the prisoner, and the report itself naturally is an absolutely impartial report. The medical men are not advocates in any way, either for or against; they are employed by the prosecution, but with the full intention that the facts bearing upon the mental condition of the accused, whether telling for or against, should be as far as possible investigated, and that then the result should go fully before the Court. What Dr. Savage has said is very true as to the necessity of getting hold of the whole of the facts, and I thought it might be interesting if I pointed out that there exist at present considerable facilities for getting hold of the whole of the facts. There are three things that one wants to do in inquiring into matters of this description—firstly, to ascertain accurately the facts; then to put a medical interpretation upon them; and, thirdly, to consider what is the legal bearing of those facts, and this last is a point which may be very properly discussed with the legal gentlemen employed in the case.

Dr. BLANDFORD—I am very much obliged to Dr. Savage for bringing this subject forward to-night. I wish to make one statement with regard to the case he has alluded to of Mrs. Pearcey, because my name, very much against my will, was mentioned in the papers as having given an opinion that she was insane, which I did not do. This case brings me to the point, which Dr. Savage alluded to, of no plea of insanity at all being set up at the trial, but the plea of insanity being started after the trial is over and the prisoner convicted. Of course, if the plea of insanity is started at the trial the evidence which has to be brought forward can be sifted, and it acquires an importance which it does not otherwise possess, and all that machinery which Dr. Orange has just alluded to can be brought into play. When I was applied to by the solicitor for Mrs. Pearcey, he told me a long story about epilepsy and various attacks. I said to him—"Why was not all this brought forward at the trial, where it would, of course, have had very great weight?" Well, of course, the solicitor tells you that he is in the hands of counsel, and it seems to me in these cases they want to have two strings to their bow. They want first of all to see if they can get the prisoner off upon the facts, and if that does not do they try to run the plea of insanity. You will all of you recollect the same thing was done in the case of Lefroy and in the case of Lamson. I was not at all pleased at his coming to me at that period of the proceedings, and I said, "I will say this much—that if all this evidence of epilepsy is true, I think there ought to be an investigation," but I entirely declined myself to examine the woman. An examination was made, with what result you know. I think it is of the very greatest consequence that anything like a plea of insanity should be raised at or before the trial and not after, and I think that medical men should be guided to a great extent, as to their giving evidence, whether it is to be given before or at the trial, or whether it is started after, as in Mrs. Pearcey's case. In the one which Dr. Savage alluded to, of a man who shot a woman in North London, in which he and I were associated, the evidence was given at the trial. We were cross-examined, and everything was done *coram publico*. The result was the man was let off.

Dr. WEATHERLY—Might I be allowed to say a word with regard to the Attorney-General's rules in these cases. In a recent case, when the son of a medical man was indicted for murdering his sister, I know as a fact that the Treasury requested Dr. Needham to examine the accused.* He did examine him, and his evidence was to the effect that the patient was hopelessly epileptic and undoubtedly insane. The prosecution, however, did not put Dr. Needham in the witness-box, but the defence called upon him. When he got into the witness-box the judge refused to take any evidence from him at all. Luckily

* We have received from Dr. Needham, in reply to an inquiry, a brief statement of what really happened, which will be found at the end of the report of this meeting.—Eds.

for the boy, before Dr. Needham was stopped in his evidence, he let the jury understand that he believed the boy was of unsound mind, and the jury brought him in insane. In that case, although the Treasury had requested Dr. Needham to examine the boy, the prosecution did not put him in the witness-box, and the judge was absolutely insulting to Dr. Needham and would not allow him to give evidence.

Dr. ORANGE—Was that evidence proffered at the preliminary inquiry as to whether the boy was capable of pleading?

Dr. WEATHERLY—It was given at the trial.

Dr. ORANGE—I remember the case. There was, first of all, a discussion as to whether the prisoner could plead. If I remember rightly it was proposed to call Dr. Needham, but the question was raised by the judge whether the witness had seen the prisoner on that particular morning so as to say whether or not he was then fit to plead. If I remember rightly that was the particular point, and it was decided that not having seen the prisoner on that particular morning his evidence had no effect at that moment. Then the trial went on.

Dr. WEATHERLY—It was after the question of the plea had been settled; I know the judge was very strong about it.

Dr. ORANGE—I think that the ultimate result was that he was acquitted.

Dr. WEATHERLY—Undoubtedly.

Dr. THOMPSON—I was called to examine a man who was indicted for murdering his mother-in-law, in Norfolk. I examined him, and gave as my opinion that he was of unsound mind at the time he murdered his mother-in-law, but the counsel for the defence did not think it wise to bring my evidence before the Court, and the man was condemned to death. I felt somewhat annoyed at having been asked by the Treasury to examine this man and then for my evidence never to be brought before the Court. I wrote to the Home Secretary, who answered that he would consider my report and communicate with the presiding judge at the trial, Mr. Justice Denman. He did so, and the result was that the man's death sentence was commuted to penal servitude for life, a somewhat illogical proceeding. I mention that to show that there may be this machinery, which Dr. Orange describes to us, for the defence of a patient who is supposed to require the examination of an expert, but it is for the lawyers apparently to decide whether it is to be brought before the Court. If I had not made every effort to substantiate my opinions to the Home Secretary the man would undoubtedly have been hanged.

Dr. MACDONALD—I may mention a case in which Mr. Justice Hawkins sentenced a man to death. It was almost a parallel case to that mentioned by Dr. Thompson. The man had a bad family history. He had one insane sister, and a brother about seven or eight years old suffering from epileptic fits. For some time he himself had strong suspicions that the people in his neighbourhood were watching him and injuring him in various ways. The result was, without any provocation, as far as I can understand, he purchased a revolver. He went out into the streets and shot a man. He was taken up, and the usual legal machinery was set in motion. The prisoner was examined by the Superintendent of the county asylum and myself, and we had not the slightest shadow of doubt that he was at the time insane. However, Judge Hawkins came down to try the case, and he said that the superintendent of the county asylum, who had been so for 30 years, did not know as much about the prisoner's mind as any of the 12 jurymen who were there to try the case. The result was the man was condemned to death. However, so strongly did we feel about it that we sent another conjoint report to the Home Secretary, who, on the following day (Sunday), without waiting for any further communication, sent Dr. Bastian and Dr. Shepherd by special order to examine the prisoner. Their report went in on Monday, and on the Tuesday morning the commutation came, and the man was sent to Broadmoor instead of being hanged.

Dr. HACK TUKE—This is a very practical question. I well remember the resolution referred to by Dr. Orange, which was passed by the Association upon

this subject. It consisted of the proposal that there should be three persons appointed to examine a prisoner respecting whom the plea of insanity was raised, one being the medical officer of the gaol where he was confined, the second some medical man of repute in the neighbourhood, and the third a medical superintendent of a county asylum. I do not know whether the action then taken led to the appointment of Dr. Bastian as the official referee in these cases, but I think it must have been observed by those who have watched trials for murder since that time that there has been a very much more satisfactory course pursued, that there has been very much less of mere vexatious cross-examination of medical witnesses, and that the judge has listened to the evidence given by anyone specially appointed to this office with far greater attention than he would do to a partisan witness on whichever side he was called. It has also had due effect with the jury as being entirely impartial evidence and a simply scientific report. The plan seems to be a very good one, and it should, I think, be carried out uniformly, whether before or after the trial. Unfortunately, in one or two cases, which have been referred to, it seems to have been disregarded. The Home Secretary in one case mentioned sent Dr. Bastian and some medical officer to examine a convict, and their report was, of course, accepted. My idea is if it can be thoroughly carried out we should get what we want, and, I think, if we could make some representation approving of the present system, and expressing the hope that it might be adopted in all instances instead of only in some, we should be doing some good. I think it would be well if we could arrive at some practical result in that direction.

The PRESIDENT—I did not understand from Dr. Orange *when* the proceeding of which he spoke could be put into operation. I should like to know something more definite about that. Is it intended that such investigation should take place at the trial or come before the trial, and would the public be satisfied with what would seem to them a shirking of the question?

Dr. ORANGE—It is absolutely impossible to shirk the case, and the medical officers who have been instructed to examine and report on the case are called before the Court. If any resolution was passed here recommending that the case should not go into Court, I must say I do not quite know who would be the person to carry such a motion to the Home Secretary. The executive would never think of interfering with the action of the judges. The judges would unquestionably not allow the matter to be taken out of their hands.

The PRESIDENT—But yet the Court ought to be provided with special expert and medical testimony on the subject.

Dr. ORANGE—The Public Prosecutor would provide that, but, of course, every matter would still have to go before the Court. With regard to moving the Public Prosecutor, I take it anybody might put him in motion. A letter from any responsible person saying that there was good reason to believe that A. B., who was going to be tried, was a person not of sound mind, would be enough to put him in motion. There is no very definite machinery, but if it was made to appear to him in any way that inquiry was called for, he would give his instructions. I think it is well that that should be pretty fully known to members of the Association, so that they may know they will really be listened to if they stated that they require more time, or further evidence, or that it was necessary to have some medical man associated with them. All these suggestions would at the present time meet with full consideration at the hands of the Public Prosecutor, so that it seems to me you really have what you want.

The PRESIDENT—We are all agreed, I am sure, that the paper is very important and practical, and we thank Dr. Savage for having brought it before us. It is all very well for him to say we should be witnesses, not advocates. Unfortunately, you are not allowed to do more than answer questions. If you are wise you won't do more, and I think very few of us have been in the witness-box without coming away with a feeling that it has been a most unsatisfactory affair, and that you had not been allowed to say fully what you thought; so that being a witness is often a very uncomfortable and unpleasant

experience. I have had similar experiences to those detailed by some gentlemen who have spoken, and have again and again had to see cases after condemnation, and specially so in the case of the man who murdered a tourist in the *Island of Arran*. The authorities instituted an investigation afterwards, and they also made use of the Commissioners in Lunacy, or, at all events, one of them in that investigation. We were bound to secrecy; I do not know why. Certainly the very fullest facilities were given to us, as Dr. Orange has said would be done here. I do not know that I am entitled even to mention the detailed result of our report, but I do know that the sentence was commuted to penal servitude for life, a graduation of sentence which I was glad was made, because I think very strongly, and have long thought, that inasmuch as disease is a thing of degree, so the penalty ought to be a thing of degree also, and that there are certain forms of mental disorder which should mitigate and which should not annul the penalty for crime. That opinion I hold very strongly. We are all very much obliged to Dr. Orange for bringing before us the way in which the Public Prosecutor's aid can be invoked and obtained. I was not aware of it, and I think it an exceedingly important thing that it should be more generally known by all of us and by the public. The other mode which has occurred to me as a means of solving the matter would be, if we could have a specialist as they have in the Admiralty Court, where you see continually men of special experience seated beside the judge and helping him to solve difficult and special problems which are not within his special knowledge. That is another mode that has been suggested, and it might be a wise one. I will now call upon Dr. Savage to reply.

Dr. SAVAGE—I have little to say in reply, except to thank you for the very kind way in which you have received my remarks. I also must thank Dr. Orange for bringing before my notice what I certainly did not recollect. One feels that there is good machinery, but that it does not work, or does not always work, or does not work well, and I think with Dr. Tuke it would be well if one might—perhaps before the next quarterly meeting—just draw up a kind of reference. I think it would not be fair to do it on the spur of the moment, but before the next quarterly meeting we might draw up a paper as to suggestions to be made to the then Home Secretary. As to the question of drink, I own that might have been misunderstood by Dr. Orange, but my feeling is this: Suppose a man is a criminal and is insane, you need not bring it strongly before the Home Secretary that he has become insane because of drink. It is possible you may be pretty sure he is insane and that his criminal act came out of insanity due to drink, but it would be rather hard upon the prisoner—he being insane—to mention it; and, therefore, I said (as it were in a parenthesis) if the man might have committed an act through drink, perhaps it is best for you not to refer to it, in the interests of the prisoner.

Dr. ORANGE—May I say that I have done it, and with no bad effects whatever.

Paper by Dr. Clifford Allbutt, on "Observations on the San Clemente Asylum at Venice."

The PRESIDENT—I am sure we are all very much obliged to Dr. Clifford Allbutt for his very interesting notes. We shall be very happy to hear any discussion.

Dr. HACK TUKE—I visited the asylum at Venice more than twenty-five years ago, and, therefore, have been specially interested in this paper by Dr. Clifford Allbutt. At the time I was in Venice the women were confined in the general hospital. The asylum on the island of San Clemente was just being built, but I visited the other asylum for men on the island of San Servolo, and found the condition of the patients at that time very similar to that which has been described so graphically to-day. I was as much disgusted as the author of the paper with regard to the excessive amount of restraint in use. At the same time—and I think Dr. Clifford Allbutt has somewhat the same feeling—one did not see that there was intentional unkindness. I think the feeling towards the

patients was that of humanity, and it was simply ignorance on the part of the good brothers as to the best form of treatment. At the same time, I had certainly hoped that after the lapse of so many years there would be a great improvement in the condition of the insane in Venice, especially as in Italian towns generally I believe the state of the patients is much better. I do not know whether Dr. Clifford Allbutt has visited any other asylum under Italian rule. I was very much struck, not only with the sad condition as regards mechanical restraint, but with the very large number of cases of pellagra in the asylum at that time. I do not know whether in the asylum which Dr. Allbutt visited there were any cases, but he has not referred to them. Certainly, that was a very interesting feature of the cases I saw in that and some other asylums I visited. I remember inquiring whether there were any Commissioners in Lunacy at that time, and I was told there were none. I think I may infer that there are no Commissioners now, or the condition of San Clemente Asylum would be very different from what it is. If there are such officials they ought to be called to account as much as the authorities in the asylum. I would only say, in conclusion, perhaps Dr. Allbutt is not aware that all papers read here become *ipso facto* the property of the Association, and are published in the Journal according to the discretion of the editors. (Laughter.)

Dr. ALLIOTT—It would be interesting to hear from Dr. Allbutt and from Dr. Tuke how the cases were treated in Venice during the fifteen days' probation in the hospital. I think I understood Dr. Allbutt to say there were fifteen days' probation. Did he see the same coercion carried out there?

Dr. WHITCOMBE—I should like to ask if the sisters or nurses in the asylum are paid, or if they are performing their duties in connection with some religious section? I know that in some countries sisters look after the asylums without payment. There is another point raised which I think, perhaps, even we in England might take into consideration: that is the fact that patients are sent to a hospital before going to an asylum, a most important step, I think, for weeding out cases which may not require asylum treatment.

Dr. MACDONALD—May I ask Dr. Allbutt if he made any inquiries as to whether the patients suffered from diseases, and whether they were under medical treatment, medicines being administered to them?

Dr. CLIFFORD ALLBUTT—As regards the payment of attendants, the sisters, of course, would receive no payments, nor the brothers. Whatever payment, in kind or otherwise, might be given would go to the institution, not to the individual. All the ordinary nurses would, I take it, be paid in the usual way. With reference to the intermediate class of lay assistants, there were twenty-nine who were, perhaps, partially religious, but I do not quite know what their position would be. As regards the hospital, I had not time to go there. I understood distinctly from my informants in the asylum that the treatment in the hospital was just the same as the treatment in the asylum. I cannot give any information as to diseases, because, unfortunately, the medical director was out when I went there, and I did not see him. He addressed me as I went in, but I thought at that time he was the Chairman of Committee or some lay person, so that I had no conversation with him; I, therefore, could get no information on the subject. The patients who were in there in restraint were so numerous that it was almost impossible to make any observations. There were very many in bed for mental, but not bodily diseases. As to the use of medicines, I was shown into a large and exceedingly handsome surgery, but whether they used the medicines in it I cannot tell. If my paper should be published, I can only say I must tone it down considerably before it appears in the Journal. I think we do not recognize how very little the doctrines of non-restraint are known to the public. A gentleman called on me three or four days ago at Whitehall, an exceedingly intelligent person, a man of very considerable position in his way, a country gentleman; though a magistrate, I do not suppose he ever acted as a magistrate, or entered an asylum, but he was a man of great general intelligence, and with a good deal of cultivation. As we were

going out he saw a picture, which many of you may have seen in our board-room, representing a man with an iron collar round his neck and iron chains round his arms, tied to a post, as a kind of memento of what used to be done in times gone by. As we were passing, he said: "Ah, poor things, I suppose it is necessary—I suppose it must be done." I said: "Do you think that is done now?" He said: "Well, I suppose it would be necessary; in fact, I do not know how you would get on if you did not do a thing of that kind."

The PRESIDENT—I am sure we are all very much obliged to Dr. Clifford Allbutt for this paper. I have been interested in it in connection with Dr. Tucker's book. His description of the asylum is exceedingly like what we have just heard from Dr. Allbutt. As to hospitals, I am not surprised to hear that the treatment of patients in hospitals is just as bad as in the asylum. I am quite sure in this country of ours there is at least fifty times more restraint in general hospitals than in the asylums. (Applause.) Nobody supervises them, and nobody puts the amount of restraint in a register, or makes a stir about it. It really makes one very indignant to hear about all this terrible restraint, and then to come home and find that if we dare to put a boot on a patient's foot, soft and padded, so that he may not get cold if he gets up in the night time, it is labelled with the same opprobrious name. I think we have reason to be angry. It is true, as Dr. Allbutt has said, that the public know very little about the management of an asylum. I think I can parallel the story that he gives, for I was once asked, in all seriousness, by a clergyman in Wales, if we ever had to use fire-arms. (Laughter.)

A paper by Dr. Baker, on "Notes descriptive of a new Hospital-Villa recently erected in the grounds of the York Retreat," was read, in his absence, by Dr. Tuks.

Dr. MACDONALD—I do not know whether it is quite fair to criticize a paper in the absence of the writer, but I should like one question on the subject of ventilation. I understood the author to say that the extracting shaft is to be in the centre of the ceiling. I can only express my surprise that that is to be so in a new building. I think, at no distant date, the system of ventilation will be that, instead of extracting the heat and depreciating the atmosphere at the top, it would be extracted at the bottom. The cold air should come in at the top, and help to clear away the foul parts of the atmosphere of the room, where it is most required, and being heavy it falls. The ventilation should be at the bottom, where the air is better than at the top. There are many other points in the paper in which I take very much interest, especially those of ventilation and heating. I have visited a great many asylums, but I must say I have found none to compare with the system of ventilation as now being carried out in the asylum at Montrose. The hospitals there are by far the most healthy of any that I have ever visited, and I believe there are few asylums to which I have not paid a visit.

Vote of thanks to the author of the paper.

The PRESIDENT—I can quite endorse what has been said about the Montrose Asylum. Anyone who has an opportunity should certainly visit it. I have now only to state that the next quarterly meeting will be held in Bristol on the first of May.

The following is the statement of Dr. Needham, referred to in the footnote, p. 321:—

"I was requested by the Treasury to see a prisoner at Shepton Mallet gaol, who was accused of murdering his sister, to form my opinion as to his mental state, and give evidence at the Taunton Assizes.

"I saw the prisoner, and talked to him for more than an hour, with the result that I had no doubt that he was an epileptic imbecile, and not responsible; and so I declared in my report to the Treasury solicitors.

"I was subpoenaed to attend at Taunton, where the counsel for the Crown

declined to call me—I presume because he considered it his first and only duty to secure a conviction of the prisoner.

“I was called, in common with four medical witnesses for the defence, by the counsel for the prisoner (Mr. Bucknill, Q.C.), and attempted to be examined as to my opinion, but when the judge heard the word ‘opinion’ he stopped proceedings at once by saying that he would have no opinions in his Court. It was for witnesses to give facts, and for the jury to give or form opinions.

“It was pointed out that I was a Crown witness, specially retained as a skilled person, and that I could not properly give facts without drawing the necessary skilled deductions from them. All this was of no avail. The judge was master of the situation, and flatly declared that he would have no opinions—medical or otherwise—given in his Court. If I liked to tell the jury verbatim my conversation with the prisoner, I could do so, but I was not to state to them any opinion that I had formed, or any deductions that I had drawn from it. They were to draw their own inferences from the questions asked and the answers given during a conversation which lasted more than an hour, and contained, of course, the admission by the prisoner that he had committed the murder.

“The position was one which I could not accept, and I withdrew from the witness box, feeling very much as if I had been helping in one of the uproarious and indecent exhibitions which are recorded as occurring in Judge Jeffrey’s Court.

“The other witnesses mounted the rostrum in turn, and were similarly treated, no opinions being allowed to be given.

“Dr. —, who was one of them, afterwards wrote a letter to the newspapers, in which he pointed the moral that men examining prisoners should take verbatim notes of all conversations, however prolonged, and give them in full when asked to do so.

“I could accept no such conclusion.

“If a man is called as an expert he must help the jury with his special knowledge to an interpretation of the facts.

“He may state the facts which occur during an interview, but he ought surely to claim, if so, to draw the legitimate scientific inferences, and to state them also. Otherwise his position must be as ridiculous and undignified as that of a civil engineer, who might be allowed to say how much iron there was in a bridge, and how it was arranged, but was forbidden to say what relation was borne by the two to the purposes for which a bridge is required; forbidden to state his opinion as to whether the weight, quality, and arrangement of the materials are sufficient to insure stability, an inference which no ordinary jury could draw from any mere statement of facts.”

ROYAL EDINBURGH ASYLUM FOR THE INSANE.

On February 23rd the Annual Meeting of the Corporation of the Royal Edinburgh Asylum was held in the Council Chamber, the Lord Provost presiding. The Treasurer (D. Scott Moncrieff, Esq., W.S.) having read the annual report of the Managers for the year ending 31st December, 1890, Dr. Clouston, Physician-Superintendent, read his Report for the year. From it we quote the following paragraphs on the increase of insanity, and on Influenza.

“It was a fact which did not tend to bear out the popular ideas as to the rapid increase of mental disease in recent years, that the yearly production of pauper lunacy in the district (Edinburgh, Leith and Portobello) had scarcely risen appreciably during the past fifteen years. The production of rate-supported insanity was, in fact, with them not keeping pace with the growth of the population. They seemed to be a saner people in Edinburgh than they were fifteen years ago, for the population had increased in that time about 30 per

cent., while the annual production of pauper insanity was only 3·7 per cent. more at the end of that time than it was at the beginning. The annual production of new cases of the disease scarcely increasing, while the total numbers steadily grew fast, was a fact which meant that there was an accumulation of uncured cases which had continued to live on in an incurable condition. This continuous increase or silting up must stop, however, in time if the new production did not increase year by year, for however well cared for, a chronic lunatic must die sometime. This process of diminishing accumulations of incurable cases had clearly begun, for if the past five years were taken (1886-90) it was found that the total numbers of pauper lunatics chargeable to the urban portion of Mid-Lothian had increased from 775 to 862, or only 87 in all, an accumulation during the five years of 11·2 per cent., against an estimated increase of 10 per cent. in the number of the general population. During the previous ten years (1876-85) the increase by accumulation had been 32·5 per cent., or a rate of a half more than during the last five years (1886-91). Both of those facts did not support any pessimistic theory of the modern increase of lunacy. The fact that St. Cuthbert's, the fastest growing parish, paid considerably less for the support of its lunacy during last year than five years ago tended in the same direction. An examination into the character of the cases admitted showed at least two marked facts. The one was that the average general health and condition of the patients were lower this year than usual. They had to enter 50 as having been in 'bad health and very exhausted condition'—that was in imminent risk of death—when they came in this year as compared with an average of 38 in that condition during the previous fifteen years. That there was a tendency year by year to send more cases in this condition was evident, for during the five years (1875-79) the average number so sent was only 29, as compared with the average of 42 during the past five years (1885-89), and the 50 this year. The number of those in really good bodily health and condition was also diminishing. They had only 72 such this year, against an average of 99 during the previous five years, and of 109 during the five years 1876-79. The other prominent fact about the admissions of the year was this: In the two chief divisions made of the mental condition of patients—first, those who were unduly and morbidly depressed (melancholia) on the one hand, and, secondly, those who were, on the other, unduly and morbidly elevated and excited (mania), they commonly found the cases of mania greatly to predominate. During the five previous years they had admitted 847 cases of mania to 617 of melancholia, or 37 per cent. more cases of mania. In no year in the history of the institution until this had the cases of depression been as numerous as those of exaltation, while this year they had 140 cases of melancholia and only 134 cases of mania. Not that he believed depression to be less common as a mental affliction of humanity than morbid elevation and maniacal excitement, if they took all those afflicted into account, whether in asylums or in the outside world. The contrary was in his experience the case. There was in his experience more morbid depression than morbid exaltation with excitement in the world out of asylums that was never sent to institutions for treatment, and did not need to be so sent. It was a far more manageable condition at home than mania. Patients who suffered from maniacal states, on the other hand, were commonly difficult to manage. Their morbidness of mind was commonly incompatible with home life, and therefore they must be sent to institutions for care and treatment. When in any year, for the first time in the history of the institution, the numbers of depressed patients predominated over those of the maniacal, one naturally thought there must have been some distinct cause operating among those prone to mental upset in the direction of lowered nervous action and vitality, and therefore tending towards mental depression. He had come to the conclusion from his observation generally, without, perhaps, very definite or statistical data, that the year 1890 was, with them in Edinburgh at least, one depressing in its conditions to the nervous tone, and lowering generally to human vitality—whether it was the influenza in the early part of the year that

perceptibly lowered human vitality as a whole, or whether the prevalence of the influenza merely showed that European humanity was in a lowered state of vitality, so being a fit nidus for the influenza germs to propagate in, or whether it was the sunless, summerless general character of the year he could not tell. They knew that the mortality rate in Edinburgh was in 1890 nine per cent. over the average rate of the five previous years. He distinctly connected the influenza in some way with the unprecedented number of melancholic patients sent to *Morningside* last year. Moreover, his own experience, and that of many of his medical brethren to whom he had spoken, went to show that a very considerable number of the people who had the influenza felt great mental depression, both during their attacks and after the attack had passed off, often for months. This latter experience was so exceedingly common that there must have been something in it. Of the thousands who were simply depressed in mind, if a few with a tendency to insanity passed into a further stage, and became insane, it would explain their numbers at *Morningside*. The subsequent lowered nervous tone left as an evil residuum long after the disease had been recovered from had not had the attention paid to it that it deserved. He believed the epidemic of influenza of 1889-90 left the European world's nerves and spirits in a far worse state than it found them, and that they scarcely yet had recovered their normal tone. The influenza poison seemed to burn up the nervous energy, and leave the brain unable in some cases to recuperate. Influenza had been assigned by the relations as a cause for the attack of melancholia in only a few cases, but a great many of the patients admitted had had the disease, and he was clearly able in many cases to trace the origin of the mental disease to it. The admissions were not more numerous as a whole during the year than usual. From January to May inclusive the average monthly admission rate was 29.6, while during the latter seven months it was only 26.3, and it declined as the year drew to a close, the rate for the last three months being only 20.3. The number of deaths (109) was the largest in any one year in the history of the institution, and the percentage of deaths was also the highest on record. The mortality above the average rate occurred entirely in the first five months of the year, during which time 63 deaths took place. Eighteen deaths occurred in February, or about three times the average monthly death-rate. Had the death-rate this year been the average one of 6.6 per cent. on the total numbers under treatment, the number of deaths would have been 76. The obvious cause for a very considerable proportion of the undue death-rate was the epidemic of influenza, which occurred at *Morningside* from the second week in December, 1889, till the end of January, 1890, with a few sporadic cases afterwards. One of the best and most quoted accounts of the epidemic was given by the two assistant physicians, Drs. Robertson and Elkins. Up to the time they published their account in the 'British Medical Journal' of February 1st, 1890, 94 patients and 52 officials had taken the disease. This was a proportion of 10½ per cent. of all the patients, and no less than 31½ per cent. of all the resident staff. The mortality from it was very different among the sane and the insane, however. None of the staff died, but 10 of the patients died of its immediate and direct effects, and other nine died during the year of its subsequent and more indirect effects. Thus 21 per cent. of the patients who took influenza died of its direct or indirect effects. Nothing could show better the vast difference between the previous general health condition and power to resist disease of the insane as a whole compared with the sane. The community of patients was, in fact, invalid, and when it became affected by disease it could not resist it and recover, but died in large numbers. The most decided and characteristic of all the forms of insanity with organic brain disease that were found in asylum patients was general paralysis, and of the 30 cases which were in the house in January, 10 took the disease, six of those dying of its direct effects, and two afterwards of its indirect effects—a mortality of over one-fourth of all their general paralytics. The nervous symptoms of the influenza were especially marked in the patients, and every one of them—except, perhaps, two—were worse in mind while suffer-

ing from the disease and during convalescence than they had been before they were attacked, some of them being rendered permanently worse. In most of the fatal cases the lungs were affected by pneumonia, pleurisy, or bronchitis, with pericarditis coming on secondarily. Five of the cases who died of indirect effects either developed consumption or, having it previously, got worse and died soon. The very interesting and important question of why the staff, sane and strong as they were, took the disease in nearly three times the proportion of the patients—10·5 per cent. against 30·3 per cent. of the total numbers of each class—was not one to be dogmatized about in such a report as that. It was one about which different opinions had been expressed. His own belief was that it was owing to the staff going into town, and going about generally, and so breathing the infection in the open air at different places, while the patients were necessarily obliged to breathe a more localized air."

SURGICAL TREATMENT OF HALLUCINATIONS.

(*Gazzetta degli Ospitali*, No. 92.)

Dr. Burckhardt has subjected six cases of insanity to operative treatment. Twice he made it his object to intersect the paths of association which, according to him, transmit the pathological impressions coming from certain sensory parts and certain ideogenic parts of the brain. To effect this, he removed portions of the frontal and parietal lobes before and behind the ascending convolutions. In one of these cases the result was very satisfactory; in the other, which is still under treatment, the improvement was only partial. In the remaining four cases there were hallucinations more or less acute, and the indication was to suppress and to reduce the hallucinations of sound more or less. Burckhardt believes that verbal hallucinations can only be produced in a brain in which the logogenetic paths are intact; for the centres, through whose injury sensory and motor aphasia are produced, are indispensable to all genesis of verbal hallucinations. To cure the hallucinations he attacked these centres, and excised parts of the first temporal and of the third frontal, on the left side. The result was satisfactory, though it may be that the improvement will not be permanent. In case of relapse Burckhardt proposes to return to the charge. The fourth patient died of vascular paralysis six days after the operation, which no doubt was the cause of his death. These results Burckhardt considers to be encouraging; he has continued to pursue this line of treatment for two years.—WM. W. IRELAND, M.D., in the *Medical Recorder*.

SCHEME FOR A PATHOLOGICAL INDEX.

We would draw the attention of the members of the Association to a reprint of an article by Dr. Howden (Moutrose) in the February number of the "*Glasgow Medical Journal*." We have no doubt that its general adoption would be the means of rendering a vast amount of pathological material available, which is at the present time practically buried. An index book, to be obtained of some well-known medical publisher, should be prepared for each asylum or hospital.

FIRE AT NORTHGROVE, HAWKHURST, KENT.

We regret to have to record that this Asylum, the property of Dr. Harmer, was destroyed by fire on the 4th December, 1890. The fire broke out in the linen room at about 9 a.m. The room was cased round with pine, with pine ceiling; the fittings were of pine, and the whole was in a few minutes in a blaze.

The central staircase, which was a handsome erection of pine, and cased in with pine, was burnt down in less than twenty minutes, and the whole asylum, which was a costly structure put up in 1877, under the supervision of the Commissioners, was destroyed in three hours. All the patients were got out safely, with the exception of one lady boarder, who was in the w.c. at the top of the main staircase, where she must have been suffocated by the smoke, which was of the blackest nature, owing to the burning pine wood, etc. One lady had died the night before, and was in her shell, and nothing of her remains have been found; but the remains of the lady boarder were recovered. This is accounted for by there being three large cisterns full of water over the w.c. The origin of the fire was due to the lighting of the linen room fire at 9 a.m., and the coroner's theory is that the girl swept up the hearth and left a lighted ember in the brush, which was put out on the floor after the guard had been put on, and that set fire to a paper and ignited the pine boarding, etc. The building cost over £10,000, and was insured for £6,000. The furniture was insured for £4,000, of which only £2,800 was paid, plus salvage valued at £600. The total loss is about £5,000. It is not intended to rebuild Northgrove, Hawkhurst, but a site has been selected near Tunbridge, which has been approved of by the Commissioners in Lunacy, and plans are now being placed before their Board for approval. The new asylum will be built to accommodate 25 male patients and 25 female, and the corridors and staircases will be fire-proof, etc. It is hoped that the whole will be ready for occupation by the end of 1891. About thirty acres of ground, much of it well laid-out, surround the present mansion. The gentlemen patients late in Northgrove are accommodated in an adjoining house, known as Crane Croft, at Hawkhurst, and the ladies are living in villas there. If the fire had occurred in the night the loss of life would have been excessive.

THE AMERICAN JOURNAL OF PSYCHOLOGY.

We have pleasure in reprinting the following notice respecting this well-conducted periodical, as it deserves to be more widely known and appreciated:— With the number for January, 1891, the Journal enters upon its third year, with its plan reconstructed and both its size and scope enlarged. During the past year, which the editor spent abroad, improved arrangements were made to secure the prompt publication of digests by competent hands of all important books and periodical literature in the various departments of psychology in the chief countries of Europe. No pains will be spared to make this department as complete and as discriminating as possible.

The January number contains original articles on:

The Insanity of Doubt.

Experiments on the effects of Fatigue on Voluntary Muscle-action.

For laboratory studies in fields of experimental psychology.

An empirical study of lying.

The first chapter of a history of the doctrine of reflex action.

A section devoted to the recent literature of neurology.

Another devoted to the recent literature of heredity and sex.

Another to the recent literature of criminology.

Another to experimental psychology.

A department of anthropological psychology will be added in the April number, which will also probably contain an extended study of the brain and sense organs of the well-known blind deaf-mute, Laura Bridgman.

Other subjects which have been represented in the past and will be in the future are: Education on its psychological side, Hypnotism and its therapeutic uses, Neuroses and the border-line phenomena of mental alienation and nervous diseases, with special reference to work in or bearing on experimental psychology.

The Journal is intended to serve the following classes :

- I. Those interested in the study of Insanity in all its scientific bearings.
- II. Those interested in the study of education in both its philosophical and scientific aspects.
- III. Those engaged in the teaching and study of any departments of philosophy, or biologists and physiologists interested in the phenomena of instinct, localization of brain-functions, the functions of the senses and nerves.
- IV. Anthropologists who are concerned with the primitive manifestation of psychological laws.
- V. Others interested in the great progress recently made in so many directions in applying more exact methods to the study of the problems of human feeling, will, and thought.

Books, pamphlets, or articles in the field thus outlined, which may be sent to the editor, will be promptly noticed or reviewed at length, and a copy containing the review mailed to the publisher.

All remittances, subscriptions, inquiries, etc., should be addressed to Dr. E. C. SANFORD.

All literary correspondence should be addressed to

G. STANLEY HALL, Editor,
Clark University, Worcester, Mass.

January, 1890.

PRELIMINARY REPORT OF THE STANDING COMMITTEE OF THE NEW YORK MEDICO-LEGAL SOCIETY ON HYPNOTISM.

(Abridged.)

The Committee on Hypnotism beg leave to report, in part, a few facts indicative of progress in scientific inquiry.

1. Hypnosis, or artificial trance-sleep, is a subjective phenomenon. Here modern science joins issue with old-time mesmerism, the theory of some mysterious efflux from the operator. Hypnosis may be self-induced through expectation alone, through fright, by religious ecstasy, or any enrapturing emotion.

2. Hypnosis is not in itself a disease. Neurotic conditions predispose one to the trance-sleep, but the strongest minds have also been enthralled.

3. Hypnosis is recognized in three stages—lethargy, somnambulism, and catalepsy. The transition may be immediate. The second is instantly induced in trained sensitives.

4. Hypnotism has been serviceable in medical and surgical practice, both as a therapeutic agent and in some cases as an efficient and safe anæsthetic.

5. The illusory impressions created by hypnosis may be made to dominate and tyrannize the subsequent actions of the subject. The following legal aspects present themselves:

1. Has the sensitive sought the operator, or has the operator used undue influence to gain control of him?
 2. Are proper witnesses present?
 3. Are possible elements of error eliminated, such as self-deception, simulation, and malingering?
 4. Is hypnosis a justifiable inquisitorial agent?
 5. Do we need a reconstruction of the laws of evidence in view of the perversion—visual and otherwise—created by the trance?
 6. Is any revision of the penal code desirable in view of these facts?
- Finally, should there be legal surveillance over private experiments or public exhibitions?
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Obituary.

M. BAILLARGER.

Dr. Jules Gabriel François Baillarger was born at Montbazou (Indre-et-Loire) March 26, 1809, and died December 31, 1890.

He commenced his medical studies at the School of Medicine at Tours, and completed them in Paris.

On the recommendation of Esquirol he was appointed *élève externe* at the Maison de Charenton in November, 1830. Two years afterwards he became an *interne* in this hospital. Under Esquirol's direction he became an enthusiastic student of mental alienation. He always retained his admiration of his great master. At the inauguration of his statue at the scene of his labours he expressed his feelings in eloquent terms.

His inaugural thesis on a subject still occupying the attention of alienists—the seat of certain meningeal hæmorrhages—was published in 1837.

In 1840 he was appointed to a post at the Salpêtrière.

In 1848 he founded the "Annales Medico-Psychologiques," of which he remained editor until his death.

About the same time he became one of the medical proprietors of the well-known Maison de Santé "Ivry."

To attempt to analyse, or even enumerate, the works he has written and the clinical studies with which he has enriched psychological medicine would be impossible in this obituary notice. We hope to do this in a future number in a review of his "Recherches sur les Maladies Mentales," recently published.

For upwards of twenty years he attracted large audiences to his lectures at the Salpêtrière, of which he was honorary physician when he died.

M. Ritti (Charenton) has written an excellent and appreciative memoir of Baillarger, and from it we cannot do better than cite the concluding passages:—

"A l'exemple de son illustre maître, M. Baillarger aimait à s'entourer d'élèves. S'il a contribué aux progrès de la science par ses travaux, par son enseignement de la Salpêtrière et par la fondation de la Société Médico-Psychologique, il savait aussi entretenir parmi ses disciples une activité féconde. Il leur indiquait des sujets de recherches, les aidait de ses conseils, les soutenait contre les difficultés. Jusque dans les dernières années de sa vie, il appelait à lui les jeunes, leur communiquait son amour pour la science, pour l'observation clinique, pour les recherches désintéressées. Contrairement à ce qui se passe d'habitude, il ne regardait guère en arrière; beaucoup déjà été fait, aimait-il à répéter, mais beaucoup reste à faire. Dans son ardent amour du progrès, il nous faisait entrevoir ce que l'avenir promet pour l'amélioration de l'assistance publique des aliénés, pour la thérapeutique des maladies mentales, etc., sa conversation ne tarissait pas sur de tels sujets.

"M. Baillarger était un vieillard fin et spirituel, ayant conservé tout l'enthousiasme de la jeunesse pour les problèmes scientifiques et professionnels; son enthousiasme était communicatif et il n'est personne qui ne se sentit plus d'ardeur pour le travail après l'avoir entendu. Il conserva cette activité intellectuelle et même sa mémoire jusqu'au dernier jour de sa longue et heureuse existence. Tous ceux qui l'entouraient l'estimaient et l'aimaient; sa nombreuse famille, ses amis, ses disciples, en voyant son intelligence toujours en éveil, si vive et si pénétrante, lui promettaient encore de longs jours, lorsque le 31 Décembre, 1890, au soir, après une indisposition qui semblait guérie, il s'éteignit sans agonie. Cette fin que rien n'a troublée a été vraiment, comme dit le poète, le soir d'un beau jour."

Funeral discourses were delivered at the tomb (January 5, 1891) by M. François-Franch, M. Blanche, and M. Bouchereau, the President of the Paris Medico-Psychological Society.

DR. LUDVIG VILHELM DAHL.

Dr. Ludvig Vilhelm Dahl, who died on the 2nd of November last, was the son of Nils G. A. Dahl, Major of Infantry in the Norwegian army, and was born at Bergen on the 18th October, 1826. He passed his preliminary examination in 1842, and took the degree of Doctor of Medicine with honours at Christiania in 1851. After filling different hospital appointments and studying some months at Vienna and Paris, Dr. Dahl was admitted as supernumerary to the asylum at Gaustad, where he remained till September, 1861, when he became Medical Officer to the House of Correction in Christiania. From 1864 to 1868 he was employed in the Medical Commission of the Home Department, and in 1871 he became director of the asylum at Rotfold. In 1875 he became director of the Norwegian Medical Department. Dr. Dahl was several times sent by the Government on medical commissions and inquiries to different parts of Europe. In 1864 he visited Switzerland, Italy, and Austria to make an inquiry about cretinism; in 1885 he was sent as delegate to the cholera conference at Rome. At the 400 years' jubilee of the University of Upsala in 1877, the degree of Doctor of Arts was conferred upon him. He also gained a silver medal at the great exhibition held at Paris in 1878, for his graphic illustrations of the statistics of disease and mortality. He was also rewarded with a gold medal from the French Academy of Medicine. Honours and decorations also came to the Norwegian physician from Denmark, Austria, Belgium, Sweden, and Italy. Dr. Dahl is author of a considerable number of treatises on medical subjects. His book, "*Bidrag til Kundskab om de Sindssyge i Norge*" (Contribution to our Knowledge of Insanity in Norway), Christiania, 1859, found its way into the libraries of many European neurologists. It deals mainly with the causes and distribution of insanity, and especially attracted attention by the careful way in which he traced the descent of hereditary insanity in families dwelling in the quiet valleys of Norway. Some of Dahl's genealogical tables were published at the end of my work on idiocy and imbecility.—W. W. IRELAND.

MR. WILLIAM MILLARD.

Mr. William Millard, a man who was well known as a life-long and devoted friend to the cause of the idiot, and was highly esteemed among all classes, not only in Colchester, but throughout the Eastern Counties, passed to his rest December 6th, 1890, at his residence, Colchester, after an illness of some considerable duration. He was born in London, September 22nd, 1818, and was consequently a little over 72 years of age. His attention to the cause of the idiot commenced as far back as 1847, at which time he was superintendent of a large Sunday School, and had taken charge of three small Sunday evening Ragged Schools. Having read a letter published in the "*Sunday School Teachers' Magazine*" on "*What can be done for the Education of Idiots?*" Mr. Millard was led to think that as he had been able to gain the confidence and win the attention of rough, ragged, wild youths, he could, perhaps, benefit those lower in the scale of intellect. He made inquiries, and by invitation of Dr. Andrew Reed, the founder of the London Orphan Asylum and other charitable institutions (who was then working in the cause of the idiot), he joined his Institutory Committee, and a public meeting was held, which resulted in the founding of the Asylum for Idiots at Earlswood, and Mr. Millard commenced his 37 years' official service in the cause. In six months after the opening of Earlswood it was found necessary to open a branch asylum, and Sir Morton Peto offered the use of Essex Hall, at Colchester, at a nominal rent, and Mr. Millard brought down the first batch of patients on January 8th, 1850, while in

July of the same year he was sent down to take charge of the establishment. The following year he commenced a canvass of the Eastern Counties in order to render Essex Hall an independent institution. Mr. Millard's great work in connection with Earlswood is matter of history, and the part he took subsequently in 1858 in establishing the present Asylum at Colchester is well known and much appreciated. He resigned his connection with Earlswood on December 25th, 1858, and standing shoulder to shoulder with Dr. Reed, at once set to work to start the Asylum at Colchester as an independent Asylum. In 1859 the institutory meeting was held, and deceased was appointed superintendent and secretary. As time went on he had the happiness to see the prospects for which he laboured so zealously and conscientiously, prosper beyond his most sanguine expectations, extension of the premises being rendered necessary more than once during his management, and the freehold of Essex Hall being purchased from Sir Morton Peto. In 1874 Mr. Millard resigned the secretaryship, feeling unable fully to discharge its duties as well as those of superintendent, and he generously offered to give up a fourth of his salary, but this was declined by the Board of Directors, who appointed Mr. J. J. C. Turner (the present superintendent) as secretary. In 1884, Mr. Millard, on account of failing health, also resigned the superintendence, and in recognition of his past valuable services his name was placed upon the Board and House Committee, and he continued to take a deep interest in the welfare of the institution, though for the past 18 months he has been prevented by illness from visiting it. We believe that besides his work in connection with Earlswood and Essex Hall, he assisted in founding several similar asylums in other parts of the country, including the Scottish Asylum, the Western Counties', the Royal Albert Asylum for the Northern Counties, the Knowle Asylum for the Midlands, the Irish Asylum, etc. Mr. Millard wrote a "History of Essex Hall" in 1864, by request of Sir Morton Peto, in order to awaken interest in the cause in the Northern Counties, and in 1866, in conjunction with Dr. Duncan, the first Medical Officer of Essex Hall, he brought out a manual on "The Training and Classification of Idiots and Imbeciles." In 1875, too, he helped Sir Chas. Trevelyan to organize a special Committee in connection with the Charity Organization Society, to promote legislation with reference to idiots and harmless lunatics, and in many other ways he assisted the idiots' cause, of which he was a frequent advocate at public meetings.

Mr. Millard, it is not too much to say, was greatly beloved by the officials and all with whom he was brought into contact during his active connection with Essex Hall, and the news of his death, though not unexpected, has been received with profound grief.—*Essex Paper*.

DR. G. D. SYMES.

We regret to have to record the unexpected death, on March 7th, of Dr. George Dickenson Symes, Assistant Medical Officer at the Lancashire County Asylum, Rainhill, aged 30. He was the son of Dr. J. Gustavus Symes, Southfield, Weymouth, late Medical Superintendent Dorset County Asylum.

A severe cold and sore throat developed into a quinsy, the abscess bursting in the usual way, but instead of convalescing he got general septic infection, with double pleuro-pneumonia, which carried him off with extraordinary rapidity. He was always rather delicate, and seemed to have no stamina to withstand an acute illness. His death is lamented by all who knew him, and has cast a gloom over the asylum, where he was greatly esteemed as a good officer, courteous to all, and loyal to his chief.

He was formerly Clinical Assistant at Bethlem Hospital, where he earned the respect and affection of both the patients and the medical staff.

We desire to express our deep sympathy with the family in their bereavement.

 MEDICO-PSYCHOLOGICAL ASSOCIATION.

 M.P.C. EXAMINATION.

ENGLAND.

December 19, 1890.

The following candidates received the Certificate of Efficiency in Psychological Medicine:—

Black, Robert S.
 Hicks, John A., jun.
 Hitchings, Robert.

Henderson, Jane B.
 Pilkington, Frederick W.
 Soutar, James G.

SCOTLAND.

December 16, 1890.

The following candidates passed the Examination:—

McCallum, Stuart.

Simpson, John.

Mitchell, Alexander.

IRELAND.

January 9, 1891.

Conolly, Richard M.

Porter, Charles.

 Correspondence.

 TO THE EDITORS OF *The Journal of Mental Science*.

The author of "Mad Doctors" is extremely obliged to the Editors of the "Journal of Mental Science" for the sympathetic review which appeared in the January number. He is thankful for the liberal praise, and deeply grateful for the kind manner in which the many faults of taste are excused. He is very conscious *now* that personal analysis is a thing to be avoided, and that while proving a person's incapacity for fairness in one respect, one is very apt to give false impressions as to that person's general capabilities and honesty of purpose. There are passages in "Mad Doctors" which have erred in giving a one-sided view of certain persons, and the author takes this opportunity of declaring most emphatically that never for one moment did he intend to impeach the honesty of the persons criticized.

So much he feels is due to himself as well as to his victims.

While apologizing thus, the author does not retract one word as too strong to express his utter detestation of the style of evidence given before the Committee of the London County Council, and his hearty contempt for the Report upon that evidence. If fools will rush in where angels fear to tread, they must expect to receive some of the knocks which frighten the cautious celestials.

The author begs to state that the writer of the review has entirely misrepresented him in the following sentence:—"The writer," he says, "ranges himself

among the practical men as against the more scientific, though for the life of us we cannot see the advantage of a man who is only practical over one who, besides that, uses the experience of others as recorded in books and papers."

There is not one word in "Mad Doctors" to justify this. The author's whole argument is backing empiricism, or the deductive method against the inductive method. He defines empiricism thus:—"Practice based upon experience, not theory." He says that doctors do good "because they trust to their own experience or the communicated experience of others." Here the author uses exactly the same words as the critic, says precisely what the critic believes the writer ought to have said.

The author considers himself highly scientific, and, as such, he objects to the "ex uno disce omnes" of the weekly articles of the "Lancet" and "British Medical." As such he requires that long series of test cases should be given when any new treatment is published; as such he compares the "a priori reasoning in the chemical laboratory" with the exact methods of true science, and learns a sorrowful lesson.

They are the truly scientific who are the most sceptical.

The critic has an unkind little laugh at the author, when he states that in illness the medical agnostic would become a medical believer, accept the medical faith, and probably swallow the pharmacopeia, if necessary, for the salvation of his body.

The author can only say that this argument is parallel to that of the clergyman who said that agnostics always believed in God in the hour of death.

Neither argument is true, and, were either true, it would only prove that the brain is a very imperfect organ, and that the throne of reason rests upon a narrow base, the base being bodily health.

THE AUTHOR OF "MAD DOCTORS."

February, 1891.

RATING OF ASYLUMS (LUNACY ACT, 1890).

TO THE EDITORS OF *The Journal of Mental Science*.

GENTLEMEN,—The following copy of a letter recently (17th March) received from the Local Government Board may be of interest in connection with the short paragraph under the above heading in the last number of the Journal.

"With reference to your inquiry as to whether the rates paid in respect of the County Lunatic Asylums should be charged to the maintenance account, I am directed to state that the Board consider that the amount of the rate should *not* be charged to the maintenance account, but to the building and repairs and farming and gardening accounts, according to the circumstances, as shown in the forms of the financial tables prescribed by the Board's General Order of the 23rd June last."

This may be taken as an authority for debiting the accounts named with the new charge instead of making the maintenance the sole sufferer, and the decision, whether right or wrong, is satisfactory as enabling asylums to act uniformly in this matter without any fear of our new bogie man—the Government Auditor—before our eyes.

I am, Gentlemen,

Your obedient Servant,

J. BEVERIDGE SPENCE.

Burntwood Asylum, near Lichfield,
March 20, 1891.

Appointments.

BEYDEN, P. HAMILTON, M.B., C.M.Edin., Medical Assistant to Dundee Royal Lunatic Asylum.

BRUNTON, WALTER REYNER, L.R.C.P.Lond., M.R.C.S.Eng., Assistant Medical Officer to the Portsmouth Lunatic Asylum, Milton, near Portsmouth.

CLEMENTS, HERBERT, L.R.C.P., L.R.C.S.Edin., Junior Assistant Medical Officer to the Staffordshire County Asylum.

DOUGLAS, ARCHIBALD ROBERTSON, L.R.C.P., L.R.C.S.Edin., etc., Assistant Medical Officer to the East Riding Lunatic Asylum, Beverley.

EUSTACE, JOHN N., M.B., B.Ch.Univ.Dub., Clinical Assistant to the Richmond Asylum, Dublin.

FARQUHARSON, A. C., M.B., C.M.Glas., D.P.H.Camb., F.C.S.Lond., Senior Assistant Medical Officer to the County Asylum, Burntwood, near Lichfield.

FETHERSTON, GERALD H., M.D.Melb., L.R.C.P.Edin., L.F.P.S.Glas., Official Visitor of the Lunatic Asylums at Yarra Bend and Kew, Victoria, Australia.

HASLETT, W. J., M.R.C.S., L.R.C.P.Lond., Resident Clinical Assistant to St. Luke's Hospital for Lunatics, London, E.C.

HENDERSON, MISS JANE B., L.R.C.P., L.R.C.S.Edin., Resident Clinical Assistant on the Ladies' Side of the Holloway Sanatorium, Hospital for the Insane, Virginia Water.

LYONS, ALGERNON WILSON, M.B.Lond., L.R.C.P.Lond., M.R.C.S.Eng., Assistant Medical Officer to the City of London Lunatic Asylum, near Dartford, Kent.

MACADAM, PHILIP E. W., L.R.C.P. and S.Irel., Clinical Assistant to the City Asylum, Birmingham.

SANDERS, W. G. W., M.B., C.M.Edin., Pathological Assistant Medical Officer to the County Asylum, Rainhill.

STEPHENS, R. J., M.R.C.S., L.S.A., Assistant Medical Officer to the Wilts County Asylum.

WESTON, EDWARD FRANCIS, M.R.C.S.Eng., L.S.A., appointed by the Justices of the Staffordshire Quarter Sessions, Private Asylum Medical Visitor.

NOTE.

In the next number of the Journal will appear reviews of Professor James's "Principles of Psychology;" Höfding's "Outlines of Psychology," published by Macmillan; "Physiologie de la Veille et du Sommeil," by S. Sergueyeff, "L'Automatisme," by Pierre Janet, and other important works.

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The Editors do not hold themselves responsible for the views of Contributors whose names or initials, &c., are given.

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EDITED BY

D. HACK TUKE, M.D.,
GEO. H. SAVAGE, M.D.

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

FRANCIS BACON, *Proleg. Instaurat. Mag.*

JULY, 1891.

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No. 158. NEW SERIES,
No. 122.

JULY, 1891.

VOL. XXXVII.

PART 1.—ORIGINAL ARTICLES.

Prichard and Symonds, in especial Relation to Mental Science.

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

I hope that you will agree with me that it is well to seize the occasion of our meeting in this locality to recall the memory of two remarkable physicians who practised for many years in Bristol—one, Dr. Prichard, who distinguished himself not only as an ethnologist, but as the author of by far the best English work on insanity in his generation, who was the most celebrated Medical Commissioner that ever sat at the Lunacy Board, and who produced a profound sensation in the legal and the psychological world by enunciating the doctrine of so-called "Moral Insanity," the echoes of which have not yet died away, nor are likely to do so as long as crimes are committed, and the question of human responsibility has to be determined. The other, who will be ever remembered by those who knew him as the beloved physician, the late John Addington Symonds, the friend of Prichard, and one who, although not an alienist, felt a keen interest in, and had a great capacity for psychological research, having written several Essays, quite remarkable for their insight into some of those problems in psychology which we are yet far from having solved, and which we discuss with some heat even at the present moment.

Both Prichard and Symonds were representative men—examples of all that is noblest and best in the traditions of the medical art; men whose lives, absolutely free as they were from "the leaven of malice and wickedness," tend to raise us above the petty jealousies and misunderstandings which too often intrude upon our professional life. They

* Paper read at the Quarterly Meeting of the Medico-Psychological Association, held at Brislington House, Bristol, May 1, 1891.

differed, certainly, in some of their mental characteristics. Their tastes in the direction of poetry and art were not equally strong; their facility of speech differed, I believe, considerably; and Symonds did not suffer from the shyness which friends of Prichard tell me characterized him. But they were essentially alike in the true modesty of their natures, in their stainless honour, in their refinement, and in the union of intellectual endowments with sweetness of disposition.

If I do not restrict myself to their scientific work, it is because I thought you would be interested not only in Prichard's and Symonds' views of psychology, but also in the psychology of Prichard and Symonds themselves, as they lived and moved and had their being in this neighbourhood, and conferred renown upon it, not solely by their brilliant careers, but by their characters as men. I would add that although Bristol may justly claim them as her adopted citizens, their name and fame are the heritage of the medical profession.

Had time permitted, I should have given some account of Dr. Carpenter, who was not only a noted physiologist, but occupied an important position in the special domain of mental physiology, and must always be remembered in connection with Bristol; for although born in Exeter he was only four years of age when his parents removed to this city. His first work in the direction of psychology dates as far back as the year 1837, when he wrote a paper on the "Voluntary and Instinctive Actions of Living Beings." With his name has been associated the phrase "unconscious cerebration," and although, I think, it must be admitted that in the regrettable contention for priority which occurred between Dr. Carpenter and Professor Laycock, the latter's claims were well founded, Dr. Carpenter's exposition of mental automatism was able, and on the whole formed a valuable contribution to psychology. It was in 1874 he published his "Principles of Mental Physiology," which covers an area of mental science too much neglected and of great importance. Even so far back as 1853 he embodied in his "Human Physiology" the phenomena of hypnotism, having become convinced of their reality and interest from witnessing the experiments of Braid. But I must resist the temptation to set forth Dr. Carpenter's position in relation to mental science. So much I have thought it incumbent upon me to say in reference to a

remarkable man, whose unremitting industry and careful study of nature are worthy of our imitation, carried on as they were to the time when a painful accident, which excited universal sympathy, terminated an honourable career.

Born in 1786 at Ross, in Herefordshire, James Cowles Prichard was never sent to school, but was educated at home, and acquired a knowledge of French, Italian, and Spanish. His father was at one time residing at Bristol, and young Prichard occupied himself "in finding out and examining the specimens of the natives of different countries who were to be found amongst the shipping of this port. His familiarity with Spanish and modern Greek was in part attributable to this cause" (Hodgkin).

After his studies under private tutors were completed he commenced the study of medicine in this city in 1802.

Subsequently he continued his medical studies at St. Thomas's Hospital. In 1806 he went to Edinburgh, and even when a student in that University he formed definite opinions in regard to the varieties of the human race. One of his fellow-students has stated that in their daily walks "this subject was always uppermost. A shade of complexion, a singularity of physiognomy, a peculiarity of form, would always introduce the one absorbing subject. In the crowd and in solitude it was ever present with him."

After he had taken his degree in Edinburgh, Dr. Prichard resided a year at Trinity College, Cambridge. It was in 1810 that he commenced practice in Bristol. He, however, found time for his anthropological researches, and brought out his work on the "Physical History of Man" in 1813. As is well known, he opposed the opinion that the blackness of the negro was due to the action of the sun through a long period of time, and maintained on the contrary that our first parents were black, the white varieties of the human species being the result of civilization. As Dr. Hodgkin observes, "he related many curious facts, collected from several parts of the globe, in support of this bold and ingenious theory, the announcement of which excited both surprise and interest."

It affords me sincere pleasure to be able in this connection to read a letter from my friend Dr. E. B. Tylor, Professor of Anthropology at Oxford, in which he replies to my inquiry as to the position held by Prichard in the estimation of ethnologists at the present day.

He writes:—"It is always a satisfaction to find that Dr. Prichard's reputation does not die out, but rather grows with

time. As an anthropologist his work is admirable, and it is curious to notice how nowadays the doctrine of development rehabilitates his discussion of the races of man as varieties of one species. We may even hear more of his theory that the originally dark-complexioned human race produced, under the influences of civilized life, the white man. I have wondered that Prichard's merit as the philologist who first proved the position of the Keltic languages as a branch of the Indo-European, is so often left unnoticed. Adolphe Pictet made his reputation by a treatise on the same point, which was received with applause, no one seeming to know that Prichard had done it before."

It is important to bear in mind what Dr. Hodgkin points out, that had Prichard written nothing on ethnology he would have been a distinguished physician. "He established a dispensary. He became physician to some of the principal medical institutions of Bristol. He had not only a large practice in his own neighbourhood, but was often called to distant consultations. Notwithstanding the engrossing nature of these occupations, he found time to prepare and deliver lectures on physiology and medicine, wrote an essay on fever, and one on epilepsy, and subsequently a larger work on nervous diseases." In view of the distinguished position occupied by Dr. Prichard in our own special branch of medicine, the question arises, How did he obtain his knowledge? He himself tells us in the preface to his "Treatise on Nervous Diseases," published in 1822, that his work owed its existence to his having held, during ten years, the appointment of physician to St. Peter's Hospital, where a great proportion of the cases brought under his observation belonged to the class of mental diseases. "Here," he says, "a variety of phenomena presented themselves, from time to time, to my notice which have appeared to throw light on some practical indication. It is now several years since the idea first occurred to me that by publishing a selection from those cases which have seemed worthy of record, I might be enabled to make some addition to the general stock of knowledge respecting the interesting and obscure class of disorders to which they belong; and in this hope I have been in some measure confirmed as I have proceeded, by observing that the examples of disease which continued to present themselves seemed in general to coincide with certain pathological distinctions which I had been led to adopt."

He goes on to say that he suspected that disorders of the nervous system are often symptoms of some latent disease in another part of the constitution. He adds:—"Some of the diseases of which I purpose to treat are commonly regarded, at least in cases of long duration, as almost incurable by any efforts of human art . . . yet numerous instances occur in which Nature, in some period or other of life, effects a cure. The diseases are found to cease in consequence of some spontaneous change which takes place in the state of the constitution. If medical practitioners, instead of hunting after specific remedies, carefully directed their attention to trace the method by which these natural terminations are brought about, or to ascertain the process of those constitutional alterations, in consequence of which the diseases alluded to disappear, it is probable that they might be enabled, in some instances, to imitate the salutary operations of Nature." The author says of his book that if he did not imagine it to contain something more than is universally known on the subject, he should not have had the presumption to offer it to the public.

In the words of Dr. Symonds this appointment to St. Peter's Hospital was "more memorable than any other that he subsequently held, because this institution contained a class of patients whose maladies gave an impulse to his prosecution of a particular department of pathology with which his name will ever be associated."* We may well judge of the remarkable mental capacity which he possessed, when we consider that he has left his mark in two vast departments of knowledge—psychological medicine and ethnology. Had he left either of these departments untouched, he would still have gained the highest point in the one to which he had confined himself.

It is very striking to find Dr. Prichard in this, the first work he published which treats of mental disease, taking a position diametrically opposite to those views of which he subsequently became the able exponent. He quotes a case reported by Dr. Gall, in which a "disorder of the propensities" followed an injury to the head caused by a fall from the fourth storey of a house, only to smile at the absurdity of such a statement, adding that if such reports gained credit "the College of Surgeons may expect one day to march in triumph and take possession of the vacant seats of the

* "Miscellanies by Dr. J. A. Symonds," edited by his Son, p. 117.

criminal judges; and we shall proceed forthwith to apply the trepan, where now the halter and the gibbet are thought more applicable" (p. 35).

Further, he observes in another part of the same work:—"I have scarcely seen any instances of alteration in the temper and affections which did not bear a pretty exact proportion to the *irritamenta* that were connected with it, or which, in cases bordering on lunacy, were not dependent on some latent hallucination or false impression. If this explanation can be admitted in all instances where the affections appear to be perverted, it will follow that we have no decided instances of original disorder in this part of the mental constitution; and the argument which has been drawn in proof of the intimate connection of the mental processes with organic operations in the nervous system must, as far as it relates to this class of phenomena, be abandoned."

From other passages of this treatise it is obvious that Prichard was at that time imbued with the old-fashioned notion that while the physical organs might be closely connected with intellectual acts, as memory and thought, it was altogether out of the question to say the same of our feelings and moral sentiments. What must have been the cogency of facts, on the one hand, and the candour of Prichard on the other, to lead him, after thirteen years' more experience, to maintain that the temper and disposition have been known to undergo a change in consequence of, or immediately after, some severe shock to the bodily constitution—a disorder affecting the head, or a slight attack of paralysis. ("Treatise on Insanity and other Disorders affecting the Mind," 1835, p. 13.)

I have already said that he wrote the best work on insanity in his day. This was the treatise now quoted from, which had its foundation in an article in the "Cyclopædia of Practical Medicine."

We have then a period of three-and-twenty years during which Dr. Prichard devoted himself with ardour to the clinical study of insanity. I venture to think that the amount of knowledge gained and the intelligent use made of that knowledge during this period, were of infinitely greater value than that which would have accrued from the study pursued during double the period by many other men. I should like to know how many of the medical superintendents of asylums who have had the same or longer

experience could have produced a standard work on mental diseases equal to that which Dr. Prichard did actually produce.

There was only one writer on insanity at that period from whom he could obtain help on a considerable scale. That writer was Esquirol, but there is this striking fact that he himself writes a letter to Prichard acknowledging how much, in one department at least, he had been enlightened by him; and again he declares in his great work on *Mental Maladies*, as we shall see directly, that he is indebted to Prichard for clinical information and original conclusions. So that we have this remarkable testimony to the knowledge and sagacity of the English physician from a man whose field of observation in the Paris Asylums was second to none in the world. Esquirol's work did not appear till 1838.

Prichard also wrote articles on delirium, hypochondriasis, somnambulism, animal magnetism, soundness of mind, and temperament.

"I shall never forget the satisfaction," writes Dr. Symonds, "which I derived from the study of the article 'Insanity,' in the 'Cyclopædia.' The light which I then derived from it has repeatedly been a help and a guide to me in the investigation of cases of derangement in which no lesion of judgment was discoverable."

I hold in my hand a letter from Dr. Prichard to my father, dated Bristol, July 22nd, 1834, in which, after referring to the preparation for publication on a larger scale of his treatise on insanity in the "Cyclopædia," he proceeds:—"I am desirous of knowing whether you have observed (at the York Retreat) any cases of moral insanity. By that term I distinguish the mental state of persons who betray no lesion of understanding, or want of the power of reasoning and conversing correctly upon any subject whatever, and whose disease consists in a perverted state of the feelings, temper, inclinations, habits, and conduct. Such individuals are sometimes unusually excited and boisterous; at others dejected (without any hallucinations), sometimes misanthropic or morose."

Here, as you see, is laid down in the fewest possible words the proposition which is associated with Dr. Prichard's name, although shadowed forth by a previously expressed opinion of Pinel in regard to one particular form of emotional disorder; as also by the celebrated Dr. Rush, of Philadelphia.

Most modest of men, Prichard, however, distinctly claims

to have been the one who "first recognized and described moral insanity."*

Recently a medical writer, in opposing this doctrine, cited Esquirol in his support, but he quite forgot to add that he subsequently, after more extended experience, gave his assent to it in an unqualified manner. I thought every alienist knew this, but as such is clearly not the case I must quote the paragraph. Bear in mind, if you please, that it was published three years after Prichard's book appeared, and is therefore a striking homage to the Bristol physician's thesis. After describing four cases, he continues thus:—"These are borrowed from the work of Dr. Prichard, who reports them as examples of moral insanity. This learned *confrère*, who published in 1822 a very good work on the 'Diseases of the Nervous System,' has since then enriched science with the most complete work we possess on mental disorders. This able physician, by a series of very interesting observations, has described the symptoms of this variety of partial insanity in which the character, the habits, the affections of the patients undergo a change without disorder of the intelligence. Dr. Prichard has not, perhaps, sufficiently distinguished moral insanity from another variety of insanity, which exists [not only] without intellectual disorder, [but] without disorder of the affections, which Pinel has called *manie sans délire*." ("Des Maladies Mentales," 1838, Vol. ii., p. 63.)†

"But does there really exist a mania," asks Esquirol, "in which patients who labour under it preserve their reason intact, whilst they abandon themselves to the most condemnable actions? Is there a pathological state in which man is irresistibly impelled to commit an act which his conscience condemns? I do not believe it." This denial of moral insanity has been largely quoted by readers who have not taken the trouble to read further, or they would have seen his recantation, in which he says that such was his opinion in 1818, when he wrote his article "Manie Homicide," in the "Dictionnaire des Sciences Médicales," but since that time he has observed cases of *manie sans délire*.

* "A System of Practical Medicine," Vol. ii., 110.

† There appears to be some confusion in Esquirol's observations upon Pinel's *manie sans délire* or *raisonnante*. In the above passage he speaks of there being no disorder of the affections; and he also records (p. 70) a case in which there was no disorder of the reason and the affections, and yet at p. 71 he gives the symptoms of *manie raisonnante* as "the change—the perversion—of the habits, the character, and the affections."

“I have,” he adds, “been obliged to submit to the authority of facts” (p. 98). Time will not allow of my following Esquirol in his further remarks, most instructive as they are.

Since the time of Esquirol a large number of distinguished alienists, in our own country and abroad, have ranged themselves on the side of moral insanity. Though he did not live to see it, Prichard has had his triumph.

It must be admitted that the Doctor laid himself open to criticism by narrating some illustrative cases which scarcely bore the construction which he put upon them. It must also be admitted that the doctrine may be abused in the interests of criminals. But when all is said that can fairly be urged against moral insanity, it remains a clinical fact, however rare, that there are certain persons who are insane and unaccountable, but in whom there is no disorder of the intellectual faculties which can be regarded as sufficiently marked to establish the fact of insanity or imbecility in the eye of the law.

For the recognition of this truth, we ought to acknowledge our obligation to Dr. Prichard, and meeting as we do to-day near the scene of his thoughtful observation of mental disorders, it is fitting that we should publicly express the debt under which we lie to him.

At no period since Prichard wrote has the question which he raised assumed more importance than at the present time, when criminality has been studied with unprecedented attention by the Italian school of which Lombroso is the representative. In this study and in the warm debates which have taken place the subject which had so much fascination for Prichard has necessarily come to the front and been keenly discussed—not always wisely. But what I wish to emphasize is the fresh interest which has been excited in regard to a class of persons whose moral nature is blunted by disease or defective at birth, and the endeavour which has been made—one which would have so greatly attracted Prichard—to ascertain what, if any, are the physical accompaniments and signs of this abnormal state. The result has been that the doctrine of Prichard has been in its essence adopted, and has indeed been more strongly emphasized in regard to congenital moral defects which Prichard recognized, but could not work out at so early a period of the study of moral disease. It is held that in addition to acquired moral insanity, there is an organization which may with reason be

styled congenitally criminal. Certain it is that although it would in my opinion be untrue to regard the great mass of the inmates of our prisons as stamped with stigmata which point to their having been cast in the same mould, we are more and more recognizing the fact that certain organizations are from the cradle devoid of ordinary moral sense, and have proclivities to motiveless cruelty, along with such a measure of intelligence as would in the eye of the law be deemed amply sufficient to carry with it responsibility. I ask your especial attention to the manner in which I have worded this clause. He who denies moral imbecility or insanity may show that the intelligence is not of a high order, but he is bound for all practical purposes to show much more than this. Can he prove inability to understand what is taught in an elementary school? Can he demonstrate that there is loss of memory greater than what thousands of people suffer from, whom no one dreams of calling imbeciles or lunatics? Can he detect hallucinations or delusions? If he can, then, of course, the case is taken out of the region of moral insanity. I assume that he can do none of these things, and I say that if he cannot, and if along with this state of the intellect, there is a hopelessly obtuse moral sense or an impulse to commit cruel acts to children and animals, which can be fairly regarded as the result of congenital defect or acquired disease, the condition meets the requirements of Prichard's moral insanity: that is to say, it is not the defective state of the intelligence which attracts observation to the individual, but the abnormal conduct, the insane emotions, which so arrest attention, that it is absolutely necessary to defend society from the results, and to either punish the culprit or to place him in an asylum. Prichard's sagacity laid, it may be said, the foundation stone of modern criminal anthropology. Morel added a most important superstructure of facts as to moral no less than intellectual degeneration. Those who are now taking the lead in raising this building to a greater height deserve respect, so long, at least, as their conclusions are grounded on and restricted by scientific observation.

Now, is the position taken by Prichard consistent with the doctrine of mental evolution as expounded by Herbert Spencer? I have the highest authority for saying that it is, for within the last few weeks he has told me that there is nothing in his psychology opposed to it, and that, in fact, he unquestionably believes in moral insanity. I endeavoured

in a paper I read before the "Psychology" Section of the British Medical Association, in 1884, to express the bearing of the evolution of the cerebral functions upon Prichard's doctrine; and I pointed out that the term "moral insanity" is unfortunate, so far as it induces the belief that the moral feelings are themselves necessarily affected by disease, while the other mental functions are sound. It is very certain, I said, that, on the contrary, what happens is oftentimes rather a weakening of the higher centres, involving paralysis of voluntary power, and so permitting an excessive and irregular display of feeling in one of the lower forms it assumes. This view, which transfers the seat of mischief from the feelings themselves to volitional or inhibitory power, might suggest the more accurate term of "inhibitory insanity." Speaking generally, the higher levels of cerebral development which are concerned in the exercise of moral control, *i.e.*, "the most voluntary" of Jackson, and also "the altruistic sentiments" of Spencer, are either imperfectly evolved from birth, or, having been evolved, have become diseased and more or less functionless, although the intellectual functions are not seriously affected, the result being that the patient's mind presents the lower level of evolution in which the emotional and automatic functions have fuller play than is normal.* I admit that Prichard does not carry me with him in regard to some of his varieties of moral insanity, and that as to the particular instances which he gives in support of other varieties, justified by clinical observation, I think a more rigid examination would have detected in them some fixed idea or other disorder of the intelligence. He pointed the way, and our own experience suffices to adduce examples—better, perhaps, than his own—which illustrate his position.

I am not concerned to uphold the doctrine of moral insanity in too absolute and literal a sense. Grant, if you like, that there is no sharp line of demarcation between intellect and emotion; and grant further, if you will, that every so-called case of moral insanity, if tested and re-tested in the most rigorous and exhaustive manner by medical and legal experts, could be made to yield some proof or indication of intellectual enfeeblement or delusion, it is quite sufficient for my present purpose to maintain that disease of the brain may wreck the moral nature, while the patient would not be placed under medical care or legal

* See paper read before the Section of Psychology at the meeting of the British Medical Association, held at the Queen's University, Belfast, July, 1884.

restraint on the ground of weakmindedness, delusional insanity, or mania.

Although, however, I do not consider it necessary to demand more than this, it is of great interest to note what the most distinguished psychologist of the present day holds in regard to the relation between intellect and emotion as to their being separately affected by brain disease. Further, it is of great clinical interest to place on record cases in which no definite intellectual disorder is observed along with indisputable moral aberration, however possible it may be to allege that it exists in spite of the most careful endeavour to discover it.

I cannot avoid referring to one of Dr. Prichard's remedies in the treatment of insanity and some other affections of the brain, which he described in the *Medical Gazette* of 1831; it was the somewhat heroic mode of producing counter irritation by an incision in the scalp along the sagittal suture, the wound being kept open by means of peas. He returned to the subject in 1836, in a paper which was read for him by Dr. Symonds before a meeting of the British Association held in this city. It was received by the audience with great interest. This method may no doubt seem very tame at the present day, when nothing is thought of trephining the skull. There is reason to believe, however, that in some cases at least, Dr. Prichard's issue was attended with benefit.

Dr. Prichard joined the Medico-Psychological Association when it was established in 1841. He attended several of the annual meetings. When the Association met at the York Retreat in the autumn of 1844 the suggestion of having a Journal for the Association was first broached, in consequence of the German Association having published its first number. The editor, the distinguished Professor Damarow, presented a copy, accompanying it with the desire of the members that the English Association should publish a similar periodical. Naturally Dr. Prichard, with his literary as well as his scientific tastes, would warmly support this proposal. The seed, in fact, was then sown, although some years elapsed before it germinated. Half a century has elapsed, and I hope we may regard the tree which has grown up in consequence as being in as flourishing a condition as Dr. Prichard and his friends could have expected.

In 1845 Dr. Prichard became a Commissioner in Lunacy,

resigning his office of Physician to the Bristol Infirmary, held by him for more than 26 years, and became a resident in the Metropolis.

The National Institute of France and the French Academy elected him a corresponding member; he became a Fellow of the Royal Society. The University of Oxford had already conferred upon him "her very highest honour," the degree of Doctor of Medicine by Diploma.

Dr. Hodgkin states that the subject of his last conversation with Dr. Prichard as they walked home together from the last meeting of the Ethnological Society at which he presided, was the publication of plates of human skulls illustrative of ethnology somewhat on the plan of the "Crania Americana," prepared by Dr. Morton, of Philadelphia. This, however, was not to be, but fortunately Dr. Thurnam, at that time the Medical Superintendent of the York Retreat, carried out the idea, in conjunction with Barnard Davis, in their great work, "Crania Britannica."

Dr. Carpenter, in reviewing Dr. Prichard's "History of Mankind," in the "British and Foreign Medical Review," July, 1847,* expresses his sense of the "vast obligation under which both science and philanthropy has been laid by the persevering devotion manifested by Dr. Prichard, through his entire professional life, to this great object, than which nothing can well be conceived to be less remunerative, either directly or indirectly, when weighed in that commercial balance by which we are too much accustomed to estimate the merit of our pursuits."

Prichard was on circuit as a Lunacy Commissioner when an unexpected attack of illness, on the 4th December, 1848, prostrated him, and it became necessary to convey him home to his residence in London. Rheumatic fever, complicated with pericarditis, followed by suppuration in the knee-joint, terminated his career, while he was still in the full strength of his intellectual life, at the age of 62.

Thus died a most worthy man—an ethnologist celebrated throughout the civilized world, a psychologist memorable for the mark he made upon psychological medicine, an original member of this Association of whom we have great reason to be proud. When Dr. Prichard died, he was, as I have intimated, President of the Ethnological Society of London. In a sympathetic memoir of him, read before this Society after his death by Dr. Hodgkin, another distinguished

* Edited by John Forbes, M.D., F.R.S.

member, he observes: "It has forced itself upon my reflection that the year 1848, which must ever be remarkable amongst the years of the 19th century for the savage atrocities that have signalized those wars of races which have disgraced it, will also be remembered as the year which closed the life of the greatest writer who has treated of the science of ethnology, and investigated and classified the nations and kindreds and tongues of voice-varying men."

When Professor Gibson, of Philadelphia, visited England, he saw and thus described the appearance of Dr. Prichard: "He is a short, compact, close-made man, with bluish-grey eyes, large and prominent features, and expression uncommonly mild, open, and benevolent, so much so that almost everyone would naturally inquire who he was. He is very cheerful, sociable, frank, easy, and unpretending in his discourse and manners, and has so much modesty, artlessness, and child-like simplicity about him that no one would be prepared to say, upon slight acquaintance, that he was anything more than an ordinary, sensible, well-disposed man, however much they might be pleased, which they would not fail to be, with his benignant and agreeable countenance. But it is impossible to be in his company long and to hear him talk on any subject without being strongly impressed with the depth and originality of his views, his sterling good sense and wisdom, his profound and varied information, his clear and luminous conceptions, his ardent and unbounded love of science, his extreme liberality towards every nation under the sun, his entire freedom from envy or jealousy of any description and from professional rivalry and bitterness, his singleness of purpose, his goodness of heart, and his reverence for all the duties that belong to a Christian, an accountable being, and a man."

This description of Dr. Prichard fittingly closes my brief sketch of the career of a physician of whom the familiar lines are eminently descriptive —

"In manners gentle, of affections mild,
In wit a man, simplicity a child."

I will now pass on to speak of Dr. John Addington Symonds, who, the sixth in medical succession in his family, was born at Oxford in 1807, but resided at Bristol or at Clifton till the end of his life, a period of forty years.

He studied medicine at Oxford and Edinburgh, where he

received the degree of M.D. in 1828. Mr. John Addington Symonds, the gifted son of a gifted father, writes: "At Edinburgh he was distinguished among his fellow-students for the union of literary tastes and pursuits with an unflinching devotion to the studies of his profession. . . . The soundness of judgment and logical precision, with which he was eminently gifted by nature, and the industry of research, which made his diagnosis valuable in all the more complicated cases of disease, were being confirmed and exercised by the perusal of Bacon, Dugald Stewart, and Dr. Brown, his three favourite philosophers. For this unusual combination of philosophical and literary ability, with practical sagacity and wisdom in the discovery and treatment of disease, he continued to be celebrated through his lifetime, forming, as it were, a link between his profession and the world of letters, and carrying on the tradition of the Sydenhams and the Harveys, of whom England is justly proud."*

His son informs me that "for seven generations his progenitors had been Puritans; and he counted one of the regicides, Gilbert Millington, among his collateral ancestors. In the history of his mind this fact has to be noticed. Many men situated as Dr. Symonds was in early life would have become revolutionary under the impact of science, philosophical culture, and the modern spirit; he, on the contrary, gradually ripened with the years, developing a sane and comprehensive wisdom, which placed him well abreast with the most thoughtful minds of his period. The postulate of a creative and beneficent Deity appears in nearly all his published writings. At the same time, his receptive intelligence was open to all the influences of biblical criticism, of geological discovery, and evolutionary speculation, which operated so powerfully during his lifetime. In his last years he studied and accepted the Darwinian hypothesis, declaring that he did not find it to be incompatible with a belief in a planning Creator.

"The broad and wholesome development of his mental faculties, his width and sanity of culture he owed, in great measure, doubtless, to a well-balanced nature, but also, I believe, to the co-existence in him of two leading impulses. The one directed him to science, the other to literature and the fine arts, and the latter of these was probably the more instinctive. I always thought that had he been quite free to

* "Miscellanies by Dr. Symonds," 1878, p. 10.

choose he would have devoted his talents to the higher branches of criticism. Circumstances led him to adopt the medical profession, and as a practical physician he achieved success. But he could not absorb his whole energies in the daily round of work, or in studies immediately connected with medicine. His literary tastes and gifts demanded exercise. The result was that he produced much excellent work, in which he showed how problems offered to a man of science may be treated with refined style and in the spirit of philosophical culture.

“His urbane manner of handling dry or intricate speculations, the beauty of his diction, the moderation with which he exercised judgment and drew conclusions, together with his habit of adorning scientific discussions with literary illustrations drawn from his wide reading, marked him out as a scholar and a critic of high rank, but these qualities probably obscured the real sagacity and originality of his insight as a thinker. We might compare him to that eminent physician and illustrious writer, whose works he never tired of studying, Sir Thomas Browne.

“His real distinction was that of a widely cultivated, largely extensive critic, who never forgot the interconnection of all the intellectual provinces. He brought to bear on every subject which he touched a refined and vigorous common sense, a just idea of what is possible within the limits of the human reason, and a marked impartiality of judgment. This critical perspicacity and moderation, this *humanism*, seems to me somewhat rare in our age of audacious theorizing on the one side and of specialized mental study on the other. His was a large sane mind, mellowed by deep and ardent sympathy with what is rare and beautiful in literature, schooled by the daily dealing of a practical physician with every form of human misery and shame, and pain and weakness.” (Letter, April, 1891.)

It was not long before Dr. Symonds was elected physician to the General Hospital and Lecturer on Forensic Medicine at the Bristol Medical School. In 1836 he was appointed Lecturer on the Practice of Medicine. For 17 years he retained his post at the hospital, and then became honorary consulting physician.

I wish, gentlemen, I could bring before you who were not acquainted with him, the Dr. Symonds whom it was my happiness to know in his prime—full of intellectual life—*Geist*, if that expresses it better—philosophic, æsthetic,

having the brilliant qualities which spring from the widest culture and a gifted mind; not only fond of poetry, but himself a poet, although not caring to let it be known, for as he wrote in a private letter in my possession, "There is very ancient authority for uniting poetry and medicine, though the moderns are dead against it, excepting Shelley, who in his beautiful Hymn of Apollo makes the god say :

'All harmony of instrument or verse,
All prophecy, all medicine is mine.'

Dr. Symonds goes on to express his opinions on Shelley, Byron, and Milton, and ends his letter with :

"But I am prosing on poetry. Forgive me; and above all do not betray me. Nine-tenths of the world would not let me prescribe for them if they thought I cared two straws for poetry."

His intellectual tastes, his love of art, his refined mind and philosophic cast of thought charmed and elevated those who came within his influence. But I despair of being able to convey to those who had not the advantage of an acquaintance with him, anything like an adequate idea of his personal charm, the strength yet tenderness of his nature, the magnetism of his character, and the transparent genuineness and purity of his whole being, so happily described in the motto beneath his crest, which was no empty play on his name: *Mundus in mundo immundo*.

Dr. Symonds' countenance and bearing were in full harmony with his character. You were at once won by his gracious manner, and impressed with the intellectual expression of his finely-chiselled features, marked as they were with the indelible lines of thought and culture. These are admirably shown in Woolner's bust, now in the possession of his son, Mr. John Addington Symonds.

The enumeration of some of the articles contributed to the journals or lectures delivered by Dr. Symonds will indicate the bent of his studies, and afford ample evidence of the position which I claim for him as a medical psychologist, although I know he would have hesitated to accept this description himself.

I select the following out of the titles of the Essays referred to:—

1. The relations between mind and muscles.
2. Sleep and dreams.
3. Apparitions.
4. Habit.

5. The principles of Beauty—sensational, intellectual, moral, emotional, and ideal.

6. Criminal responsibility in relation to insanity.

Every one of these essays contains ingenious speculations and original thoughts upon the subjects he discusses, conveyed in a style singularly lucid and graceful.

(And here I would parenthetically observe that of these, his article on Dr. Prichard is one of the best examples. Mr. Symonds writes me that his father's "familiar connection with Dr. Prichard was far closer than his own modesty and dislike to introduce personal details into literature made apparent in the biographical sketch* composed by him. Concerning the speculations introduced into that essay I have no right to speak. I will only point out the philosophical width and clearness with which he handled Dr. Prichard's theory of the origin of species. At the same time sympathetic, cautious, and independent, this critique seems to me a model of urbanity in scientific discussion.")

In the first paper he discusses with great acuteness the doctrine of effort and volition, instinct, the motions immediately consequent upon certain organic conditions without sensation; and here I must point out that the possibility of this occurrence was only just becoming recognized when Symonds wrote. He enforces the truth that they must not be restricted, as they generally had been, to those involuntary muscular actions which belong to mere nutritive life, as the contraction of the heart from the stimulus of the blood; but that they have a far wider range of activity, that, in fact, *sensation is not by any means a necessary condition of muscular contraction*. When he wrote, Marshall Hall had but recently enunciated his views on the reflex action of the cord, and Laycock had excited surprise by extending this doctrine to the cerebrum.

Passing over the sections in which he treats of motions following internal and external sensations, I must pause to refer to Dr. Symonds' treatment of the influence of the *emotions* upon muscular action. He points out in a very forcible manner the involuntary effect produced upon ourselves as regards our muscles, when we recognize the presence of a passion in another person—a true reflex action of the brain.

Again, in referring to the effect certain emotions exert

* Read at the meeting of the Bath and Bristol Branch of the Provincial Medical and Surgical Association, March, 1849.

upon the breathing, he asks why it should be necessary, when we are engaged in some action requiring stealth and silence, to counsel one another to hold the breath. His reply is, "Under ordinary circumstances respiration occurs as noiselessly to others as unconsciously to the subject. No other probable solution of the question occurs to me than the following. On occasions of the nature alluded to, the solicitude or mental attention produces an unusual excitement of the nervous system, and a consequent hurry of the breathing, which becomes audible, and it is to restrain this derangement of an ordinarily quiet action that the voluntary effort is enjoined."

He enters into the movements which result from irritation independent of desire. He confesses that it is utterly inexplicable why a person yawns because another does, for to say that it is due to sympathy is but to compare it to something equally unintelligible. Then there is the contagiousness of hysterical exclamations and convulsions, and again, imitative repetitions of atrocious crimes, not only motiveless, but performed by persons who loathe the acts they commit when impelled by this strange reflex impulse.

Another group of involuntary actions consists of movements of habit which are explained by the law that "actions which have frequently co-existed, or followed each other in a certain succession, have a tendency to repeat that association or sequence, even when the causes which originally produced them are no longer acting." This is, of course, admitted by all; but those who read Dr. Symonds' article will be struck with the able manner in which he traces many of our daily actions to a fundamental law of our nature. Automatic writing, again, which has been so much studied since his day, is happily treated of and illustrated. For example, there is, so to speak, a mistake of the muscles when a perfectly educated man writes the *adverb* "there" when he intended to write the *pronoun* "their." In the same way a man makes a mistake in writing when others are talking in the room; his muscles act reflexly, and a word is written which is heard instead of the word in the writer's mind. As Dr. Symonds puts it, some word diverts the writer a moment from his previous train of thought; the muscles continue to act, and follow the impulse of the word in question. He points out the beneficial influence of the law that motions are as immediately consequent on ideas as they are on sensations and emotions. Thus authorship would be very

rare if it were necessary that the writer's mind should be voluntarily instead of automatically directed to his pen. "How many sublime meditations would have been lost to the world if the legs of peripatetic philosophers had required the constant superintendence of their minds. Or to come down to more ordinary pursuits, the knitting needles of the intelligent lady would make but slow progress in their charitable employment, were her muscles unable to guide them without the direction of the mind, which is engaged in the conversation of her friends. How could the weaver sing his psalms, or the waggoner whistle his rustic strains, did the shuttle of the one, or the whip of the other, require that mental attention which is occupied by their respective melodies?" These examples of unconscious muscular action are excellent illustrations of a great truth in mental physiology, now known to be so important, but barely recognized when Symonds wrote.

The article upon "Apparitions" is an exceedingly thoughtful one, and among other questions, Dr. Symonds discusses the difficult one of the seat of representations of former perceptions, in other words subjective sensations. He was not disposed to believe that "sensible images, recalled in the usual operations of memory and imagination, take place in the external organs," and, therefore dissented from the well-known doctrine of Sir David Brewster that they do.

He adduces the fact that persons who have become blind from paralysis of the optic nerves, or extirpation of the eyeballs, may continue to see objects in the mind's eye. He explains the observation of Dr. Bostock that when he was recovering from an illness he saw spectres constantly for three days, which altered their position according to the direction of his eyes, by pointing out the tendency the mind has to associate ideas with those of the same degree of vividness; "thus in the first remembrance of an absent friend, he is surrounded by the places and circumstances in which he formerly saw him. Now when we move our eyes, a new field is, of course, presented to us, but the vivified image is still associated with the visible objects, and the idea of motion is produced in the same complex manner as when, on observing a distant carriage, we discover that it moves, not by the feeling consequent on a change of place on the retina, but by seeing it in connection with new objects in the landscape." It would, however, occupy too much time to pursue further

the arguments upon which Dr. Symonds bases his conclusions that "apparitions are not to be referred to affections of the retina." At the same time he admits that it is not absolutely impossible that there may be a transmission from the sensorium to the peripheral sense-organ. Now I think that with our increased knowledge of sensory centres we must conclude that while hallucinations arise in the majority of instances in the sensory areas of the cortex, and do not involve the peripheral terminations of the nerves in the organs of sense, it is quite possible, and indeed probable, that the latter are in *some* instances the seat of the revived impression. My object, however, is to show how intelligently, and with what scientific acumen, Dr. Symonds occupied his mind and pen in endeavouring to unravel some of the difficult psychological tangles of his and our own day.

Mr. Symonds has been given to understand—and correctly—that his father's "open-minded inquiry into the phenomena of double consciousness (in the essays on 'Apparitions' and on 'Sleep and Dreams'), his analysis of the interaction of memory, association, and imagination in the formation of dreams, his attribution of a real psychological importance to the operation of the mind in sleep, and his acceptance of dreams as a form of unconscious art-creation, indicate a remarkable prevision of the way in which such delicate psychological problems are being now approached. That is to say, he had a liberal, a philosophical and a sympathetic mind; handling these moths and phantasms of our consciousness with curiosity and tenderness, not dismissing them upon the ground of some assumption, recognizing their relative value, and even accepting modes of explanation which are adopted by those who devote special attention to such matters. It seems that what he said about apparitions of the living is not even now out of date, while his distinction between the supernatural and the miraculous, and his discourse on the methods of explaining hallucinations—fertile in a hundred ingenious suggestions—remain un-superseded by the industry which has been since applied to these phenomena."

Mr. Symonds further writes to me that his father, as a psychologist, occupied, he thinks, a somewhat peculiar position, and that he exercised the power of a critic, the power of one who brought feeling, common sense, sagacity, and readiness for new ideas to bear upon the matter. He did not attempt to innovate or legislate, he did not pretend to

forge theories for facts which have, as yet, been too imperfectly observed. He made it rather his function to classify opinion by the exercise of a widely trained and comprehensive judgment.

I would here observe that Dr. Symonds' essay, entitled "The Principles of Beauty," brings out in a striking manner alike the psychological acuteness and the fine artistic perception with which he was endowed. I fully agree with his son that in this discourse his gifts, as a writer, "appear in passages of the purest prose, while his philosophical temper of mind and his scientific acquirements are exercised on a congenial topic. It may, perhaps, be regretted that he devoted so much attention to developing a theory of the harmonic ratios upon which beauty, in the physical world, depends. But the way in which he grasped and expounded that theory throws light upon the groundwork of his philosophical creed. He truly believed that the universe is the work of God, the manifestation of the mind of God, and that, therefore, in all the rhythms of the world we shall find one order and one music." And Mr. Symonds adds, "This is a belief which, to my mind, is being forced upon us by the evolutionary hypothesis. Certainly it is one which psychologists, in an age addicted to so-called materialistic explanations of phenomena, might well keep steadily before them."

I must now draw special attention to his admirable article on "Criminal Responsibility in Relation to Insanity," read before the Bath and Bristol Branch of the British Medical Association, which met at Clifton in 1869. Of this essay the "Journal of Mental Science" wrote (1865, p. 273), "It is almost needless to say that Dr. Symonds' essay is worthy of perusal. Any contribution to practical medicine bearing his honoured name would necessarily command our attention."

It was written shortly after the conviction of Townley for murder, which raised such a storm of medical discussion on the question of his insanity, Dr. Bucknill and others in England being prominent upholders of his responsibility, and the celebrated Dr. Morel, of Rouen, taking a decided view that the man was insane and irresponsible. Dr. Symonds took the former view, and considered that the alleged delusion of Townley was the outcome of violent personal feeling, and was not sufficient to prove a diseased state of mind. It should be noted that he did not hold that

mental unsoundness should *always* exempt the criminal from punishment. He maintained that it is not the business of the mental physician to determine the question of responsibility; that all he is called upon to declare is whether the man is sane or insane—in short, what he said was this, if we declare him to be unsound in mind, “let moralists and legal judges settle the question whether he is responsible for his actions.” The alienist must in each case inquire (1), “As to delusions, whether they were of so gross a nature as in themselves to argue a diseased state of the understanding; or whether, though of an insulated nature, and not involving the whole mind, they had a direct bearing on the crime. (2), As to cases without manifest delusions, whether the state of the emotions and moral feelings was so perverted, either with reference to the ordinary standard, or with reference to what was the patient’s temper and character, as to indicate a morbid condition, that condition telling in particular on the power of self-control. (3), As to the impulsive forms of mania, these ought not to be admitted except on the strongest evidence.” He points out that fortunately in such cases “the evidence is usually very convincing, if not to the legal mind, to those who have any practical acquaintance with the great variety of the forms which mental disorder can assume.”

I have already adverted to what Dr. Symonds himself felt that he owed to Prichard for what he had taught him about moral insanity, but I should like to quote further some of his remarks upon the general subject. “It seems to me strange,” he says, “when we reflect on the large share which the emotions and sentiments and passions bear in the mental constitution of man, and when we consider that there has been no disinclination to attribute susceptibility of separate and independent derangement to another part of our constitution—I mean the purely *intellectual*; and, moreover, that the most strenuous asserters of the doctrine that insanity, in all cases, involves a perversion of judgment, do not attempt to conceal that the propensities, tastes, and emotions are often, or, indeed, in most cases, morbidly affected; I say it seems strange that the question should not have presented itself before, as to whether there are not actual cases in which mental derangement is confined to *moral* feelings and the emotions, just as in other cases the perceptive and reasoning powers are the sole subjects of disorder; and stranger still that, whether such

a priori suspicions ever arose or not, the real existence of such cases should not have attracted observation. That they have been so entirely overlooked can only be explained on the ground that the sentiments and passions of man have been generally considered subservient to the will and reason, and that any undue excitement of the former (the passions) has been consequently supposed to arise either from a criminal want of control on the part of the will, or from a deficiency of rational power; so that, according to this view, a man of violent passions or eccentric conduct, unless proved to entertain some delusion or hallucination, must be either wilfully perverse or chargeable with moral delinquency.”*

Well may Dr. Symonds add that “On the whole I cannot help viewing the subject as one of the most interesting in the whole range of morbid psychology. And it is impossible to think of it without having the mind filled with very melancholy reflections. . . . The consideration of that perversion of the natural feelings, tastes, and habits which constitutes ‘moral insanity’ introduces us to a wide world of human suffering, which, though it may not be peopled with such appalling apparitions as have risen before the imagination of poets, and been embodied into the undying forms of Orestes, Ajax, and Lear, yet swarms with unhappy beings—sufferers whom we view not in those throes of anguish which by their novelty throw an air of elevation or sublime indistinctness over their subjects, but in the ordinary habit of the mind, in the quiet paths of life, in the domestic chamber, and by the friendly hearth” (p. 158). Dr. Symonds, after pointing out that while patients suffering from other forms of mental disorder “are followed in their retirement by feelings of tenderest compassion and regret,” adds, “Alas! how different the fate of those who are afflicted, not with aberrations of judgment, which are detected by even the simplest of sound-headed observers, but with marked obliquities of feeling which are so easily confounded with bad passions wilfully indulged, and with evil habits wilfully pursued” (p. 139).

Dr. Symonds supplied Dr. Prichard with the particulars of a case which he regarded as one of moral insanity.† Some years previously the patient had had an attack of

* Life of Dr. Prichard, in “Miscellanies,” p. 136.

† See “Treatise on Insanity and Disorders affecting the Mind,” by James Cowles Prichard, M.D., F.R.S., 1835, p. 50.

acute mania. After his recovery his moral character was found to have undergone a change. But "there was no evidence that he entertained any belief in things morally or physically impossible, or in opposition to the general opinion of mankind." Dr. Symonds adds that after deliberation he came to the conclusion that although he had been unable to trace any positive intellectual error, "there was such a morbid condition of the feelings, habits, and motives as to constitute a case of what has been correctly designated by Dr. Prichard as moral insanity." I am bound, however, to say that other features of this case appear to me to take it out of the category of pure moral insanity.

His son justly remarks, in reference to this subject (moral insanity), "it must be remembered that a theory of insanity apart from mental delusions was at that time novel, almost revolutionary. When I read these dissertations, I feel how little we have advanced beyond the principles there advocated; and how valuable were the calm humane philosophy and the cautious exercise of the author's judgment upon topics involving such immense moral and legal difficulties. If anyone should turn to those modest essays by Dr. Symonds after the perusal of Lombroso's work on 'Criminal Psychology' he will not fail to perceive what it was in the temper of my father's mind which I think worthy of imitation. Realists in art, and realists in science, might object that he approached the painful topic far too superficially; I can only answer that I have watched him labouring with loss of appetite and loss of sleep under the pressure of some case of obscure mental disease, which he had professionally to deal with. And, for myself, I admire the sanity of judgment which enabled him, after those trying episodes, to survey the dark subject-matter in the spirit of an Aristotle or Hippocrates."

But I will not pursue further the consideration of a doctrine which has had the good fortune to be illustrated and defended by these two remarkable men.

I think I have quoted enough from the writings of Dr. Symonds to prove that it is not without reason that I recall this gifted physician to the memory of a company of medical psychologists. Of the estimate in which his professional skill was held, the practice which he enjoyed for many years in this city and the neighbourhood, is a sufficient indication. A large number of his patients came from a distance, attracted not only by the climate of Clifton as a health resort in the winter months, but by the reputation of Dr. Symonds.

He was interested in all the social questions of the day, sceptical of nostrums and fads, but warmly supporting sound plans for the amelioration of the miseries of his kind, whether moral or physical. It was indeed after his health had broken down and when he ought to have had a long period of much needed repose, that he took a leading part in the meeting of the Social Science Association held at Clifton in 1869, and presided over the Section of Health, at which he delivered an able, eloquent, and practical address, one also full of hope for the future of our race, ending as it did with the words, "We cannot easily suppose that our earth will have lost her heat, or our sun have ceased to burn, before man has experienced and enjoyed the perfect evolution of all those capabilities and faculties with which his Maker has endowed him, before all that is now only potential and latent has come out into form and action."*

It was shortly after the delivery of this address that his professional life closed.

Professor Newman thus writes to me respecting Dr. Symonds, who was his junior by four years: "His amiable manner and his excursive mind made him a universal favourite, while his extensive medical study prepared him for a high place in his own profession. He was already a proficient in outlying literature quite beyond me, though time did not allow him to attain any such eminence as his son has achieved, but on the topic of Greek tragedy he had knowledge, and on this we had many a friendly gossip. I had no means of cultivating taste for art such as Dr. Symonds more and more indulged, but I could not help feeling that had medicine not been his first pursuit, his mind would have carried him into several directions of beauty. I once accepted hospitality from him when he was the leading physician in Clifton, and on my return to live there, in 1866, I found in him a geniality quite unaltered. I soon believed that he was overworking himself. At last I took on myself the responsibility of remonstrating with him, and spoke to the following effect: 'You have amassed in your elegant house stores of various beauty, which you have not time to enjoy. Your distant patients will kill you. Evidently you need more rest. Take rest before nature forces you to take it.' He listened kindly and silently, but some days later said that he had lessened the calls upon him, so far as he

* "Miscellanies," p. 400.

could, *without cutting through his principal artery*. I remember this characteristic metaphor. Alas! when I saw him for the last time he said, 'Oh, Newman, your word to me was like that of a prophet. I no longer have the power to choose what I will or ought to do.' He died soon after, most regretted by all who knew him best."

"If before his illness his life had been a pattern of strenuous activity," writes his son, "it now became no less remarkable for patient endurance, and for cheerfulness under privation. Struck down at the early age of 62, suddenly arrested in the midst of a career of usefulness, smitten by a slow disease, forced to exchange authority for obedience and energy for inaction, he never murmured, but supported himself with a philosophy of tranquil and unquestioning acceptance."

"To the last he continued to converse with pleasure upon all topics, showing a mind at rest—perfectly content to quit this world, serene in the certainty that it must be well with those who have striven to conform themselves to the divine will."* His son does not speak too strongly when he concludes his too brief memoir of his father by the remark that he has endeavoured "to give some faint idea of the character and genius of a man whom those who loved him felt to be as good and great as man on earth may be," or when he applies to Dr. Symonds the words employed by himself to express his own ideal of a perfect character, as manifested in "those who, in passing through the world, escape contamination, who devote their faculties, endowments, and exertions to the promotion of the happiness of others, by making them wiser and better, and who show, in all their actions and feelings and endurance, that the moral sentiments are developed to the greatest height commensurate with humanity—because they are interpenetrated with, and become assimilated to, the divine light and the divine pattern."†

Dr. Symonds died on the 25th February, 1871. No physician in Bristol was more loved in his life-time, none more mourned in his death,

"Nor e'er was to the bowers of bliss convey'd
A fairer spirit or more welcome shade."

* "Miscellanies," p. xxvi.

† "Miscellanies," p. xxxii.

Use and Abuse of Hyoscine. By LIONEL WEATHERLY, M.D.*

My apology for reading this short paper must be, my belief, that at our meetings too few communications are made bearing upon the medical treatment of mental disease.

Pathological research keeps making headway, but it must be disappointing to all of us engaged in psychological medicine and to the general practitioner (not to mention the general public) that our treatment does not at all keep pace with our knowledge acquired by study at the post-mortem table.

In all branches of medicine we have been inundated lately with new drugs, the manufacturer of each heralding abroad and trumpeting loudly the most fulsome praise of its wonderful effect. Possibly no class of medicine has furnished more new remedies of late years than that coming under the name of *Hypnotics*.

Of all these remedies not one, I firmly believe, deserves a permanent place on the shelf of our armamentarium so truly as *Hyoscine*, *if properly and carefully used*.

Hyoscine is an alkaloid—obtained from *Hyoscyamus*. Its salts readily crystallize. The preparations generally used are:—

The Hydrobromate.

The Hydro-iodate.

The Hydrochlorate.

The solution I use is always made up as 1 in 400, and as it is a drug which is not easy to keep, I use a sterilized solution with 5grs. of Boracic Acid to the ounce.

Dose: $\frac{1}{300}$ - $\frac{1}{100}$, increased very cautiously to $\frac{1}{50}$.

It is practically tasteless, which is a very *great advantage*.

Its antidote is Pilocarpine or Caffeine.

Speaking generally, its physiological action is as follows:— (Dr. John Mackenzie states that this is a bad drug to use continuously, as its use is followed by loss of weight and degradation of habit, the patient becoming untidy, etc., but my experience does not agree with this.)

Kidneys.—Dr. Tirard says it can be used with perfect safety where there is kidney disease and where morphia is therefore contra-indicated.

Digestive System.—It causes dryness of mouth and throat by diminishing flow of saliva.

* Paper read at the Quarterly Meeting of the Medico-Psychological Association, held at Brislington House, Bristol, May 1st, 1891.

It may cause nausea or even vomiting ; but this is rare.

It does not purge ; but has no control over diarrhœa.

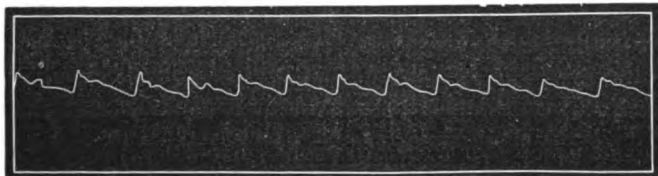
Temperature.—There are no statistics of any effect of Hyoscine in reducing temperature, but it is undoubtedly useful in controlling the delirium of high temperature.

Respiration.—It is said to have no effect on the respiration.

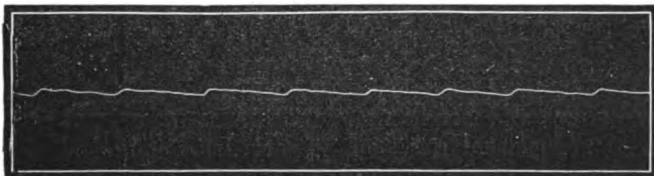
Circulation.—The effects upon the pulse are certainly open to some doubt, though I have found that in the majority of cases it depresses the circulation.

Whether by direct action on the heart or its centres, or by affecting the peripheral resistance, I am unable to say.

Sphygmographic tracings, before and after Hyoscine, are somewhat variable in their characters, but the one I show, which Dr. Buck, my Assistant Medical Officer, has taken for me, may fairly well illustrate the results on a normal heart.



No. 1.—Tracing taken before Hyoscine was given.



No. 2.—Tracing taken half an hour after administration of Hyoscine.

It will be plainly seen that after the Hyoscine the line of ascent is shorter, the general curve is long and low, the dicrotic wave is lost—in fact the pulse shows a tracing characteristic of heightened arterial tension.

This was the effect of a very small dose on a patient who has some tolerance of the drug.

I therefore agree with those authorities who have warned practitioners against the use of this drug, unless with the most watchful care, in cases of heart disease, though I know some hold a directly contrary opinion.

In cases where there is evidence of a weak heart or general feeble circulation I always combine ʒss or ʒi of Spt. Am.

Arom. with it, and this invariably counteracts or diminishes the depressing effect upon the circulation without in any way interfering with the action of the drug on the mental condition.

Nervous System.

Motor symptoms.—Walk may become ataxic even after a small dose, and cause a great feeling of fatigue. This I have noticed myself in some few cases. On the other hand, in some cases of disseminated sclerosis, senile, alcoholic tremors, and paralysis agitans, the drug has a marked controlling effect over the tremors and the powers of co-ordination.

Brain.—It often causes dizziness and even delirium. It may cause hallucinations, or change their character, and certainly in some few cases of hysterical mania it has produced hallucinations of the muscular sense.

Mental excitement, especially motor, is greatly controlled by it if not hysterical. It often fails, however, as a hypnotic in the excitement of tabes, and other cases where the motor symptoms are more prominent.

Its effect on temper and irritability, if given in repeated small doses, is in the majority of cases very marked.

Sleep.—By injection, one observer writes that his experience of this drug is that actual sleep is not produced, but a condition greatly resembling sleep, in which the patients are always found somnolent, but yet awake. My experience is certainly the same, but only when a small or moderate dose is given. A larger dose, say $\frac{1}{75}$ gr., will often produce a deep sleep, though this will pass into a simple somnolent condition after the lapse of a comparatively short time.

My experience of this remedy, extending over a period of three years, teaches me that its proper use is as a *mental alterative*, and in certain cases I must candidly confess I have seen it work almost wonders.

Most of us have constantly under our care cases which, maybe, partly from natural peculiarities of temperament, exaggerated by the insanity, partly from excessive brain irritability, render our lives a burden to us; not only to ourselves, not only to the attendants, but also to the patients around them are they a constant source of annoyance and worry. Quarrelsome to a degree; resenting vigorously the most ordinary rules of discipline; abusive, arrogant, and domineering.

Give such a case many of the drugs we have been in the habit of using, and what effect have they? None. The

incubus remains a stern reality in our midst, until his period of brain irritability has passed off.

Give such a case repeated small doses of Hyoscine, say $\frac{1}{100}$ of a grain, by the mouth, and what a change, in a large majority of cases, takes place!

I have seen many a time in my asylum such a case, under the influence of two doses of Hyoscine, and even of one small dose, become a decent member of society. From insolence and arrogance the stage to politeness and amiability has been as rapid, as marvellous.

The man, who was but a short time ago quarrelling with all around him, and showing himself to be a passed professor in the Anglo-Saxon language, suddenly asks one of his companions to play billiards with him, or sits down to the piano, or again makes himself comfortable in an armchair with a book or newspaper; and his tongue is no more that of a viper.

Take yet another case.

I have in my house a gentleman who suffers from the most marked Folie Circulaire. In his periods of excitement, before I used Hyoscine, I could find no means of ameliorating the acuteness of the attack, nor of checking the rapid increase of his maniacal excitement, his pulse bounding and throbbing violently, his scalp hot, and veins markedly full, his abuse, his opinion of his wonderful powers, his plans for altering the universe and setting everything right, becoming more and more exaggerated every minute. A dose of Hyoscine is given. In a few moments (certainly within the quarter of an hour) his pulse becomes compressible, his veins lose their turgid appearance, and the excitement shows symptoms of greatly subsiding; though the sub-acute stage thus produced may persist for some time.

Again, as showing the action of this drug as a mental alterative, let me briefly state the history of a case of puerperal mania I saw with my friend Mr. Craddock.

She was dreadfully excited, destructive, and violent; all attempts to get proper nourishment failed. No sleep whatever. She was rapidly passing into that fatal typhoid condition we so often see in these cases; high temperature, quick, weak, and thready pulse, dry brown tongue, and parched lips.

Every sort of drug had been tried. The case looked a hopeless one. We at once gave her, through the stomach tube, a good quantity of eggs, milk, and beef tea, and $\frac{1}{100}$ gr. of Hyoscine. She soon went to sleep and slept apparently a healthy, natural sleep for eight hours. When she woke she

was amenable to the nurses' wishes with regard to taking her food. Hyoscine was given night and morning, and though at times the excitement was great and she remained quite incoherent, still the nurses had but little trouble with her, and said she was a different being with regard to obedience to their wishes. In seven days she began to get lucid intervals of ten minutes' duration. These gradually increased in length and in frequency, whilst the excitement steadily decreased. The Hyoscine was steadily persisted in for 20 days. Then the improvement was so marked that it was left off. Two months from the day I saw her she had quite recovered.

From the time of the first dose of Hyoscine the persistent resistance to the wishes of the nurses with regard to feeding, etc., and which so handicapped the possibility of treatment, never returned.

A general paralytic, with delusions of untold wealth, but with the fixed idea that he had been robbed of it all, and by those in charge of him. His excitement at times and his wrath know no bounds. He longs for revenge, and no punishment is too great for the criminals who have so cruelly robbed him. Argument is, of course, useless. It only irritates. To leave him alone is impracticable, if not inadvisable. *Hyoscine is given.* Ten minutes, we are all friends and brothers, and "*jolly old pals.*"

It can be given in violent mania hypodermically, and its effect in many cases is to "knock over" the patient almost in a moment, but it is, I maintain, a dangerous remedy used in this way, unless it is carefully administered and its effects most attentively watched.

A case of acute delirious mania. The patient stripping himself, trying to dash out his brains against any object within his reach, desperately fighting with all around him, shouting, cursing—literally foaming at the mouth.

Give such a case, say $\frac{1}{100}$ gr. of Hyoscine hypodermically, and probably before you have cleaned and put away your syringe your patient lies huddled up on the floor apparently in a deep sleep. Speak to him, he will open his eyes for a moment and probably answer you coherently, though only in monosyllables. A vastly different creature, indeed.

But, as I have said, this is not always the happy result. The drug may in some cases produce such a condition of failure of the circulation and respiration that the patient seems in the most imminent danger.

I believe, however, that this effect, though very commonly

produced by *Hyoscyamine*, is more or less rarely caused by this drug. *Hyoscyamine* is constantly confused with *Hyoscine*. It is a remedy I would never use, and I am always cautioning medical men against confusing this dangerous remedy with the more or less safe one under our notice at present.

In hysterical cases with hallucinations I have found *Hyoscine* to be a very unsuitable remedy, though I cannot explain the reason of its failure.

In such cases the effect on the patients to whom I have given it has been either *nil* or very distressing.

I cannot do better than repeat what a patient (a case of Hyst. Insanity, with Hall., Ill., etc.) herself wrote of her experience of a dose of this medicine given hypodermically whilst in a condition of wild hysterical mania. "The needle was inserted in my arm, and I was put on the bed—a very queer state. I thought I was dying. I did not close my eyes for fear of losing consciousness, and as I spoke my voice seemed to come from the ceiling. I managed to unfasten my things and get my breath, and then my mouth and throat became dryer and dryer, and I could not swallow. I thought I was dying and kept choking, and when I tried to get to the water bottle I kept falling backwards, as if I had a load on my back. I suddenly sank, and felt myself dying, and I burst into peals of insane laughter. I tried to stop myself. As I sank lower and lower the louder I laughed. I gradually came round and looked in the looking-glass. I had the face of a raving lunatic, as if a cobra was on my head. When I was in bed the doctor and nurses came and stood around me, their faces bathed in bright gold, their eyes blazing and gleaming with insanity at me. They seemed turned to stone, like corpses, as I sat up staring at them in *horror*. Their faces were in a decomposed state. It was awful."

It was indeed with "horror" that she looked at us, and, holding my hand, begged me to save her from death and never to allow her to have the injection again.

In two other cases of hysterical insanity with hallucination I have used this drug, and in both it certainly altered the character of the hallucinations, making them ten times more distressing and horrible, and causing in each case hallucination of the muscular sense.

In cases of hysterical mania with hallucinations I have given it with very varying effect, and generally speaking I do not think the drug is a satisfactory one in any cases of insanity with hysterical symptoms.

In delirium tremens I have advised its use, and it has, in the few cases I have seen, been very successful, especially in a case under the care of Mr. Scott, who had tried all sorts of drugs with no effect, and the case was completely wearing all out. One hypodermic injection of Hyoscine procured long and natural sleep, the patient woke quite well and was in his business in 48 hours.

In a case of disseminated sclerosis with very exaggerated tremors and loss of brain power, Hyoscine has acted wonderfully well, and the medical man, Mr. Charles Terry, under whose care the case is, tells me that for four months the patient took $\frac{1}{100}$ gr. twice a day with very good effect on the tremors and co-ordinating powers generally, and that it certainly increased the brain power. It was then given in doses of $\frac{1}{80}$ gr., with very marked benefit. The shaking of the hands improved, the running backwards disappeared, and there was still less general tremor. The set look of the face improved, and more interest was taken in the events of the day.

I have seen this case several times, and the patient himself finds a great difference in his symptoms, if from any cause he leaves off taking the medicine for even twelve hours.

My friend, Dr. Law Wade, with whom I have had many conversations about this drug, and who, when he first used it, was disappointed in the results obtained, now writes me "that the steady administration of a small dose three times a day has acted wonderfully well in several cases, so well that it is impossible to conclude that the result is due to anything but the drug."

In mental depression I have found no good result, though I have tried it in many such cases.

In conclusion, I must repeat that I believe the most important use of Hyoscine is as a *mental alterative* in those cases which I have mentioned, as showing benefit by its administration in small and, if necessary, repeated doses.

In these cases it certainly changes the patient from an unmanageable, revolutionary factor in our midst to a person who is fairly amenable to the wishes of those about him, and often to a very presentable member of decent society.

It, as it were, knocks off the rough edge of temporary excitement and irritability, landing the patient, in many cases, very rapidly into a quiescent and altogether happier state of mind.

No one who has charge of insane patients can possibly disagree with the utility of a drug acting in this manner.

Its next use, I take it, is to control the tremors which we get in multiple sclerosis, in chronic alcoholism, and in paralysis agitans, and in many cases of general paralysis it greatly improves the powers of co-ordination when they are affected.

To rapidly subdue delirious and maniacal excitement it is certainly a valuable agent in experienced and careful hands, and will act more rapidly and more surely than any drug I know when given hypodermically; but as it is not a safe remedy I look upon the indiscriminate use of it as a powerful and sudden hypnotic as *its abuse*.

In some instances, as I have said, it certainly acts in a way no other drug known to me can act, but it may be attended in other cases with sudden fatal results, and I therefore think I am right in calling the indiscriminate use of a remedy with a possible action of this sort *its abuse*.

The kind of cases I believe it to be unsuitable for, I have already mentioned.

I trust there may be many here to-day who have definite experience of this, to my mind, valuable medicine, and that the discussion will throw more light upon its remedial powers and uses in mental disease.

Nothing, however, will shake my firm belief in the utility of the alkaloid in the class of cases I have tried my best to describe as suitable for its administration.

*On the Arithmetical Faculty and its Impairment in Imbecility and Insanity.** By WILLIAM W. IRELAND, M.D.

The operation of counting is so familiar to us, and so easily brought under mental observation, that a definition of what it is in learned terms does not make anything clearer to our minds. The abstract idea in numbers is as many as, five, that is, as many fingers as I have, as many as you have, as many as your mouth and eyes and ears together, or as many as the sepals of the rose.

Numbers relate both to time and to space, phenomena occurring successively as well as simultaneously, as many as, and as often as. He has as many teeth as you have lived years. The infant at first sees everything as one. Gradually it begins to differentiate, to distinguish itself from other things,

* Read to the Meeting of the Medico-Psychological Association, at Edinburgh, 12th March, 1891.

one person from another, one discrete object from another. Then children learn to distinguish quantities, they know a big piece of cake from a small piece; but even after a child has learned to speak, more than two years pass away before he can be taught to count. Thus children exercise many of their faculties before they arrive at the arithmetical one, and some do it very slowly. The power of counting comes with age and the growth of the brain. It is noticed by teachers that bright, sharp children with good memories, who get above older children in the class, do not readily surpass them in arithmetic. It is frequently stated in books of anthropology that savages very low in the scale of humanity cannot count above some small figure.* The Weddahs of Ceylon are said to have no word for any number; the Tasmanians used to have words for one and two, for three they would say two and one, and sometimes two and two for four. To indicate five they lifted their hands as high as a man's head. Thus, although they had the idea of the number five, they had no word for it; for higher numbers they would only say many. "Throughout Torres Straits † there were practically but two numerals, *urapun* and *ōkōsā*, which were respectively one and two in the western language. Three is *okosa, urapun*; four is *okosa, okosa*; five is *okosa, okosa, urapun*; six is *okosa, okosa, okosa*; beyond that they usually say *ras* or a lot." The Australians have only two numerical expressions; but by combining them they can count as far as 10. The most intelligent, when they want to express the number five, say "hand," and for the number 10 they say two hands. Sometimes for four they say as many as the toes of the emeu. The Bushmen have only two names for numerals, and reach a little higher by repeating them, as 2+1, 2+2, 2+2+1, and so on. Our system of numbering by tens and twenties, which prevails in almost all languages, shows that men originally began counting on their fingers.

Most of the tribes in New Caledonia, according to Letourneau, have only four nouns of number. For five they say "a hand," "two hands" will mean ten. If they wish to go beyond ten,

* "Sociology based upon Ethnography," by Dr. Charles Letourneau, English translation, London, 1881, p. 583.

† See a paper on the "Ethnography of the Western Tribes of Torres Straits," by Alfred C. Haddon, "Anthropological Journal," Vol. xix, p. 303. Taine in his book on Intelligence, London, 1871, has the following note: "As to the primitive meaning of our nouns of number, see Bopp. Comparative Grammar (tr. Breal), ii, 221. *Tri* (three) means exceeding, i.e., the two inferior numbers. Four probably means three *plus* one; five, four *plus* one; ten, twice five. A hundred certainly means ten times ten. A thousand probably means many, a great number" (p. 412.)

they begin to count again as far as five, and after that they put forward a foot, or five toes. When they have got as far as twenty they say "a man," that means all a man's fingers and all a man's toes. Some few clever calculators can continue in this way, but the most skilful mathematicians in all New Caledonia cannot get beyond two or three hundred. Beyond this colossal extent of numeration, people make use of the expressive saying, "The grains of sand could not count it."

If you ask a Greenlander the number of people about, and he wishes to say fifty-three, he will say the third man on the third foot, *i.e.*, he counts the fingers and toes on three men till he comes to the number three on the first foot of the third man. Traces of this remain in our arithmetical notations. The Roman I. originally represented a finger; II., two fingers; and so on up to V., for at least one way of writing IV. was with four strokes, IIII.* The Roman V. represents the hand, four fingers held together and the thumb held separate. X. represents the two hands drawn together or two V.'s affixed to one another, the undermost being upside down. The Arabic cipher for five seems to me to be the closed hand, the upward stroke being the thumb. In the Indian 3 we have our own figure for three, three digits represented laterally instead of vertically, as in the Roman. It is thus clear that men beginning to count rested their eyes upon visual symbols; for higher numbers they helped their conceptions with small objects easily shifted, added, and subtracted, hence the word calculate from calculus, a pebble. In higher numbers the cipher used must have been always more ideographic than figurative. The Mexicans, who without any help from the Old World, worked out a system of notation of their own, indicated the first twenty numbers by an equal number of dots. The first five, Prescott† tells us, "had specific names, after which they were represented by combining the fifth with one of the four preceding, as five and one for six, five and two for seven, and so on. Ten and fifteen had each a separate name, which was also combined with the first four, to express a higher quantity. These four, therefore, were

* Of course IV. means one finger less than a hand. In some cases numbers are expressed by a subtraction from a round number like ten, as in the Latin *undeviginti*, in the Hindustani *sis*=19, one from *bis*=20, *untis*=39, one from *tis*=30, *untalis*=49, one from *chalis*=40. The Yombas of Western Africa, who have a curious system of numerals, also, in some instances, make use of subtraction. See paper on "The Numerical System of the Yomba Nation," by Adolphus Mann, in the "Anthropological Journal," Vol. xvi, p. 60.

† "Conquest of Mexico," Vol. i, Chap. iv., p. 98.

the radical characters of their oral arithmetic, in the same manner as they were of the written with the ancient Romans, a more simple arrangement probably than any existing among Europeans. Twenty was expressed by a separate hieroglyphic—a flag. Larger sums were reckoned by twenties, and in writing by repeating the number of flags. The square of twenty, four hundred, had a separate sign, that of a plume, and so had the cube of twenty, or eight thousand, which was denoted by a purse or sack. This was the whole arithmetical apparatus of the Mexicans, by the combination of which they were enabled to indicate any quantity. For greater expedition they used to denote fractions of the larger sums by drawing only a part of the object. Thus, half or three-fourths of a plume or of a purse represented that proportion of their respective sums and so on.”

In building up a science of numbers men steadied their conceptions with names. Though the name does not furnish the idea, it is only with names retained in the mind as a series that we can reach and realize the conception of high numbers. It may appear that we have no precise conception of a number like a hundred thousand, or a million, but while such names may be repeated with only a vague idea attached, they surely conduct to conceptions which are very precise. We can always make an exact correspondence between the group of units indicated by the name in our minds and the outer heap or succession of units in the phenomenal world. No abstract ideas in our minds, therefore, contain less error, and have clearer relations to outward objects; men who differ about everything else, about the just, the true, the good, or the beautiful, who would dispute about every point in religion or politics, would agree in counting a heap of objects, or adding a column of figures.

Then we see our ideas of numbers pervade all nature, in the relations of the stars and planets, as well as in the sides of the minutest crystal. The numbers of parts of the flower are repeated in the same multiples. Two and five are the commonest figures in nature; two answers to the double brain and five to the digits of each limb, which are all severally represented in the brain.

Some people, in thinking of numbers, always associate them with the corresponding ciphers; others with certain figures, such as the corresponding number of dots. One boy told me, in thinking of small numbers, he always conceived them as so many dots or spots arranged in a form, which he showed me, and which seemed the same as that of the numbers in dominoes.

Others conceive of numbers as if arranged in a series, as might be on a board, in lines of various direction, the rows of ciphers generally breaking off in a new direction at 10 or 12. This peculiarity illustrates the tendency to connect visual images with our ideas of numbers. Mr. Galton,* who has written a curious essay upon the subject, found these "number-forms" to occur in about one in thirty of men and one in fifteen of women.

I have here a chart which a lady has written for me, showing how she pictures to herself numbers in a series, as if written on a board. It resembles some of those in Mr. Galton's engravings.

Some writers on anthropology, mostly evolutionists, after giving instances of the meagre vocabulary for numerals amongst wild tribes, treat them as proofs that savages have no capacity for counting—that they have never arrived at the stage in which the arithmetical faculty has been evolved.

Romanes† quotes Galton's observations in Africa to show that in dealing with certain savages "each sheep must be paid for separately, thus: Suppose two sticks of tobacco to be the rate of exchange for one sheep, it would sorely puzzle a Dammara to take two sheep and give him two sticks. All that such facts show is that in some respects the higher receptual life of brutes attains almost as high a level of ideation as the lower conceptual life of man." Mr. Romanes, in a note, goes on quoting Mr. Galton: "Once, while I watched a Dammara floundering hopelessly in a calculation on one side of me, I observed Dinah, my spaniel, equally embarrassed on the other. She was overlooking half-a-dozen of her new-born puppies, which had been removed two or three times from her, and her anxiety was excessive as she tried to find out if they were all present, or if any were still missing. She kept puzzling and running her eyes over them, backwards and forwards, but could not satisfy herself. She evidently had a vague notion of counting, but the figure was too large for her brain. Taking the two as they stood, dog and Dammara, the comparison reflected no great honour on the man." It seems as if Mr. Galton were more anxious, in this comparison, to produce a rhetorical effect than to give due credit to the Dammara. Another African

* "Inquiries into Human Faculty," by Francis Galton, London, 1883, pp. 114-145.

† "Mental Evolution in Man: Origin of Human Faculty," by George John Romanes, London, 1888, p. 215. The reference is to Galton, "Tropical South Africa," p. 213.

traveller, Sir Samuel Baker, says :* " All those savages I have actually visited, not only have speech, but also numerals."

Nevertheless, it seems fairly proved that there are savages who, in their rude struggle with the forces of nature to gain a living, have taken little trouble to distinguish separate objects by counting, or to devise names for numbers, but it would be rash to assume that they could not do so if they were taught. Mr. Romanes boasts of having taught a chimpanzee to count up to five; that is, the animal would, when in good humour, give him four or five straws from its mouth on Mr. Romanes naming the words one, two, three, four, or five. " Farther than this," observes Mr. Romanes, " I have not attempted to take her." Perhaps it would have been more correct to say : " I could not succeed in taking her." I myself am not quite satisfied about this accomplishment of the ape. I should say that the idea of numbers could not be proved complete unless the chimpanzee not only would give at the word of command four or five straws, but four or five of anything. Nevertheless, I am not disposed to deny that an intelligent animal like an ape might be taught to count up to five, but had Mr. Romanes tried also to teach figures to a Dammara the wide gulf between the intellect of the man and that of the monkey would soon have been manifest. The Dammara might have needed to begin at five, but he could soon have been carried into combinations impossible for the intelligence of any of the brutes. The fact is that all men, civilized or uncivilized, have a potential capacity for arithmetic, which in the savage as well as in the ignorant often dies uncultivated. This has been proved by experience in missionary schools, where the children of the lowest savages have been taught.

Take the case of the Polynesians, separated by a wide ocean from the civilized nations of the earth. They lead, or, at least, used to lead, a simple life, enjoying the plenty of their sunny isles, with an easy unconcern about property; no way vexed with toil, and unacquainted with serious mental exertion. These primitive savages were found to have a scanty vocabulary of numerals, but it was found that they had a capacity for arithmetic much beyond the requirements of their ancestors from time immemorial.

In my inquiries on this subject, I wrote to the Rev. Dr.

* See his letter in Dr. Bateman's " Darwinism tested by Language," London, 1877, p. 176. Baker adds: " They usually count in tens, taking for the base of their calculations their digits."

George Turner,* who was long a missionary in Samoa. In reply he says: "You are quite right, I think, in concluding that in the very lowest strata of savage life there is a potential faculty for arithmetic which could be cultivated to any extent. At the close of an arithmetic book in Samoa we have added the first book of Euclid. In the Sandwich Islands they have a separate book, embracing the six books of Euclid."

Before being visited by Europeans the Maoris are said to have been able to count up to a hundred; after that they were hazy. Now they have been proved to possess great arithmetical ability.†

Another missionary, Dr. W. A. Elmslie, who has also kindly answered my inquiries, thus writes from his experience in Africa: "Among the Ngoni, where cattle are abundant, I have never met a case where the loss of a beast was known by counting, even a large herd. They do not in practice count their cattle, as they do not count anything, from some superstitious idea that it is unlucky to do so. This does not, however, I think, bear out an assertion that they cannot do so; the strong superstition of the tribe comes in as an explanation."

The following observations made by Dr. Elmslie apply generally to four tribes living on the western shore and upland districts of Lake Nyassa, viz., Ngoni (who are of Zulu origin), Tusubuka, Tonga, and Nyanja.

"The method of counting in all these is very similar.

"1. They can count up to any number, though in practice, according to the requirements of their primitive life, they do not count very far. Any number beyond say twenty they will say is a 'great many,' not because they cannot count, but because they never have occasion to be exact. In counting up, the mistakes they may make in the higher numbers are only the result of inattention and not inability.

"2. They have the names of numerals up to five and the name of ten. The Ngoni have a word for 'hundred,' but it is seldom used. They count thus: 1, 2, 3, 4, 5, 5 and 1, 5 and 2, etc.; 10 (or 'one ten') 10 and 1, and so on. For 20 they say 'two tens,' so that they count by tens.

* Dr. Turner has published two books which are full of observations of great interest to the anthropologist, "Nineteen Years in Polynesia," London, 1861, and "Samoa a Hundred Years Ago and Long Before," London, 1884. While correcting the proofs I have heard with much regret of the sudden death of this distinguished missionary.

† See paper on the Maoris of New Zealand, in Vol. xix. of the "Anthropological Journal," p. 113.

"3. They use their fingers in counting. They begin with the hand shut, and open out finger by finger beginning at the little finger, and when five are counted they close the fist and proceed with the other hand, and on reaching ten they shut both fists and clap them together just as they say 'ten,' and so on, time after time, carrying in their minds the number of tens so counted.

"4. There is undoubtedly marked capacity for learning arithmetic, and we have children working up to the compound rules. Geometry has not been tried."

Another missionary, Dr. D. Kerr Cross, thus writes, referring to the tribes around Lake Nyassa: "My experience among the savage races of Africa leads me to the belief that they are not nearly so defective in the arithmetical faculty as Dr. Tylor indicates in his 'Primitive Culture.' With me they can easily go up the length of two tens, and indeed somewhat beyond such, if occasion requires. They close the fist indicative of five, strike the double fist for 10, and strike the legs with the closed fists for 20. Seldom do they go beyond this number. As far as I know they have no word for 10 tens, although Dr. Law, in a neighbouring dialect, gives a word. Should attention be paid to them the youth of any tribe can be taught to count with some degree of accuracy, as is observed in our schools."

The Darwinians are accustomed to account for the origin of the superior mental faculties of man by the assumption that they were gradually evolved from an intelligence once lower than that of a monkey through the struggle for existence and the strain of competition. They at first thought that in the rudimentary numerical faculty noticed amongst savages they had lighted upon a stage of mental development not much higher than that of the ape, but when it appeared that in the children of these very savages there was a potential capacity never called into exercise by their ancestors, a difficulty arose under which their hypothesis would not work. Indeed, Mr. Wallace, in his book upon Evolution, devotes a chapter to show that the human capacity for arithmetic and geometry could not be explained by any process of development through the struggle for existence, or sexual selection. Yet the arithmetical talent seems to be a special faculty of the human mind. Though all normal children can be taught to count, some learn quickly, others slowly; some become very expert at figures, others have little aptitude; some men take a delight in working at arithmetical problems, others have a distaste for

them. In general, simple men who have had little schooling dislike arithmetical calculation. I have been told that the fishermen in Prestonpans, who take shares in their boats, when they count their gains do not make use of any ciphering or mental division. If there are seven of them to a boat's crew they all assemble, and the money gained is counted out before their eyes in seven portions, which they take and go away. Mr. Winter writes:* "It is a characteristic fact that the criminal classes generally distinguish themselves by a remarkable ignorance of the science of numbers. Nevertheless at the Elmira Reformatory they learned arithmetic quickly."

There are instances of extraordinary development of the arithmetical faculty in early life, such as was shown by George Bidder and Zerah Colborn, which partakes of the mysterious, for it appears that these childish prodigies could perform surpassing feats in calculation without ever being taught the ordinary methods devised through ages for the easier working of such difficult problems. This, I think, shows that the arithmetical faculty is different from the methods by which it is cultivated, and that men can work by different symbols and processes from those usually employed. It often happens that those who are very skilful in solving arithmetical questions have no unusual ability for anything else. In framing his system of phrenology Gall arrived at the idea that number was a special faculty, and sought a locality for it in the brain. He fixed it in the frontal lobe above the outer angle of the eye, just below the place assigned for the faculty of music. It is curious that in the mental manifestations in idiocy and imbecility we find that of all human faculties that of music is the best preserved, whereas that of number is the most deficient, yet music seems to have a certain connection with number. A tune depends upon the numerical relation of certain notes to one another and upon their succession in time. Even idiots who cannot speak catch up tunes and hum or grunt them. To be able to learn to speak is a measure in the capacity of imbeciles, but speech may be freely exercised without their being able to count. This deficiency is universal, comprising all classes of imbeciles. The old legal definition of an idiot is "one who cannot count twenty pence." Dr. Abercrombie, in his book "On the Intellectual Powers," commented upon this deficiency, and noted that it extended to

* "New York State Reformatory at Elmira," by Alexander Winter. London, 1891, p. 139.

cretins. I never saw an imbecile who was expert in figures, though such cases have been described. I should think that such prodigies are mere show cases, who have been taught to master a particular question by an arithmetical formula which after all is not difficult, such as to find out the day of the week on a given day of the month some years back.

Dr. Edward Seguin, whose experience was very great, observes in his book on Idiocy: "The greater number of idiots cannot count three, though among them, or more properly speaking among imbeciles, are found children wonderfully skilled in the arrangement of figures and in calculations of various sorts. This automatic genius does not belong to them as a class, nor imply in its rare possessors any susceptibility to general improvement."

Some cases of great aptitude for figures with imbeciles are quoted in my book on "Idiocy and Imbecility." As already said, none of them came under my own observation. As a general rule, with great pains and great skill in teaching, imbeciles may be brought through addition, subtraction, and multiplication, but rarely through division. Though in most cases it is the more intelligent who learn arithmetic best, I have seen many imbeciles who understood all the ordinary relations of life, could conduct themselves well in society, go about alone, learn to read, and had quite a respectable amount of general intelligence, who, nevertheless, could not work with figures, could not give change for a shilling, and could not multiply by two up to twenty without stumbling. This is not because they do not remember the names, but because they fail to attach any idea to them. In general they may be said to understand numbers as far as they can be seen at a glance, though even then they are slow at counting objects held before them, and are liable to make mistakes through inattention, or through counting the same thing twice over.

In teaching imbeciles numbers, it is best to do so on small objects, like beans or grains of maize; mixing these objects does not seem to perplex them. They reach the idea of numbers through the variety. After they have learned to count a little, one tries to teach them to multiply, and here the haziness of their arithmetical notions is apparent. For example, a boy ten years of age, who can read, and is very observant, knows railway signals, and makes shrewd remarks about people's conduct, will go on thus: "Twice four = 8, three times four = 6." Here another pupil comes to his assistance, saying, "It is 10." "What is twice ten?" Answer, "20."

“Twice eleven?” “6.” Four times four is stated to be 12. Another observes: “I told him it was 16, and he would not believe me.” Some of them always stick at one multiple. One boy would go on quite right multiplying by 2 up to 8, but here he would rarely say that it was 16. After that he would generally go on right up to twice 12. Another will say “Twice five = 10, three times five = 12.” Or “twice four = 8, three times four = 9, three times five = 15, four times five = 16.” “How many men are in a jury?” “A dozen.” “Well, if three jurymen go away, how many are left?” Answer, “None.” Of course these wrong answers are mixed with right ones. In general they show an easy indifference to their failures, but I used to have a pupil who would shed tears when he failed to get through four times four or six times six without stumbling. This was always done with the numbers counted out before him.

I have already described the case of a boy, “aged ten years, who knows all the colours, and is learning the alphabet. He forms an estimate of the character of those around him, and has some sense of moral relations. He talks volubly on childish subjects, but is so deficient in arithmetical power that a year ago he seemed to have no conception even of a unit. He would say that he had three heads, touching his head several times with his finger. This was not because he wanted the word, for he could repeat the names of numbers, as far as twelve at least, without any difficulty. This year, after much trouble, he seems to have mastered the idea of two, and can count cautiously up to three. When he gets to four he is extremely perplexed. If one holds out five fingers to him he will count ‘one, one, two, three, four, there is four,’ or at another attempt, ‘one, two, three, four, five, six, seven,’ and the sum total is declared to be eight. This boy is not without imagination. He is fond of arranging pebbles in a line to represent a railway train, showing he can conceive of symbols.” This boy died about a year after of exhaustion from frequent epileptic fits. At the time the above passage was written these fits were only occasional. It was noticed that the sutures were still open, and that the brain was somewhat softer than usual, otherwise nothing particular to the naked eye. The encephalon weighed $55\frac{1}{2}$ oz.

One might suppose that this deficiency of the arithmetical faculty was owing to some injury of a particular portion of the brain, as has been observed in loss of speech through aphasia, but no such lesion has ever been pointed out in the brains of

imbeciles, nor is there, as far as I know, any diseased condition common to all classes of imbecility. The mental inferiority may be due to cerebritis, sclerosis of the brain, microcephaly, epilepsy, or hydrocephalus, yet in all these forms we may presume that there will be a marked deficiency in the capacity for counting. This is perhaps not what one might expect when he sees a problem put into the calculating machine, say, division of high numbers, and which is brought out by the working of the machine with infallible correctness; one is then disposed to think arithmetic an almost mechanical mental operation. As Oliver W. Holmes has happily put it: "The calculating power alone should seem to be the least human of qualities, and to have the smallest amount of reason in it, since a machine can be made to do the work of three or four calculators, and better than any one of them. The power of dealing with numbers is a kind of 'detached lever' arrangement, which may be put into a mighty poor watch." It must, however, be confessed that the power of the calculating machine does not look so wonderful when one understands how it is made and adjusted.

It might be suggested that, since the arithmetical faculty is late in appearing in children, and often so deficient in imbeciles, it would be one of the first to disappear in the downward process of dementia. This, however, does not seem to be the case. Through the kindness of Dr. Clouston, I had an opportunity of examining a number of patients suffering from progressive dementia and general paralysis, and the arithmetical faculty did not seem to be more impaired than other faculties; indeed, it seemed as if it were less so. Patients so far gone in dementia that they could not, or would not, take the trouble to select or put on their own clothes, nevertheless added columns of figures with tolerable accuracy, and correctly worked sums in reduction, proportion, or other ordinary questions in arithmetic.

In a case of general paralysis it was a contrast to see a man, after making the most senseless and immoderate boastings, sit down and work in a creditable manner a question in arithmetic. While all his conversation savoured of extravagant delusions, his arithmetical exercise was correct and neatly done.

One man, in the middle state of general paralysis, gave me an order in pencil for £4,000 in paper and gold. He said an actor, on whom he wished to draw, was a billionaire. When I asked how this actor made so much money, and how much he was paid a night, he replied a hundred thousand pounds,

which he said were paid in gold. I asked him if he carried this money with him when acting, when he said "Yes."

I asked him if this were not too heavy. He said "No." I then got him to calculate the weight of 100,000 sovereigns, counting each four as equal to one ounce. This he did quite correctly, but nevertheless he would not admit that the sum was too heavy. Although general paralytics talked of numbers in a wild way, it seemed to me that, when they could be induced to sit down and make a calculation, they understood the relation of figures to one another. Two of them were expert and quick in arithmetic. The demented patients in general were easily fatigued, but added figures correctly, though slowly. One patient was very diffident to begin. He had forgotten his arithmetic. I asked him what was twice four, and he said eight. This encouraged him. I then asked him to add a column of figures; the first were seven and five. He said he did not know. I said, Is it not 12? He replied, doubtfully, "It used to be." After this I got him to add a column of eight figures, which he did correctly, but very slowly.

In the downward progress of dementia the higher mental faculties do not seem to be affected in any regular succession. To take advantage of a figure used by Dr. Savage, the dissolution of the mind resembles the decay of an old house left to ruin; sometimes one part of the building falls in, sometimes another. In looking over the literature of insanity, I cannot find that the impairment of the arithmetical faculties in dementia has received attention, but those striking cases in which the patients show a morbid fondness for counting have not escaped observation. Such disorders fall under the head of *Grübelsucht* or *Folie du doute*. The mind is seized by a procession of numerical ideas which escape beyond the control of the will. Going along the road he counts the swallows which fly overhead, the men and women who pass, how many white horses there are, and so on. Emminghaus* tells us of a man who, being asked in company how he liked a song, answered: "Do you know how many letters the song contains?" The same person in walking used to count how many steps he took. Cullerre, who has written a paper † on this peculiarity, which he calls Arithmomania, finds it commonest amongst epileptics. He defines it as the impulse to combine numbers, and especially to calculate the divisions of time as seconds,

* "Allgemeine Psychopathologie," Leipzig, 1878, p. 186.

† "Les Epileptiques Arithmomanes, Annales Medico-Psychologiques," Tome xi. N. 1, p. 28. See also B. Ball, "Leçons sur les Maladies Mentales," p. 449.

minutes, hours, days, months, and years, and in general to work with figures apart from any connection of profit or interest. This affection is accompanied by an indefinable mental disturbance which, though it may be disagreeable, is not so painful as other forms of dominant ideas in which the emotions are more or less affected.

Is the inherent faith which we have in our perceptions of number ever deranged in insanity? Does a lunatic for example ever believe that 2 and 2 make 5? M. Delboeuf* thinks so. The only instance which he gives is taken from a dream, but dreaming certainly closely resembles some kind of insanity. "One night," he says, "I dreamed of a German café where I had taken a glass of beer for which I had to pay 37½ centimes, the value in French money of 30 pfennige = 1 franc 25 centimes. I approached the counter and put down first a piece of 20 centimes, then one of 10 centimes. The woman before whom I put down this money did not seem satisfied. I was astonished. 'Madame,' I said, 'do 20 and the half of 20 not make 37?' The woman did not seem to comprehend my reasoning; the waiters and others came up and supported me, and at last she ceased to insist. I quitted the café wondering at the singular aberration of a shop woman who could not see that 20 and the half of 20 do not make exactly 37½." Here, it may be observed, that the woman at the counter, who refused the incorrect sum, was a portion of M. Delboeuf's own personality; perhaps one side of his own brain refused to partake in the error of the other hemisphere!

Notes Descriptive of a New Hospital Villa recently erected in the Grounds of the York Retreat. By ROBERT BAKER, M.D.

For many years past the Retreat Committee, whilst constantly improving the structural condition of their hospital, have entirely ceased from extending it by the former practice of adding wing to wing and corridor to corridor.

Instead of doing this they have erected various villas in their grounds with all known adaptations for the prompt treatment of the insane.

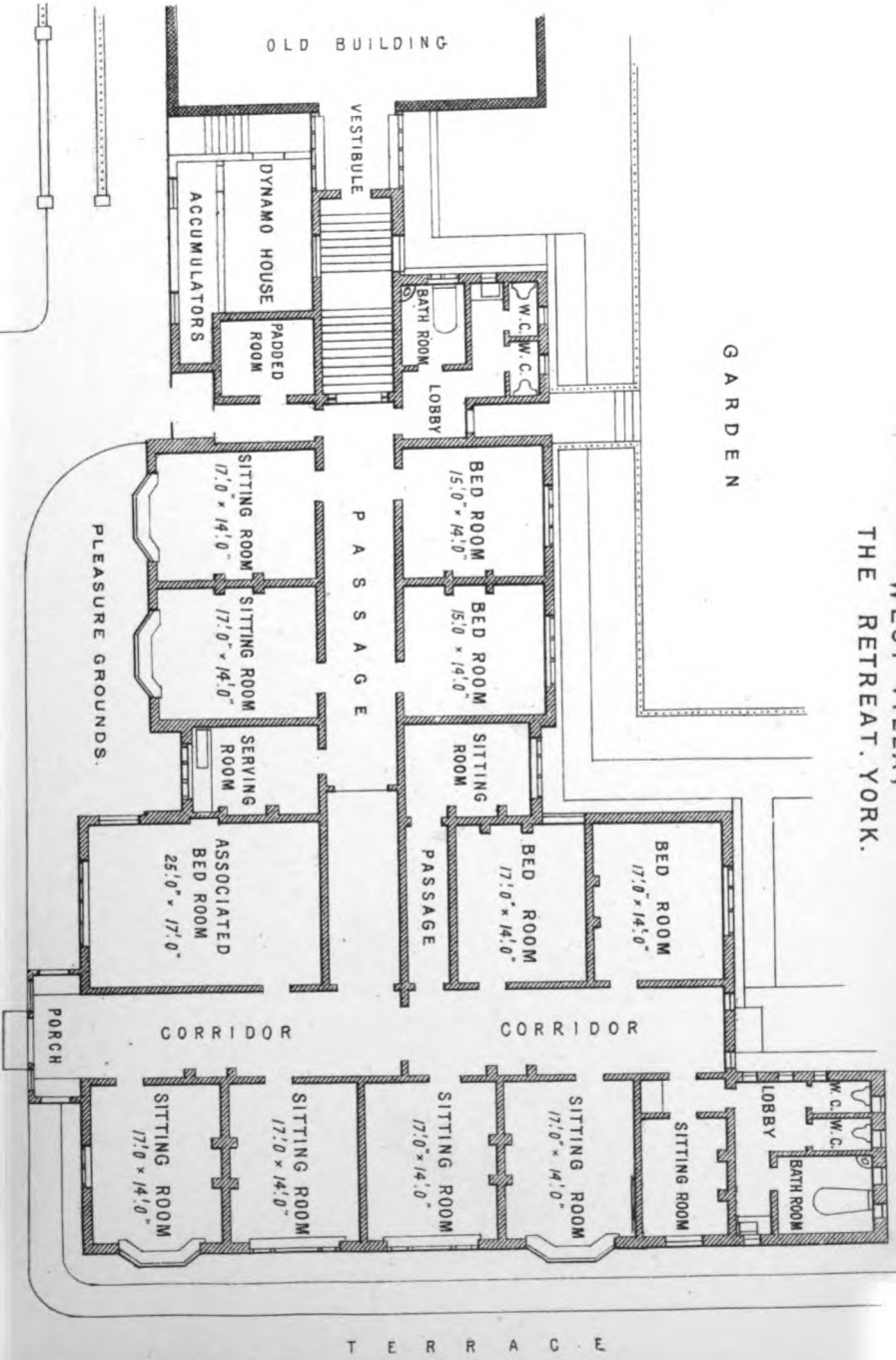
This plan of having a variety of small hospitals in different parts of the estate is manifestly a most advantageous one, for whilst the power and resources of the parent hospital are

* "Le Sommeil et les Rêves," "Revue Philosophique," Octobre, 1879, p. 356.



WEST VILLA, THE RETREAT, YORK.

WEST VILLA,
THE RETREAT, YORK.



always available, separation and isolation of recent and acute and curable cases from the inevitable annoyances of a large asylum are most desirable.

I propose this afternoon to describe to you the villa hospital which has just been completed, and which has this month been occupied by patients.

It has been designed by Mr. Burgess, of London, and carried out under the supervision of Mr. Taylor, of York, and provides accommodation for *twelve to fifteen persons*. It is constructed in the English half-timbered domestic style, the lower portion being of Leicester bricks and the upper portion dashed plaster work, the gables being half-timbered, and the whole of the woodwork both within and without of oak; the windows are filled with half-inch plate glass. The roof is covered with Staffordshire red tile work, the campanile tower being used as a central extracting shaft. The building is one-storey in height, and has been kept low in order to interfere as little as possible with the light and air to the main building. Owing, however, to the rapid fall of the ground the front of the building appears tolerably elevated, and a commodious terrace has been formed by the earth obtained from the necessary excavations.

As will be seen by the accompanying sketch, the new west villa has been so planned both as to locality and arrangement that *one-third, two-thirds, or the whole of the building may be used in connection with either the male or female side of the Retreat*, involving necessarily provision of duplicate accommodation of bath-rooms, lavatories, etc.

A separate sitting-room and bedroom is provided for six patients, there being one associated sitting-room and one associated bedroom. The sitting-rooms—each 17ft. by 14ft.—are situated towards the south and west, and command pleasant views of the country around. The single bedrooms face into the gardens. The connection with the Retreat building is by a passage, 7ft. wide, enclosing two flights of easy steps. The building is warmed by air supplied fresh from the outside, and driven by engine and fan through chambers heated by hot-water pipes, and admitted into the rooms and corridors through the gratings in the plinths, each under special control. The vitiated air is removed from the rooms and corridors by central openings in the ceilings, communicating by zinc tubes with the extraction shaft, which is heated with steam pipes. Open fires are also provided in each room and in the corridors.

The electric light has been installed throughout the new villa, and answers most satisfactorily. The installation comprises all the modern improvements in incandescent electric lighting, combined with some special adaptations desirable in a hospital for the treatment of the insane. The plant consists of a steam engine, dynamo, storage-battery, and 60 incandescent lamps of 16-candle power each. The steam engine is of the horizontal type of six-horse power, and has been placed entirely separate from the villa, so as to prevent the possibility of any inconvenience from vibration. The dynamo, placed in the engine-room, has the power or output calculated at 6,000 watts (one lamp being equal to 60 watts), which is sufficient to charge the storage-battery up to its full capacity, and supply current for driving a ventilating fan by an electric motor; also to run 60 or more lamps of 16-candle power direct. The accumulator or storage-battery is made up of a series of cells, which, when fully charged, will serve to run 60 lamps at their full power for ten hours. Each cell has been furnished with a delicate recording instrument for showing the state of the battery at all times, and there is a special arrangement under the control of the switch by which the voltage or pressure of the series of cells can be regulated within certain limits at pleasure. The accumulators have been divided into two equal parts, and may be considered as two separate batteries, each capable of running 30 lamps for ten hours. These are so contrived that one battery may be used singly or both conjointly, thus allowing repairs to be done to one set of cells, leaving the other available for running half the number of lights.

The rooms and corridors have all been lighted by lamps of 16-candle power, in two sections, one serving for the lights in the rooms, which, including some single lamps, have been arranged in groups of two, three, and four pendants fixed near the ceiling, and enclosed in a circular plate-glass case, having a solid base of convex form, and silvered over to reflect the light to all parts of the room. The other section serves to light the corridors and lobbies; this is done by single lamps suspended from the ceiling with flexible cords. The whole lighting is controlled from a switch-board so constructed that the light in two rooms and the corridors may be regulated from full-lighting power by three gradations down to a dim, subdued light. The switch-board is placed in a position only accessible to the officials, and there is a special switch for turning on or off simultaneously all the lights in the rooms,

retaining a dim degree of light in the corridors only. In addition, there is a switch placed near the door of each room in the corridors for controlling the light within each room by a special key.

The total cost of the building, with its heating and electric lighting, is £4,000.

CLINICAL NOTES AND CASES.

*Some Unusual Cases of General Paralysis.** By BONVILLE BRADLEY FOX, M.A., M.D., Brislington House, Bristol.

The first case was a typical and well-marked one of remission, occurring in the subject of a maniacal attack of undoubted early general paralysis.

CASE I.—B., a male, married, æt. 35, admitted December 29th, after an illness stated to be of only 14 days' duration.

Previous history.—Had entered the army 13 years ago (joining his regiment in India). Before this he had contracted syphilis, had been treated, and supposedly cured. While in India he had several attacks of fever, which in four years time caused his return to England. On the voyage home unmistakable symptoms of secondary syphilis appeared, from which he recovered, and subsequently married. He gave up the army, and went into a family business as accountant and cashier, being utterly without the education and training necessary for such a post, and though in general matters clever, in the details of this particular calling he quite broke down, and lately complained that the mental strain was intolerable, while his figures were found to be in confusion.

On admission he was maniacal, impulsive, and violent, a magnificently made man, well able to use his excellent muscles, and knocking the attendants over like so many ninepins. He was very loquacious, incoherent, and exalted, asserted that he was the second son of God, possessed of the world and of unbounded wealth; was benevolent, and offered gifts freely of from £10,000 to £20,000. He suffered much from insomnia. Physical signs of general paralysis practically absent. The pupils were normal. No fibrillary tremor of lingual or facial muscles is recorded. There was no elevation of temperature. The organs generally were healthy. The first development of the disease was highly suggestive. He had been most unusually voluble at a dinner party at his own house, and when his wife remonstrated with him, he burst into tears.

* Read before the Medico-Psychological Association, May 1st, 1891.

During the first three weeks of residence here no great change occurred, save that in about a fortnight he began to wet his bed at night. Scruple doses of bromide seemed to assuage the mania temporarily, but it frequently flared out again, and he committed most reckless, unprovoked, and violent assaults, flinging knives at those near him, and punishing the attendants most terribly when they interfered. The exaltation advanced. At this time he recognized and deplored his loss of memory. Calabar bean in gr. $\frac{1}{2}$ doses was tried, but for too short a time to be a fair test. About a month from admission he was placed upon small doses of iodide of potassium (gr. iii.), in conjunction with the ammonio-citrate of iron, to which some hydrobromic acid was subsequently added, and a vast improvement took place, so that on February 27th, just two months from admission, he was much more rational and tranquil. This treatment was continued until April 1st, ten weeks from its commencement, when it was dropped, as he seemed convalescent. In the course of that month he was allowed to visit his friends, evidently prematurely, as he returned in seven days, complaining of pains in his head, and of insomnia. These were relieved by the quiet of the asylum and hydrobromic acid. Very shortly we sent him for six weeks to our seaside house. At the end of that period he returned, to all appearance recovered, and was discharged just about six months from the first development of his malady.

In about ten weeks he wrote us a letter interesting for two reasons. In the first place it was absolutely free from the various peculiarities of style to which we are accustomed in general paralysis. But while the manner is excellent, the matter is ominous, for he complains of a fresh symptom in that he finds his limbs unsteady and untrustworthy, so that while he can play tennis, the fact of knocking one foot against the other was sufficient to throw him down. At this time his mental faculties appeared unclouded, though they were not exposed to the test of any strain or work. He mixed in society and held his own. The details of his subsequent history I cannot give with exactitude, as he left our part of the world. But I know that before long the disease returned, and he died of well-marked and confirmed general paralysis.

This case is an example of the fact that it is in the maniacal rather than the melancholic or weak-minded varieties of general paralysis that remission occurs.

Arising from it is a question that I would put to the meeting. Do any of you know of any undoubted cases of general paralysis in which perfect and permanent recovery has taken place? Not a few are reported, but investigation suggests either that the original diagnosis was open to doubt, or that recovery was only temporary, or else incomplete, certain

physical defects remaining, such as labial tremor and thickness of articulation, or, more rarely, some childishness of mind. Even in Dr. Macleod's cases I should hesitate to pronounce the results perfect cures, and though Dr. Savage* has recorded a case in which a man actually resumed hard work for a year, he ultimately relapsed and died. That the physical rather than the mental defects should remain seems to be in accordance with the fact that *ab initio* physical symptoms of general paralysis may exist for long, even for years, without the appearance of the characteristic mental symptoms, while the converse is hardly ever true, though ordinary mania may be a precursor of general paralysis.

The possibility of such considerable remission and disappearance of nearly all the typical features of a disease should, I submit, encourage us in our search after some means to establish the improvement, to convert the temporary convalescence into the permanent recovery. Where a disease will, so to speak, do so much for itself, it does seem a reflection on medical skill that it will only enable us to tell the patient's friends that his recovery is absolutely delusive, and that the apparently healthy man must shortly die, probably a lingering and loathsome death by inches.

What are the pathological changes that occur in such a case? Dr. Clouston† believes that prior to the development of any marked mental symptoms recognizable convolitional lesions have occurred, developed in some intensity, and involving a certain number of convolutions. Further, that if physical motory symptoms are absent, it is because the area of the disease is limited to the anterior cortex, and, at the time, spares the region of the motor centres. In nature these lesions are "active congestion, and incipient organic change." During remission the former passes away, the latter remains, quiescent temporarily, but biding its time to awake into renewed activity, and to become a focus of fresh mischief. Dr. Bevan Lewis‡ describes the early vascular changes more elaborately. He finds turgescence of the vessels of the pia, and engorgement of the cortical arterioles. Proliferation of nuclei in the lymph sheath surrounding the vessels is marked. Diapedesis of the fluid contents of the vessels into the lymph channels and neighbouring tissue occurs, while the former are crowded with escaped leucocytes. The resulting damage to

* "Insanity and Allied Neuroses," p. 304.

† "Clinical Lectures on Mental Diseases," p. 371.

‡ "A Text Book of Mental Diseases," p. 494.

the vessel partakes of both a vital and a mechanical nature ; vital in so far that the tunica muscularis is paralyzed, the elasticity of the vessel impaired, and blood stasis, aneurismal dilatation, and ultimate rupture are favoured ; mechanical, in so far that the uniform support of the adventitia is impaired, while the nuclear accumulations encroach on and compress the lumen of the vessel. Without following him further it will be admitted that even after the subsidence of active inflammation, the vessels originally affected are unlikely to resume their former healthy condition, and probably remain as weak spots in the brain.

The next case is interesting solely from an ætiological point of view.

CASE II.—K., æt. 49, admitted January 12th, a male, married for 18½ years, 11 children, the wife miscarried with twins last October. Family and personal histories clear. Formerly a cool, collected, precise, sober, and particularly neat man, who had always enjoyed very good bodily health.

On December 27th he was thrown out of a trap on to his head. His wife asserts that he was in perfect mental health up to the time of the accident, and that some unusual irritability which had been noticed was simply due to a heavy cold, which his previous excellent health unsuited him to bear patiently. Whether this was or was not the case, it is certain that a day or two after the accident various symptoms suggestive of general paralysis appeared, so that if the disease had not an exclusively traumatic origin, its development and first manifestation at least were determined by the accident. The first day after the fall he complained of pain in his head, and of a heavy sensation there when he stooped. After the first day he made no complaints, but said he was never better in his life. Irritability greatly increased. He became contradictory and arbitrary, threatened to assault his wife, and from being particularly clean and tidy, he degenerated into a sloven. Appetite was capricious ; when he ate, he did so ravenously. Exaltation appeared in a day or two, the earliest delusion being that he had come into money and bought a house. Sleep fitful, often absent, or else he started in his sleep.

On admission, 16 days after the accident, physical and mental symptoms of general paralysis were easily recognizable. Although the pupils were equal and fairly active, the face was pale, sallow, and suggestively cachectic ; the muscles of expression and those of the lips had lost tone ; the muscular grooves were partially obliterated, and there was tremor, especially in the tongue. Articulation was muffled, and words were clipped or slurred. The patella-tendon reflex on both sides was exaggerated. There was a scar on the scalp 2½ in. long, on the vertex, from a point

slightly behind and to the left of the centre of sagittal suture towards temporal region. It was not yet healed, and was surrounded by some little œdema. Pulse 90, and full. Mentally, for the first 24 hours he showed no delusions, but was untidy and dirty, and though inveigled here by his family on very false pretences, he expressed no surprise or resentment, but was most jolly, garrulous, and the personification of restlessness. He misstated his age as 47 instead of 49. It is needless to describe his case in detail for the month he was under our care. Exalted delusions of the wildest and most typical description appeared in a day or two, and either became amplified, or replaced by still more absurd ones every 24 hours. He grew increasingly dirty, and passed water anywhere while awake, and always wetted his bed during sleep. His every action was wild and incoherent, and his conduct and conversation most salacious. He decked himself out with leaves. Once there was an outbreak of frantic unreasoning violence. Sleep greatly improved. There never was any abnormality of pupils during this month, but tremor and blankness of expression increased. At the end of this period he was transferred to another asylum, and after residing there for about two years he became sufficiently well to return home, where, however, he died in the usual manner and time.

Such rapid appearance of pathognomonic paralytic symptoms, not only physical, but also mental—so many, indeed, as to make diagnosis assured—directly after the injury is very unusual and remarkable. Although Griesinger* mentions that in the case of most severe injury to the head, insanity results at once on recovery, in the vast majority of recorded instances years have elapsed before its manifestation. This man's injury, moreover, could not be described as severe, and was limited to a scalp wound, and some concussion. It may be objected that the fall was merely the exciting cause, that the irritability noticed a day or two previously was not due to a cold, but to early general paralysis, which may have been developing for some time, and that the congestion caused by the blow merely acted as a spark to a train of gunpowder already laid. I would suggest that the drawback to such explanation is its hypothetical character. The man was able to discharge his duties up to the day of the accident; he had shown no signs which raised suspicion, and as far as other predisposing causes of general paralysis are concerned, with the exception of possible uxoriousness, a factor of very varying and doubtful efficiency in different subjects, all were conspicuous by their absence—no worry, overwork, anxiety, alcohol, or syphilis.

* "Mental Pathology and Therapeutics," New Sydenham Society, p. 176.

The points of interest in the third case are its history and inception, its termination as far as we were concerned, and its association with a physical malady.

CASE III.—C., æt. 37, male, married for six years, with one child, five years old. Family history not clear; there had been phthisis on both sides, and though no near relatives had been insane, his father had died of diabetes, and his brothers were intemperate. Previous history poor; he had been one of those medical students who drift on for years without obtaining a qualification, and had led a fast life. Is suspected of syphilis by a near male relative, but, whilst admitting much, he himself denies this. Has been sober. Six years ago he received a bad blow on his head and neck, and ever since has been a changed man. This was immediately before his marriage, and whereas formerly he had been the reverse of continent, he speedily experienced a great diminution in sexual vigour, as well as in desire, and found matrimonial claims hard to satisfy. His marriage was not a success in any way, and added to his anxieties by involving him in pecuniary worry, to which he was unaccustomed. He felt depressed, and suffered much from lightning pains in his limbs. Between six and eight weeks before admission he was seized with agonizing pain down his back. It was rubbed with opium and belladonna, and the pain passed off as rapidly as it came on. A week later he had a similar attack, this time affecting his head. A year ago mental alteration was noticed. He became capricious, irritable, and unlike himself; more recently he had been depressed, hysterical, and high-spirited by turns, and occasionally violent. Exaltation appeared a month before admission.

On admission, on June 18th, he was anæmic and cachectic-looking. Pupils contracted and sluggish, the left very slightly the larger. Patella tendon reflex absent on both sides. With feet together, and eyes shut, a little disposition to totter. He complained of lightning pains down his legs, which he said had lasted off and on since his accident six years ago, and of a sense of abdominal constriction, a "girdle pain," which had only recently developed. He stated that he was passing water with a much less forcible stream, and that there was dulness of sensation in both ulnar regions, but no anæsthesia was detected on testing. His complaints, too, as to defective eyesight seemed unfounded. There was no heat, pain, or tenderness over scalp or spine. No tremor of any muscle. Articulation distinct. Skin greasy. Temperature normal. Urine neutral. Sleep and appetite good.

Mentally he was exalted and jolly. Said it was a great shame to have sent him here, but still he was glad to have come on account of the great good he should do the patients almost involuntarily by the mesmeric or magnetic power which he felt permeating his whole system, and which he exercised *nolens volens*.

Asserted he had made his fortune in a day, was going to stand for Parliament, and would enrich us all. His handwriting was shocking, the most impossible misspellings were made, and whole words were dropped out of sentences, so that they became quite unintelligible. His memory was so bad that he misstated his age by ten years. He was clean, but stuck a feather in his hat, and fraternized with the most demented patients.

The case seemed to be one of general paralysis supervening upon *tabes dorsalis*, the symptoms of which latter had existed for some time previously. As such patients often are, he was fanciful and hysterical, but only those symptoms have been set down which were confirmed by tests, or by the report of his relatives. For the first twenty-four hours he only spoke in a whisper, but the application of the interrupted current to the outside of the larynx at once restored his full voice, to his great delight.

He was placed on arsenic and iron, and went on well enough for six months. He complained but little of tabetic symptoms, and was free from the characteristic pains. His general health on the whole improved, but though he gained weight he lost physical power. The mental symptoms of general paralysis were firmly established—all sorts of grandiose delusions, and much emotional instability. At the end of eight months' residence he complained greatly of weakness, walked feebly, and though he tried to join in the dances by straddling his legs, and so increasing his base, he often tottered, and occasionally tumbled down. He was ordered bromide of potassium and quinine, and seemed to improve under this, and lost no more ground until June, just twelve months from admission.

He then had two slight convulsive seizures, chiefly affecting the right side. They were followed by excitement, which was subdued for a time by bromide, but in a fortnight's time such frantic, destructive mania occurred, that he had to be placed in the padded room. Physical degeneration set in. The catheter was frequently needed, and the urine became albuminous. Cellulitis appeared in both feet, and spread both in superficial extent and in depth. Neither local nor general treatment made any impression. In a few days' time not only were the muscles of his legs almost in ribbons, but every part of his body in the slightest degree exposed to pressure assumed an inflammatory tint, which deepened rapidly into a slough or bag of pus. The mania had by this time burnt itself out, but had left a terrible amount of exhaustion, which no form or quantity of stimulant appeared to affect. His physical condition, indeed, almost hourly degenerated, and neither had we, the consultant we called in, nor his family, any doubt but that he had only a day or two to live. As his friends were most anxious he should not die in an asylum, his bed was put in an invalid carriage, and he was driven into Clifton. He left us on July 19th, one mass of mortifying corruption, and from that moment began

to mend, and before very long was walking about again, comparatively well in body, and quiet, if silly in mind.

The chief lesson this *dénoûement* taught me was that in general paralysis one should never prophesy until after the event. It corroborates Dr. Savage's dictum than general paralytics may temporarily recover from almost any symptoms, though at the same time I do not consider this case on all fours with his,* in which a terrible sloughing carbuncle on the neck seemed to act as a revulsant, and to benefit the patient. Our patient improved, not I believe, on account of, but in spite of, his physical symptoms. These, the sequel of epileptiform seizures, most probably marked the transitional period when the disease was passing from the second into the third stage. Change of air, as we know, sometimes works wonders, and did so here, tiding the patient over a crisis that was apparently hopeless, but which, safely passed, landed him in the calm of dementia.

The history of the disease is worth considering. Did the fall six years before lay the foundations independently of both tabes and general paralysis, of which the symptoms of the latter took longer to develop? Is this, in fact, another case of traumatic general paralysis, or was its origin due to quite different causes, to increased mental worry and anxiety, coupled with increased physical calls on a diseased and decaying organism? The latter I believe to be the true view, and this leads to what is really the most important practical question in such cases, viz., the association of tabes dorsalis with general paralysis—in other words, does tabes predispose to general paralysis? Not invariably so, of course. We see ataxic persons develop other forms of insanity from which they may perfectly recover, but my belief is that the association is too frequent to be accidental.

This is such an important matter, if only from the point of view of prognosis, that I trust members will give us the full value of their experience and opinions, and will suffer me to remind them briefly of those held by good authorities. Maudsley† asserts confidently that in some cases the disease begins in the cord, and spreads to the brain, commences as tabes dorsalis, and ends as general paralysis. Savage‡ records cases of general paralysis supervening not only on old tabes, but also in persons who have suffered from other

* *Op. cit.*, p. 323.

† "The Pathology of Mind," p. 436.

‡ *Op. cit.*, pp. 286, 317.

nervous lesions, such as infantile paralysis. He notices that the pathological changes in the cord may be confined to the posterior columns, or to the lateral or antero-lateral, or may extend to all the tissues of the cord equally, so that pathology supports the idea of extension as far, at all events, as the cord is concerned. Mickle* quotes cases and opinions by Foville, Westphal, Falret, and other Continental observers in support of the thesis that "true general paralysis may begin by a propagation from the lesions of true locomotor ataxy." Clouston† goes a step further, and asserts that general paralysis may not only begin in the cord as tabes, but also in the nerves of special sense, or in a peripheral nerve, and while not prepared to admit the development of general paralysis by a simple process of propagation, he suggests that it is quite possible a diseased process of one nature, advancing along the cord, may assume a different nature on reaching the different and higher structures of the brain, just as inflammation, spreading from periosteum to bone, changes its character in some respects. He mentions further a significant fact, viz., that in these so-called tabic cases the adhesion of pia mater to convolutions is over the base of the brain and cerebellum, rather than over the vertex, the usual position in ordinary general paralysis. The latest observer, Bevan Lewis,‡ admits that emphatic testimony is borne clinically to the close alliance if not absolute identity of the morbid processes underlying general paralysis and tabes dorsalis, but denies that general paralysis arises from tabes by an ascending change, by propagation through direct continuity of diseased tissue. He asserts that hitherto no such actual continuity has been demonstrated, and attributes the secondary changes to an angio-neurosis, to vaso-motor agency operative upon nervous tracts in physiological sympathy with their higher centres. But this explanation, though comprehensible enough in those cases in which spinal symptoms have appeared after or with the cerebral, does not, I confess, quite satisfy me in such a case as the present, where for years tabetic symptoms preceded any mental and cerebral ones.

On the whole the balance of evidence seems strongly in favour of some connection between tabes and general paralysis, even if the exact pathological nature of that connection is not precisely clear, and indicates that in some cases tabes may undoubtedly act as a predisposing cause.

* "General Paralysis of the Insane," p. 82.

† *Op. cit.*, pp. 366-7.

‡ *Op. cit.*, pp. 502-4.

The last case is one of general paralysis, with melancholic delusions, in which at first correct diagnosis was obscure.

CASE IV.—W., *æt.* 56, a yeoman in easy circumstances, of good family and personal history. Had been sober, cheerful, and free from all injuries or shocks. A bachelor, who has had no real worries of any sort, and though he has kept a woman at some distance from his home, it is not suggested that in any way she contributed to his insanity. Some few months ago he had two slight seizures, which his doctor thought probably epileptic. Mental change has been noticed for three months. Believed that he was "overlooked," that the evil eye was upon him, and that his vital powers were wasting in consequence. On admission, on December 19, he was very emaciated. *Bruit du diable* was audible on both sides of his neck, but there was no other anæmic symptom, and examination of the organs returned negative results. Pulse 92, but regular and strong. Pupils normal. Skin soft and smooth. No muscular tremor. Articulation clear. No cachexia. Cheeks ruddy.

Mentally melancholia, with delusions, and so great restlessness, it deserved sometimes to be called "agitans." He was hardly ever still, but drifted about the rooms, picking his fingers, pulling at his clothes, rubbing one hand over the other, moaning "Oh! dear! Oh! dear!" in a gradual crescendo that frequently rose to a shout. Sometimes he refused food, sometimes bolted it. When quiet, he was much too much so, sitting stolidly silent with his hands in his lap, heedless of everything. He was in perfect terror from a belief that he had been "overlooked," or bewitched by a certain woman, and though in such a belief he may not be quite singular among natives of Somersetshire, he fancied that she could similarly influence his relatives who were thousands of miles away. He fumbled a good deal in his capacious breeches pockets, and occasionally undressed, careless as to exposure, but there was no evidence of actual masturbation. He fancied quite wrongly that he passed his fæces in his clothing, and asserted that castration would relieve all his troubles. He retained his water all day, and said he could not pass it, but when taken to the urinal, he passed it excellently. Whether hallucinations were present was uncertain. He once said that he saw a tame magpie eating the last portions of his father's body. However greatly agitated, he was never violent. He could walk excellently when he chose. His sleep was very bad.

This condition continued for a month, and I submit that so far there was no certainty at all of general paralysis, although one might have considerable suspicions. Neither morphia nor quinine, with paraldehyde as hypnotic, did any good, and a month from admission he for the first time wetted his bed. During that period he became more and more frantic with terror. For the

next two months he was on the whole calmer, though at times quite delirious with fear and apprehension. On March 5th, while out walking, he suddenly bolted, and ran for nearly two miles before he could be stopped. He could give no reason for this action, but between 4 and 7 p.m. had 15 epileptoid seizures, most of which were slight, and confined to mere muscular twitchings, but the two or three latest fully developed, and accompanied by the usual convulsions. He could swallow, and chloral, bromide, and belladonna were given freely until 3 a.m. the next morning, when the fits stopped, and the medicine was diminished. For the next week his condition was bad. No recurrence of fits, but there was diarrhœa—all evacuations being passed under him—and tympanites. The catheter was occasionally necessary. His pulse was 108, intermitting every 20 beats, and the temperature was elevated constantly between two and three degrees. He was utterly lost, and so helpless that he could not even sit up, much less stand, though a bedsore threatened over the sacrum. By March 25th he was able to be up and dressed, was conscious, composed, and took plenty of food. Under digitalis and quinine pulse and temperature had returned to the normal. He rarely spoke, but the mental complexion was melancholic, though he did not mention his delusions. Although he ate well, and took quinine and *Ol. Morrhuæ*, he had greatly fallen away in flesh and strength, though he could walk about. A bedsore had formed rapidly over the sacrum, as large as the palm of a hand, and although the granulations at the peripheral part were vigorous, there was a terribly deep slough in the centre. Moreover, a second large, if superficial, bedsore was appearing behind the right trochanter. By the end of the month there could no longer be any doubt that he was a general paralytic. He was dull, confused, and vacant, passing evacuations into bedding and clothing; taking most freely all sorts of food, stimulants, and tonics, but rapidly degenerating; very tremulous generally; his tongue, one mass of tremor, was protruded on his lower lip from a mouth that was opened with a jerk. His pupils were unequal, the left being the larger; his skin greasy; his urine phosphatic. Such a combination of symptoms, assisted by a knowledge of the course of the disease, and of his former "visceral" delusions, made diagnosis easy.

Matters went on for another week. Although supplied with every nutritious article of food imaginable he rapidly emaciated, and in four days lost 2lbs. No medication had any effect on his general health. Yet with all this the bedsores pursued the paradoxical course not infrequently seen, and while a fortnight ago they rapidly developed without any sufficient local cause, they were now steadily improving. Tremor increased. There was a slight trace of his former melancholic delusion.

On April 6th, nearly four months from admission, and about seven from the commencement of any mental change, epileptiform

fits of a violent nature recurred—the *status* was well marked, 12 occurring between 9.30 a.m. and 3 p.m. Considerable doses of bromide and chloral stopped them, but his strength was spent, and though he freely swallowed brandy, ether, and ammonia, there was never any reaction, and he died, collapsed, two hours after the last fit.

A previous attack of much slighter convulsions had shattered his strength and physical powers, and there was little left to resist such an aggravated recurrence. A post-mortem was refused.

As has been suggested in the notes, the diagnosis was the chief point of interest, and I fail to see how within the first two months of residence any certainty could have been arrived at that the case was not melancholia agitata pure and simple. Whether, if life had lasted longer, the case would have proved an instance of that folie circulaire in general paralysis, that alternation between the gay and dejected states described by recent writers, can only be a matter of surmise. It may, however, be pointed out that, while Baillarger has noticed that in general paralysis there is a special hypochondriacal delirium, with an enhanced tendency to early-occurring gangrene, Mickle* has not found such tendency in cases in which the hypochondria was temporary or intercurrent. Our patient was an example in point. His ideas, as long as they existed at all, were certainly hypochondriacal or melancholic—the distinction I believe to be merely one of degree, and of little practical importance—and in him gangrene was a prominent and early symptom. Associated with it was most rapid wasting, concurrent with excellent appetite, and careful dietary. “Visceral delusions” were conspicuous—his vital powers were wasting, his lungs and liver had been extracted, and he had ideas of fæcal defilement, etc. In my experience of these cases some such delusions sooner or later appear. Voisin has described three varieties of such delusions in the melancholic general paralytic—(i.) Ideas of obstruction of organs; (ii.) Denial of existence; (iii.) Micromania, idea of reduction in size.

Terror, too, is a frequent and prominent symptom, referred by Maudsley,† though not in connection with general paralysis, to disorders of organic sensibilities. To these the sympathetic system ministers; they are essential conditions to the physiological unity of the organism, and once affected, the patient must indeed feel as if the very foundations of his being were giving way, and be horror-stricken accordingly.

* *Op. cit.*, p. 24.

† *Op. cit.*, p. 369.

What, it may be asked, are the circumstances that determine the mental complexion in the cases of melancholic general paralysis, that produce such a contrast to the common exalted type? The answers are most various:—

Sex, says Dr. Wm. Wood,* the female predisposing to melancholia.

Original temperament, says Dr. Maudsley,† on an extension of the principle “in vino veritas;” but his theory of disorder of the sympathetic might surely well be applied.

Dr. Savage,‡ on the other hand, has not found the characteristic pathological changes in the sympathetic, described by two French writers as occurring in the cervical ganglia.

Dr. Clouston § believes that in all such cases there is some organic visceral disease, generally phthisis or pneumonia, which transmits painful or depressing sensations to the cerebrum.

Other writers have referred such delusions to intestinal diseases.

Dr. Bevan Lewis || describes such ideas as frequently associated with tabetic general paralysis.

The decision of the question I must leave to the meeting. For myself, in the absence of a P.M., I do not like to assert quite positively that there was no disease of the viscera in this case, but will only say that, though I searched diligently and often for it, I failed to find it.

Opinions are divided too as regards the prognosis in such cases, but the weight of evidence goes to prove that our patient was an example of a general rule that general paralysis of the melancholic type runs a swifter course than the maniacal or demented varieties.

My paper has extended to such dimensions that other interesting questions suggested by these cases must be omitted, such, *e.g.*, as the relationship, (if any,) and influence of syphilis on general paralysis, the hereditary kinships of general paralysis, the factors that influence prognosis in ordinary cases, etc., but I should like very shortly to give our experience of treatment. Such expedients as counter-irritation, revulsants, and bleeding have not been tried. In active mania opiates have somewhat failed, and I would rather rely on free purgation, prolonged warm baths, and largish doses of digitalis. In the ordinary run of cases, without active symptoms calling for individual

* “Brit. and Foreign Med.-Chir. Review,” July, 1860, p. 198.

† *Op. cit.*, p. 441.

‡ *Op. cit.*, p. 350.

§ *Op. cit.*, p. 375.

|| *Op. cit.*, p. 513 and 518.

treatment, I have utterly failed to find anything like a specific, and cannot be sure that much benefit has accrued from physostigma. Of veratrum I cannot speak. More trustworthy appear to be tonics, such as iron in the form of steel or Blaud's pill, and arsenic and quinine. In epileptiform seizures, especially in anything approaching the *status*, we rely on bromide and chloral given in combination—by the mouth if the patient can swallow, if not, by the rectum; and they are persevered with until the condition is relieved. While fully aware of their depressing influence, and of the increased inco-ordination ascribed to their use, these dangers are surely not comparable to those arising from prolongation of the *status epilepticus*, and I know of no remedy their equal in controlling this. Of course their effect must be watched, the patient frequently visited, and digitalis and diffusible stimulants freely given on the first indication. Cases in which syphilis has preceded the disease—not to speak more definitely—have been treated by courses of mercury and iodide, and I am bound to confess without much benefit.

In the later stages of the disease we have found patients most susceptible, not only of any cold, but of any considerable heat, and on a hot summer day they do better in a cool, shady room, than out of doors, until towards evening.

In conclusion, I would summarize the foregoing thus:—

Why despair of curing early general paralysis? Cases of considerable periods of remission, and of the prolongation of the disease to 20 and 30 years, though exceptional, should encourage us.

Symptoms of general paralysis may follow immediately on a blow, suggesting cause and effect.

The most desperate physical condition need not necessarily prove fatal.

Tabes dorsalis predisposes to general paralysis.

Some cases of early general paralysis, with melancholia, may be impossible to recognize. Their tendency is to gangrene, and to a more rapid course than when the disease is associated with other mental symptoms.

It is uncertain what conditions predispose to or determine the melancholic type.

What is the best treatment of general paralysis therapeutically?

A Case of Post-Eclamptic Mania. By E. H. ALEXANDER, M.B., Resident Surgeon Edinburgh Royal Maternity Hospital; late Extra-Assistant Physician, Royal Edinburgh Asylum.

The following case is interesting as illustrating a condition of acute mania after eclamptic seizures, quite analogous to the maniacal attacks which one sometimes sees during the post-paroxysmal period of epileptic fits. Such cases naturally come under the notice of the obstetrician rather than the alienist, hence special stress is not laid on the mental aspect of the disease.

Mrs. W—, æt. 17, a primipara, was admitted in a comatose state to Edinburgh Royal Maternity Hospital, under the care of Dr. Berry Hart, on the morning of the 20th February, at half-past ten. From a midwife who had attended her during her confinement the following facts were obtained:—

The patient for the last three months of pregnancy had complained of frequent headaches, pain in the loins, vomiting, swelling of the hands and feet, and puffiness of the face in the morning.

The labour was an easy one. Since the birth of the child, which occurred at 7 a.m. the same morning, the patient had had four convulsions, after each of which she had been "very hysterical."

On her admission the urine was drawn off. It was found to be highly albuminous, to contain numerous tube-casts, and a few blood cells.

Dr. Hart bled her, and advised active purgation, a vapour bath, cupping over the kidneys, chloral per rectum, and chloroform during the fits. As the skin did not act freely, pilocarpin was administered hypodermically.

She had in all eight fits after her admission, the last being at 9.30 p.m. The fits were of the usual epileptiform character, and not ushered in by any cry. The tonic spasm, which was more marked on the right side, was accompanied by conjugate deviation of the eyes and turning of the body to the right. The pupils were contracted, and the conjunctival reflex abolished. The tonic spasm gave way to clonic spasm, with stertorous breathing and foaming at the mouth. The pupils were now dilated, reacted to light, and there was slow nystagmus. The fits lasted about a minute or a minute and a half, and were not followed by any paralysis.

The knee-jerk was absent when the patient was admitted, and did not return until the following day.

The post-eclamptic condition was first one of deep coma, gradually passing off into a more or less drowsy state, with marked confusion, the patient being unable to tell correctly her name, age, where she lived, or where she was. This stuporose condition was replaced in its turn by one of furious mania. The patient became irritable, restless, and excited; now noisy, shouting and swearing, now struggling to sit up in bed and throw off the clothes; or again lapsing into an emotional state, with sobs and tears, incoherent mutterings, and slight erotic manifestations. She had well-marked delusions of personal identity, mistaking the bystanders, both male and female, for her husband.

This maniacal condition, after lasting for an hour or an hour and a half, was succeeded by a period of quiescence—the prodromal symptom of another convulsion.

Her temperature throughout never sank below 100° F., and her pulse averaged 140 per minute. By seven o'clock next morning the excitement had calmed down, and the patient for the first time spoke rationally, and recognized those around her. She then told us that she remembered absolutely nothing from five o'clock on the previous morning. For several days after this she was drowsy and stupid. The temperature remained high for a fortnight, sometimes running up to 102° or 103° F.; this, however, was ascribed to septic infection, probably incurred during her labour outside.

She was discharged on March 18th, having made an excellent recovery, there being neither casts nor albumen in her urine.

Remarks.—The primary cause of the eclampsia was in all probability a nephritis of pregnancy, leading to the retention in the blood of poisonous products, the nature of which has, up to the present time, not been determined. The condition remaining untreated, these bodies by their action on the nerve centres led to epileptiform convulsions. Further, we have to note that the patient was, for her age, decidedly childish and emotional, and that she had a distinct heredity towards the neuroses, in that her father is a chronic drunkard, and her mother is very hysterical. The maniacal outbursts might then be looked upon as having for their predisposing cause congenital mental instability, and for their exciting, the epileptiform fits.

The Pathology of Sudden Death in Mania. By JAMES R. WHITWELL, M.B., Assistant Medical Officer, West Riding Asylum, Menston.

That in the continued and severe excitement which occurs in some cases of mania, either of parietic origin or otherwise, a sudden condition of collapse may occur which may or may not terminate the case is well known; the exact cause of this condition, however, in each individual case, is frequently a matter of the greatest difficulty to decide. In many cases, however, putting aside coarse hæmorrhages, one may reasonably expect to find some pulmonary or cardiac condition of sufficient magnitude and gravity to permit of its selection as the actual cause of death.

Of the cardiac conditions, either organic valvular disease or some muscular incompetence, associated, perhaps, with a fatty change in the organ, is the most common; of the pulmonary conditions, probably congestion and œdema of the lungs and pneumonia are the most frequent, and it is probable that under one or other of these headings many of the cases of so-called "exhaustion from mania" should be placed. It is especially to the pulmonary conditions found in these cases that attention is directed in this paper.

Pulmonary œdema may occur in these cases as a result of at least two conditions, firstly, as a sequential pulmonary lesion to a failure of the heart, a frequent cause of pulmonary œdema apart from mental cases, and secondly, it may occur as a result of pulmonary embolism not necessarily associated with any abnormality of the heart.

Pneumonia may be associated with acute mania in various ways:—1st, it may be that the pneumonia is a causative or concomitant condition which produces death, either by the extensive area involved or by cardiac or other complications. 2nd, it may be that the pneumonia has occurred as an intercurrent disease, in the same manner that it may attack a sane and otherwise healthy individual. There seems, however, some reason to believe that the administration of chloral in these cases of acute mania not only frequently tends to assist in the production of the pneumonia on account of its effect on bodily heat, but further, by its cardiac action, may assist in interfering with an otherwise not specially unfavourable prognosis. 3rd, it may be that the pneumonia has occurred as an inflammatory

condition of the lung, superadded to the condition of fat embolism.

The following case demonstrates the condition of acute pulmonary oedema occurring in a case of long-continued mania, associated with the presence of fat emboli in the lung:—

E. L., male, æt. 34, first attack; admitted December 2nd, 1889. A man of fair physique, stature, musculature, and nutrition; face much scarred with small-pox of old date. Right eye shows remains of old corneitis and has a marked anterior staphyloma. Bodily systems, generally speaking, practically normal, and no obvious sign of syphilis to be noted. Left pupil (the only available) reacts fairly well to diffuse light and accommodative efforts. Knee jerk and superficial reflexes present to normal extent and equal. Mentally, patient is continuously noisy and restless, talking, gesticulating, singing and shouting, and can scarcely be kept quiet for a single moment; he frequently sings songs of current interest, and passes rapidly from one to the other, and a note or word given to him is readily fitted with some song in which it may occur prominently. Any word mentioned in his hearing has frequently a more or less accurate and appropriate rhyme adapted to it. All this is done by the patient with his eyes mostly shut, and with his hands and feet wandering about in all directions. He shows little or no tendency to violence, but is particularly mischievous, upsetting everything that is within his reach in the most casual way, not being at all disturbed by the crash which sometimes occurs as a result of his deed. With the exception of a day or two, during which he was fairly lucid and quiet, this condition of mania was steadily kept up for $4\frac{1}{2}$ months, with the physical result that, during the first month, he lost flesh considerably; during the second he began to put on flesh a little and regain a presentable appearance; after this, however, he steadily lost weight until his death, which took place on April 20th, 1890. At two o'clock of this morning, while in the midst of one of his frequent nightly outbursts, he somewhat suddenly became quiet, which drew the attention of the night attendant, who found him lying on his back, with a pale and somewhat dusky complexion, and evidently seriously ill. On arriving I found him unconscious, collapsed, and distinctly cyanotic; pulse 90, of fair tension, and of sufficiently good volume to render the idea of syncope at least doubtful. A sphygmographic tracing, taken at this time, showed a well-marked predicrotic wave, and also some irregularity in force and rhythm, his usual pulse being one of very low tension. Respiration regular, laboured, and but slightly increased in frequency; numerous moist crepitations were heard in the chest, especially at the left base. His condition gradually became worse, and he died on the evening of the same

day. At the necropsy no point of special interest was observed, except in connection with the lungs: the right weighed 545 and the left 1,160 grammes; the latter was intensely œdematous and congested from apex to base, and small pieces, taken at random, showed, on microscopic examination after treatment with osmic acid, numerous fat emboli, scattered throughout the sections, both in the capillary vessels and in the smaller branches of the pulmonary artery; portions only from the left lung examined. The heart showed some patches of fatty degeneration in its muscular substance; the liver also was fattily degenerated. Although the most careful examination was made, both during life and after death, no sign of bruise or injury, either to soft parts or bone, was detected, with the exception of a faint, pale, yellow bruise of very old date over the right eye and temple, covering an area of about $1\frac{1}{4}$ inch in diameter.

This case is a type of what occurs clinically in a certain percentage of maniacal cases, and is very apt to be regarded as a case of exhaustion from mania or death from fatty degeneration of the heart, and, doubtless, each of these conditions, in many cases, are factors in the fatal result. Still, the pulmonary condition adds a new and unexpected feature to the case, which must be a most prominent element in, if not the absolute and immediate cause of death. Exhaustion from mania is too indefinite a term to be discussed here, and is largely a screen in the absence of more definite knowledge, but in fatty degeneration of the heart producing syncope, one could scarcely find a pulse of such fulness and tension as occurred in this case, and, in addition to this, the dusky pallor and cyanosis all tend to lead one to the diagnosis of fat embolism in the lung as the actual cause of death. It is difficult to see in this case why there should be none of the well-marked embolic infarcts, but only apparently an acute œdema of the lung; many cases, however, both experimental and clinical* (*vide* Bergmann), are on record which have shown a very similar condition on post-mortem examination.

Of the connection of fat embolism with pneumonia the following case is an example:—

J. G., male, æt. 35, second attack; admitted February 7th, 1890. A man of fair physique, stature, musculature, and nutrition, and of dark complexion. Left eye has a large leucoma over the centre of the cornea. Bodily systems practically normal. Right pupil reacts but slightly to diffuse light, but well to accommodative effort. Left knee jerk much brisker than right, the latter being

* Bergmann, "Berliner Klin. Woch.," No. 33, 1873.

about normal. Superficial reflexes practically normal and equal on the two sides. Mentally, patient is apparently much demented, is dull, apathetic, and quite regardless of his position and circumstances, has no cognition of his surroundings, cannot tell his home address, nor is he aware of any dates. With but little mental or bodily variation, patient remained in this state till May, when he became somewhat excited, and pulled a good deal of hair out of his head and beard; this excitement, however, only lasted a short time, and he soon returned to very much his mental condition on admission, and remained so until September of the same year, when he entered upon a state of continuous and acute mania, which lasted till his death in November, and during this time he was continually noisy, restless, and troublesome, singing, shouting, tearing, and jumping about whenever he was not under the influence of sedatives, and he steadily lost flesh throughout the whole period. At about two a.m. on the 8th of November he was noisy and excited, and quite suddenly, in the midst of his excitement, fell backwards, his face became of a dusky cyanotic hue, he had considerable dyspnoea, and his pulse was irregular, but not of very good tension. This condition of collapse and dyspnoea steadily increased until death, which took place about two hours after the commencement of the seizure. At the post-mortem examination the left lung showed oedema of the base and posterior part, but not to any great extent, and considerable emphysema anteriorly. The right lung, throughout its middle and lower tubes, showed a large number of wedge-shaped embolic areas, with their base at the surface of the lung, varying in size from an inch square downwards, and, independently of these more condensed patches, there was considerable oedema of the greater part of the lung. In the upper lobe were also a few infarcts, but the most noticeable feature of this lobe was a large patch of pneumonia in the grey hepatisation stage, which abutted against and merged into some of the embolic areas, and would seem to be an inflammatory condition superadded to a previous attack of embolism, which gave rise to so few symptoms, perhaps owing to the relatively small area involved, as to pass unobserved. Microscopic examination, after treatment with osmic acid of sections taken from portions of the lung in the immediate neighbourhood of the infarcts, showed very numerous fat emboli of various sizes. The changes in the other organs, noted post-mortem, were comparatively unimportant; no special fatty change in any of the organs. Commencing cirrhotic change in both kidneys and considerable hepatic venous congestion. No sign of bruise or injury of any kind observed, either during life or after death, though special search was made with this object in view.

That embolism of a portion of the lung is a not very unfrequent cause of pneumonia has been proved by the

observations of Virchow,* Panum,† and Cohnheim,‡ and, judging from the surrounding circumstances discovered in the lung in the case of J. G., there is every reason to believe a pre-existing embolism was the cause of the pneumonia; if this is so, it would explain in a most satisfactory manner the frequency of pneumonia as an inter-current disease in mania, and would, in addition, add another factor to be considered in connection with the prognosis of inter-current pneumonia in cases of mania. It is noticeable that the infarcts in fat embolism, when present, are mostly near to the surface of the lung, in which case they are readily observable after death. Where, however, they are not to be discovered, fat emboli may be present and produce acute œdema of the lung, and it is possible that, in these latter cases, the emboli are mainly blocking vessels in the body of the lung, which, perhaps, are not terminal in character.

Fat embolism of the lung was first observed in man by H. Müller§ in 1860, and has since been observed in pyæmia,|| diabetes,¶ injury to bones, mania,** and the status epilepticus;†† and, in addition, has been produced experimentally by various methods and persons. Dr. Jolly‡‡ has drawn attention to this condition in mania, detailing a case previously recorded by Dr. Flournoy, and surmised that, as injuries of the bones were absent, the introduction of fatty matter into the circulation was by reabsorption from the self-inflicted bruises, which are apt so frequently to occur in cases of violent mania, and, in evidence that this is possible, quotes a case of Dr. Fitz§§ (cited by Flournoy), in which mechanical injury of subcutaneous adipose tissue had led to reabsorption. Halm,||| however, has not been able to produce fat embolism by mechanical injury of the subcutaneous tissue in dogs, and in the cases detailed in this paper there was certainly no evidence of any recent injury discovered, though diligent search was

* Virchow, "Gesammelte Abhandlungen zur Wiss. Med.," 1862.

† Panum, "Experimentelle Untersuchungen zur Physiologie und Therapie der Embolie," 1864.

‡ Cohnheim, "Untersuchungen über die embolischen Prozesse," 1872.

§ H. Müller, "Würzburger Med. Zeit.," 1860.

|| Wagner, "Archiv für Heilkunde," 1862.

¶ Sanders and Hamilton, "Edin. Med. Journal," July, 1879.

** Flournoy, "Contributions à l'étude de l'embolie graisseuse," 1878.

†† Clouston, "Journ. Ment. Sci.," July, 1879.

‡‡ Jolly, "Archiv für Psychiatrie und Nerven [Krankheiten]," Bd. xi., Ht. 1; "Journ. Mental Sci.," July, 1882.

§§ Fitz, "Boston Med. and Surgic. Journal," May, 1878.

||| Halm, "Beiträge z. Lehre v. d. Fettembolie," 1876.

made with that special object in view. In Dr. Clouston's case also, that of an epileptic who had had a steady series of fits for two days and died comatose, no injury was noted. In this patient there was discovered post-mortem fat embolism of the lungs and pia mater, and, in addition, extensive fatty degeneration of the liver, kidneys, and heart; it was also observed that the cancellated tissue of the bones was very open, and was filled with a grumous fluid. It would appear that our knowledge on this subject is not sufficiently complete to be able to refer with any degree of certainty to the source of the fat in each individual case; there is, however, some evidence to show that, in all probability, fat embolism can occur without any rupture into any pre-existing fat in the body, in which case it is probably due to some obscure change in the blood, producing a condition of lipæmia, perhaps having its origin in the bone marrow, the result of the long-continued and severe mania or convulsions. I may therefore summarize as follows:—

- 1st. A not unfrequent cause of sudden collapse which may or may not result in death in cases of mania is fat embolism of the lung.
- 2nd. That it is to be suggested or diagnosed during life by the presence of the following points:—
 - i. Sudden collapse, with coldness of extremities, etc.
 - ii. Dusky pallor of face, sometimes marked cyanosis.
 - iii. Some dyspnoea: respiration may be shallow, sighing, or laboured.
 - iv. Pulse of fair volume frequently, usually irregular.
 - v. Stethoscopic examination revealing pulmonary œdema or secondary embolic pneumonia.
- 3rd. That it is to be suspected after death by:—
 - i. The observation of intense local œdema of one or both lungs.
 - ii. The occurrence of actual infarcts in the lung.
 - iii. The presence of localized pneumonia, which may or may not be associated with infarcts.
- 4th. That the actual source of the fat is not at present known, but
- 5th. That fat embolism of the lung can occur in these cases without any discoverable injury to either bone or subcutaneous tissue.
- 6th. That it may possibly be due to a change in the blood, brought about by the long-continued maniacal excitement.

*Accumulation of Cocoa-nut Fibre in the Stomach: Death from Intestinal Obstruction.** By R. S. STEWART, M.D., D.P.H.Camb., Senior Assistant Medical Officer of the Glamorgan County Asylum.

I. A. H., aged 12, was admitted into the Glamorgan County Asylum on 6th November, 1888. When seven months old he had convulsions, and these recurred till he was two years of age, and then disappeared. At the age of seven he had one other fit. He is said to have been able to speak when two years old, but not since then. Ultimately he became so troublesome and defective in his habits as to be unmanageable at home, and he was removed to the asylum.

His mental condition was one of idiocy with much restlessness. He was noisy and dirty, and was much given to picking up rubbish and pulling door-mats to pieces.

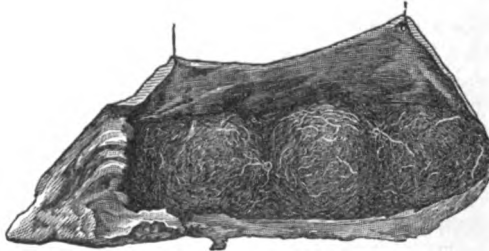
Until the commencement of the fatal illness, which occurred on September 4th, 1890, his bodily condition was uniformly good, and there was no hint whatever of any disturbance of the digestive system. He took food well, and was not at any time troubled with sickness, vomiting, or constipation. On the last mentioned date he became listless and apathetic, lost his appetite and began to be sick. Next day he vomited the little milk he took, and appeared to be in some pain, as he now and then put his hand over his abdomen as if suffering there. On that day there was one natural motion. There was no apparent enlargement of the abdomen, and little tenderness on manipulation, but a hard inelastic tumour could be detected in the epigastrium over the site of the stomach. One dose of 5 grs. of grey powder was administered, but was shortly after rejected, and an enema brought away only a small piece of fæces. The vomiting and complete inaction of the bowels continued, the temperature rose to 100° F., and death occurred on 11th September, seven days from the onset of the illness.

On post-mortem examination made 23 hours after death, the brain was found to be much hypertrophied, its weight being 57ozs., or 11ozs. over the average; the heart was normal, and the lungs and solid organs of the abdomen presented nothing noteworthy beyond slight congestion. A small quantity of brownish serum was present in the pelvic portion of the peritoneal sac, but nowhere was there any fibrinous exudation. About the junction of the lower and middle third of the small intestine an obstructive mass could be felt, and the stomach was occupied by a firm, unyielding mass. The peritoneal lining of the small gut above the seat of obstruction was inflamed. The stomach on removal weighed 25½ozs., and, when emptied, 7ozs. Its contents, weighing 18½ozs., consisted of three separate solid masses, each about the size and shape of the closed fist, and several smaller masses wedged

* Read before the Cardiff Medical Society, March 5th, 1891.

in between the larger. These were composed almost entirely of cocoa-nut fibre with a few strands of dried grass, soaked in a pea-soup like and only slightly stercoraceous fluid. On section of two of the pieces no lamination could be observed; the fibres assumed a dense felted arrangement. The gastric mucous membrane was only slightly congested, and in the neighbourhood of the pylorus, where the muscular coat was much hypertrophied, it was strikingly rugose. The obstruction in the ileum was found to be a mass of similar composition to those described. It assumed a banana-like shape, and the sharp ends of the loose fibres were projected downwards and outwards into the wall of the gut in a manner that seriously prevented its downward passage. The intestine above the obstruction contained slightly feculent fluid, but not in any great amount, and the mucous membrane presented a swollen and inflamed appearance. Below the obstruction the intestine was empty with the exception of a small mass of fæces in the caput cæcum coli. The Peyer's patches, below the obstruction as well as above it, presented distinct alteration from the normal. Above they were much congested, and below they had a swollen and roughened appearance.

The total weight of the fibre masses after drying was only $4\frac{1}{2}$ ozs.



Stomach laid open along the lesser curvature, showing three separate masses of cocoa-nut fibre and the rugose condition of the pyloric mucous membrane.

Collections of indigestible substances are occasionally found in the stomach of cattle, horses, and goats, and here, as a rule, they form round a nucleus and present a greater or less degree of lamination. Youatt, in a book on the diseases of cattle, published in 1834, records instances in which the nucleus took the form of such varied articles as scissors, a handkerchief, an old shoe, the lash and part of the handle of a whip, a waistcoat, a buckskin glove, a shell, and pieces of straw, stone or iron (verily *il ne faut point disputer des goûts*). Sometimes, as in the case here recorded, there is no distinct central nucleus, and these masses are usually composed of hair irregularly matted together. Occasionally the concretion contains a large quantity of mineral matter, and forms a

calculus capable of taking on a high polish, and sometimes these, forming as they do in the intestine of the horse, give rise to fatal obstruction.

Treves, in his work on intestinal obstruction, classifies foreign bodies occurring in the stomach and intestines into (1) rounded or regularly shaped bodies capable of passing readily, (2) sharp pointed bodies, and (3) indigestible materials of small size which are apt to accumulate and form large masses, such as husks of oats, vegetable fibres, grape skins, hair, wool, and yarn, the latter swallowed by habit by dressmakers and others, or intentionally by lunatics and hysterical persons. The case here recorded would belong to the third class, and it further affords an illustration of a remark which he makes to the effect that these bodies may remain for years in the stomach or intestine without causing any mischief, but that when so lodged they may almost at any time induce changes leading to a fatal result. From inquiries made subsequently to the patient's death it appears that, even before his admission, he had been addicted to eating, among other things, cocoa-nut fibre, and that during the first twelve months of his residence in the asylum he had picked two doormats to pieces, but subsequently to that he entirely gave up the habit. There is every reason, therefore, to believe that the masses found in the stomach had been present for some considerable time, and that there was on the part of the stomach an entire toleration of their presence. The practically unaltered condition of the gastric mucous membrane found on post-mortem examination would point in the same direction, and the fatal result is to be attributed not to the presence of these masses in the stomach, but to the extrusion—an accident liable to occur at any moment—of the small mass into the intestine and consequent obstruction.

Many of the reported cases have occurred in lunatics and hysterical persons. In one case recorded by Dr. Quain, and cited in Treves's work, the obstructive mass of cocoa-nut fibre weighed four pounds. Another is described by Dr McDowall (*"Journal of Mental Science,"* January, 1882), where the colon contained a mass composed of pieces of wood, wire, stocking, ticking, and leaves. Dr. Campbell records (*"Jour. Ment. Sci.,"* July, 1886) an instance where the stomach contained a mass of matted hair, pieces of blanket, and a hank of twine, one end of which had become unwound and extended into the intestine for two feet, and in the case of

an idiot patient of the Earlswood Asylum, described by Dr. Cobbold in the same Journal (April, 1886), death resulted from persistent vomiting induced by the presence in the stomach of a collection of human hair, cocoa-nut fibre, horse hair, and leaves, weighing $2\frac{1}{2}$ pounds. Habershon ("Diseases of the Abdomen," 3rd edit., p. 253) cites the case of a sailor who had repeatedly swallowed clasp knives. The stomach contained several knives and parts of others; one was found fixed transversely in the rectum, and one blade had perforated the colon. In Walshe's book, "The Horse," an account is given of a young lady who died in consequence of the accumulation in her stomach of hair which she had swallowed. Since writing the above an instance has been related to me where several recently hatched chicks died in consequence of the accumulation in the gizzard of the fibres from moss litter which they had picked up from the floor of their coop.

Notes on a Case of Tubercular Degeneration of the Supra-Renal Capsules, without Bronzing, associated with Insanity. By ERIC FRANCE, Clinical Assistant, Northumberland County Asylum.

Thomas H., butler, admitted to the Northumberland County Asylum, January 13th, 1871, at which date he was 50 years of age.

From the clinical record of the first eleven years of his residence here nothing of special interest is to be gleaned.

Mentally he was the subject of periodical attacks of maniacal excitement; during these he was particularly troublesome and perverse. In the intervals he was quiet and obliging, and willing to do light work in the ward. But even when at his best he was a man of many fads and by no means easy to manage.

During these eleven years his general health was good, and it is not until the month of July in 1882 that those symptoms of nervous and gastric disturbance, which a further development of his case brought into such prominence, first appear.

July, 1882.—Patient complained of pains in his head and refused his food this morning. He also complained of giddiness. His pulse is regular (84 per min.). Temperature normal.

July, 1883.—For the last two months patient has suffered from an eruption, similar in appearance to scabies, affecting flexor surfaces of arms and wrists. He is also much troubled with boils in various parts of the body.

August, 1885.—For the last year or two his health has not been

good. He has suffered much from dyspepsia, which he will only treat after his own fashion. Refusing medicine.

January, 1886.—Bodily health unsatisfactory ; patient sleeps badly at nights.

During the next four years nothing is to be found in the case-books which throws light upon the progress of his disease. But careful inquiry from the various attendants, under whose observation the patient was, elicits the fact that symptoms were noticed which, although at the time they were considered comparatively unimportant, in the light of the autopsy are invested with an interest which we think may to some extent justify the record of the case.

The symptoms referred to are shortly as follows :—

Most prominent were frequently repeated attacks of dyspepsia, which varied in intensity, but were generally ushered in by feelings of dizziness and nausea and were often accompanied by vomiting. In these attacks the old man would always insist on “ doctoring ” himself, and refused to take any drugs. He was a good deal troubled with constipation. Later on diarrhœa of the intercurrent type appeared.

He was very easily tired, and it was no unusual thing for him to complain of being “ tired out ” after polishing a tin in the morning and forthwith go to bed for a rest. The attendants had little faith in this “ weariness,” thinking he made it an excuse for idleness or in order to annoy them.

Latterly he began to complain of pains in the joints and loins, which he thought were rheumatic. It must be understood that these complaints were never urgent, but rather took the form of remarks dropped casually in the course of conversation. And so, in spite of increasing weakness, he managed, with good-natured perseverance and the help of an occasional “ day off ” in bed, to keep going about, doing a little work now and then.

But during the month of February of this year (1891) he began to go rapidly down-hill.

Hand-in-hand with increasing severity and frequency of the gastric symptoms came extreme debility, anæmia, and occasional attacks of faintness.

He now was compelled to take to his bed, and he remained there till his death.

During the last two months of his life he became rapidly weaker and his appetite was extremely poor. The cardiac action became very feeble, but no murmur could be made out. The radial pulse was remarkably small, soft, and weak, and could sometimes be felt only with difficulty. The tongue was red and dry, but not much coated. Diarrhœa became, towards the end, more profuse, and he frequently vomited.

Three more extracts from the case-book will conclude the clinical history, such as it is, of the case.

April 26th, 1891.—This morning there is almost complete anorexia.

Patient complains of severe headache and sleeplessness; also of a pain in the right hypochondrium. There is great debility, and he is much purged.

April 28th.—This morning he had another severe attack of vomiting. The vomit was dark-coloured and apparently mixed with bile. Prostration extreme.

April 29th.—Scarcely tastes anything; beef-tea enemata given to prevent starvation; voice almost inaudible; pulse imperceptible at the wrist; still has pain in right hypochondrium. Mentally he is in a sort of hazy stupor.

April 30th.—Died.

Post-mortem examination 17 hours after death. Body not emaciated. Rigidity present in all extremities.

Brain 45½oz. With the exception of some slight general atrophy, normal. Lining membranes smooth. No excess of fluid in ventricles.

Thorax.—A remarkable amount of subcutaneous fat over chest and abdomen.

Heart 8oz. Valves competent. Some atheroma of aorta and valves.

Lungs.—Considerable old fibrous adhesion to diaphragm and chest-walls, and slight congestion at bases. No trace of tubercle.

Abdomen.—*Stomach* here and there congested. No ulceration.

Liver 39oz. Apparently normal.

Spleen 4oz. Dark and pulpy-looking.

Kidneys apparently normal.

Left supra-renal capsule enlarged to at least twice normal size. On section the whole of the normal structure of the organs is replaced by moderately firm caseous material. There is moreover a lobulated or nodular appearance, which, as Virchow points out,* corresponds to the original tubercular foci.

Right supra-renal capsule slightly enlarged. In the process of removal a few drops of pus escaped from the capsule. On section it consisted of a firm albuminoid material, slightly translucent in character, homogeneous in appearance, and of a greyish-white colour. In isolated spots rounded masses about the size of peas are seen, which in appearance closely resemble soft yellow tubercle. On microscopical examination those parts of the capsule which are not broken down into a mass of detritus consist of a proliferation of small round cells, embedded in a fine reticulum, which also encloses several giant cells.

At the close of the autopsy the body was carefully searched for discoloration, but not a trace was to be found. The buccal mucous membrane, said by some investigators to be in a few cases the only seat of bronzing, was entirely free from any discoloration. The sympathetic and the semi-lunar ganglia were not examined.

Some excuse for the incomplete and somewhat fragmentary

* "Krankhafte Geschwülste," ii., s. 689.

character of the clinical notes may be claimed on the ground that the nature of the lesion was not diagnosed during the life of the patient.

Remarks.—One or two features in this case seem to give it an especial interest. The first is the entire absence of bronzing. Dr. Wilks, in one of his contributions to the literature of Addison's disease,* referring to Addison's statement that where the first albuminoid state of degeneration in the capsules had not been passed no alteration in the colour of the skin will be expected, says: "After the publication of his memoir, Addison met with a recent case of this kind where no discoloration was present, and since this some few other similar cases have been observed. These facts would tend to show that the pigmentation of the skin does not occur at a very early period of the complaint, but is one of the later symptoms, and that the constitutional asthenia is really the most important pathological feature, and may be the only symptom present when the patient falls a victim to the disease. The fact, however, must be remembered that in some remarkable and exceptional examples the disease has run a rapid course to its end before the development of any pigment in the skin."

Whether the absence of bronzing in this particular case is to be explained in either of these ways is a matter of opinion, although it appears to us that neither the history of the case nor the autopsy lends much support to either theory. It is for this reason, and because, as Dr. Wilks further says, "nervous depression is the only symptom which is invariably present," that the suggestion, by a French writer, of the name "Asthenie surrénale" for Addison's disease seems specially appropriate.

The other points of interest are the age of the patient and his insanity. With regard to the former, Merkel, in discussing the ætiology of the disease,† says: "The disease occurs most frequently in the prime of life, from the ages of 15 to 45, no instance having, as yet, been recorded before 10 or after 60." The earliest symptoms are supposed to have occurred in this patient certainly not before 61 years, and he died at the age of 70.

Lastly, the fact that the disease occurred in an insane patient is of some interest owing to its rarity. The only similar case to be found is one recorded by Dr. R. MacPhail.‡ In this he quotes Griesinger.§ "In Addison's disease there

* Reynold's "System of Medicine," Vol. v., p. 359.

† Ziemssen's "Cyclopædia of the Practice of Medicine," Vol. viii., p. 644.

‡ "Journal of Mental Science," January, 1885, p. 556.

§ "Mental Diseases," New Syd. Trans., p. 198.

is generally great depression of sentiment, but no case of actual mental disease is known to me," and in addition says that he is not aware that the condition has ever been reported in connection with insanity. As Dr. MacPhail points out, the occurrence of maniacal excitement with the disease in question is most probably coincidental, and as far as we know neither is related, but the rarity of the coincidence makes it worthy of note.

For permission to record this case, and his kind help, I am indebted to Dr. McDowall.

OCCASIONAL NOTES OF THE QUARTER.

Meeting at Bristol.

This, the third Quarterly Meeting held in the provinces, proved another success, and fully justified the course taken several years ago, when it was determined to hold the spring meeting of the Association at some distance from the Metropolis. On many grounds it was the right thing to meet in the West of England. One of the reasons which rendered it a fitting place of meeting was the opportunity which it gave to assemble at and to inspect so well-known an institution as Brislington House. That a cordial welcome and true hospitality would be extended to the Association was fully anticipated, and those who met at Brislington did not fail to find that this anticipation was justified to the greatest possible extent. The President paid an eloquent tribute to the manner in which the Fox family had always conducted this large private establishment. It was a great satisfaction to the meeting that the son of Doctor Prichard, the Nestor of the medical profession in Bristol, was able to be present when the Paper on the life and career of his distinguished father was read.

It was from the very first inception of the Medico-Psychological Association the intention of its founders to hold its meetings in different parts of England, and to inspect the asylums of the locality. The ever-increasing tendency to centralization has, unfortunately, entirely thwarted this excellent and practical idea. The meeting at York inaugurated the return to the original practice, and we can only hope that the peripatetic action now taken with so much advantage to

the vitality and extension of the work of the Association will be fostered. The principle applies to the Annual Meeting whenever the President of the year is in a position to invite the Association to the scene of his asylum work. Happily, this will be the case when the next meeting assembles in Birmingham, and if the nomination of the Council as regards the presidency in the following year be confirmed on that occasion, the Association will meet at York.

Kent County Asylum v. The Mayor and Corporation of Maidstone.

An important action was brought some time since by the Clerk (Howlett) of this asylum against the Borough of Maidstone for the recovery of a sum of money for the maintenance during the year succeeding the coming into force of the Local Government Act, 1888, of certain pauper lunatics sent from Maidstone to the asylum.

Mr. Justice Denman gave judgment in favour of the plaintiff.

The defendants appealed. The case was heard on March 20th, 1891. Appeal allowed. The judgment of the Court was delivered on May 15th before the Lord Chancellor, the Master of the Rolls, and Lord Justice Fry, as follows :—

That something is due to the plaintiff is not in dispute ; the only question is as to the mode of ascertaining that amount. The question primarily turns on the true meaning of the Local Government Act, 1888, section 86, subsection 4. That enacts that when at the passing of that Act a borough of the kind there described contracts with the Quarter Sessions of the county in which the borough is situate for the reception of the lunatics of the borough in the county asylum, such borough shall, on the determination of the contract, cease to have power to build a lunatic asylum, and shall be liable to contribute to the county rate in respect of the county lunatic asylum in like manner as the rest of the county. So far the matter is clear. But the enactment further provides that the liability to contribute to the county rate shall be subject to the enactments providing for an additional charge for the maintenance of lunatics in cases where no contribution has been made towards the cost of building and furnishing an asylum. The object of this provision is clear. If the borough were allowed to join the county after the county had built the asylum without contributing toward the expense of the building it would gain an unfair advantage over the rest of the county, and this is to be

avoided by maintaining in force certain enactments with regard to additional charges. Now, Maidstone was, at the passing of the Local Government Act, a borough of the kind described in the section ; it had a contract with the county in respect of its lunatics, and it had not contributed towards the cost of the county asylum. The Local Government Act, 1888, contains another section which it is essential to mention—namely, the 62nd—which provides, amongst other things, that, in case of difference as to any matters requiring adjustment (including liabilities), agreements may be entered into between the parties for their determination, and that, in default of agreement, they shall be determined by an arbitrator, for whose appointment provision is made. Now, to revert to the change as to the lunatics, we must inquire what, at the passing of the Act of 1888, were the enactments in force providing for the additional charges for the maintenance of borough lunatics where the boroughs had not helped to build the asylum. The only enactments which it appears can be so referred to are the Acts of the 16 and 17 Vic., c. 97, the 25 and 26 Vic., c. 111, and the 30 and 31 Vic., c. 106. The joint effect of these enactments amounted, in our opinion, to this—that the committee of visitors of a county asylum had the power to fix a weekly charge for every lunatic, and to fix, in regard to lunatics taken in from places which had not helped to build their asylum, a larger sum than for lunatics from the county ; that the borough had the power to accept the rate so fixed by the visitors of the Kent asylum or of any other county asylum willing to receive the borough lunatics or to build their own asylum ; that the visitors of the county asylum might carry the extra sum paid for foreign lunatics to a building and repair fund ; that the borough had a power to defray out of the borough rate and in exoneration of the poor rate the sum which they considered to represent the extra sum, not exceeding, however, one-fourth of the entire weekly charge ; that in certain cases the visitors of the receiving asylum were to transmit their accounts in respect of borough lunatics separately—that is, they were to send to the union the account for maintenance of the lunatics and to the treasurer of the borough the account for the extra sum. The result of these enactments was to give power to the visitors of an asylum to contract to receive lunatics and to the visitors of another county or borough to contract to send lunatics, but the borough within the geographical bounds of a county was under no obligation to have recourse to its county asylum ; it might resort to any other county in England or it might erect its own asylum. When, and only when, a contract was made, certain liabilities arose—namely, the liability of the union within the borough to pay for the ordinary maintenance of the lunatic, and the liability of the borough fund to pay the extra sum for the lunatic. But everything in the nature of liability arose from contract. But by the Act of 1888 all this is altered. The borough is deprived of the freedom of contract and of its power to erect an asylum, and in-

stead it was bound to send its lunatics to the county asylum and to pay the ordinary weekly sum for each lunatic. Moreover, the enactments providing for the extra sum were still to be in force. It is obvious that the language of this last clause is not perfectly accurate, because it seems to imply that the enactments created a liability, whereas, in fact, the enactments only gave a power to contract and through contract to create a liability, and this very power to contract the Act of 1888 itself destroys. But though the language of the clause may not be precise, the real meaning is not, we think, difficult to gather. In our opinion the effect of the language used is to create a statutory liability in the borough in respect of the extra sum in lieu of the contractual liability which previously existed, and consequently the borough is still under a liability to pay to the county something more than the mere expense of the maintenance of the borough lunatics. So far it appears to us that the case is reasonably clear, and it is really not in dispute. But then arises the question, how is the *quantum* of this liability to be ascertained? The plaintiff says it is to be fixed by the committee of visitors of the county asylum as it was before the Act of 1888. The defendant says it must be ascertained by agreement or arbitration under section 62 of the Act of 1888. In our opinion the committee of the county asylum have no longer the power to fix the amount of the extra sum to be paid by the borough. The power was given to them only as part of the machinery by which the county could contract with the borough; the resolution of the county visitors fixing the amount had by itself no binding effect on the borough; and it only became binding on the borough when they assented to it. In our opinion the power of the committee of visitors to fix the amount perished with the power to contract, of which it was, in fact, only a part. To arrive at the conclusion that this power survived would be to construe the words in question, not as continuing an existing power for an existing purpose, but as continuing an existing power for a novel purpose, and so as to expose the borough to the possibility of an injustice against which it had lost the power of protecting itself when it was denuded of its freedom to contract with what asylum it chose. It is said, and truly, that after the Act of 1888 the borough will have its representatives on the County Council, but this does not appear to us to be a sufficient answer to the difficulty. We think, therefore, that the determination of the amount of the liability of the borough for the extra sum for its lunatics is one of those matters of difference which under section 62 must be determined between the authorities either by agreement or by arbitration. That has not been done in this case, and, therefore, in our opinion the plaintiff has no present cause of action in respect of the extra sum, and this appeal must be allowed.—*Times*, May 16.

PART II.—REVIEWS.

Pope's Law and Practice of Lunacy. Second Edition. By J. H. BOOME, of the Middle Temple, and V. DE S. FOWKE, of Lincoln's Inn, Barristers-at-Law. Sweet and Maxwell, Limited, London. 1890. pp. 573.

We may say at once—and we say it with pleasure—that in the hands of the present editors the reputation of Mr. Pope's "Treatise on the Law and Practice of Lunacy" is quite safe. All the material features that differentiated the first edition of this well-known work—its clearness of arrangement, its lucidity, its scientific *excursus*, its accuracy, and its detail—have been preserved, while the recent legislative changes in the law of lunacy have been incorporated into the text.

"The Act of 1890," the editors observe in their preface, "at last seems to give some promise of finality in lunacy legislation." Having regard to the incompleteness of the new measure, to its sins of commission, and its far more serious sins of omission, we hope and believe that this is not the case; and in the firm conviction that a third edition of *Pope* will soon be called for, we venture to direct the attention of the editors to the following points:—

1. A tabular explanation of the legal abbreviations used throughout the work is much needed. What are medical men to make of such signs as "B and C," "M and M," "De G, M, and G."?

2. The amount of space (twelve pages) devoted to criminal responsibility in mental disease is utterly inadequate to the importance of the subject.

3. The Act of 1890 should be annotated, even although the process involves a certain degree of repetition. The editors should take "Sebastian on Trade Marks" as a model.

4. Some account should be given of the gradual judicial departure from the rules in Macnaghten's case in recent years. These rules will soon be as defunct as "the wild beast theory" which has secured for Mr. Justice Tracy a bad immortality.

5. The statement (p. 20) that "there are no less than five distinct criterions of legal sanity and insanity" is inaccurate, or, at least, misleading. The law now recognizes only one test of lunacy, viz., "Was the person whose act is in question able to understand its nature, and to pass a fairly rational judgment on its consequences to himself and others, and was he a free agent so far as that act was concerned?"

Life of Dorothea Lynde Dix. By FRANCIS TIFFANY.
Houghton, Mifflin and Co., Boston. 1890.

(*Second Notice.*)

Resuming our notice of this interesting work—interesting at least to all who care for the humane treatment of the insane—we take up the thread of the biography, so well written by Mr. Tiffany, at the point where Miss Dix returned from England to the United States, resolved not to take her ease in spite of the temptations to do so, but profoundly impressed with the conviction that she had some great duty in life to perform. The Editor sketches the condition of the insane in New England at this period. It is said that on coming out of church Miss Dix overheard two gentlemen speaking in such terms of indignation and horror of the treatment to which the prisoners and lunatics in the East Cambridge (Massachusetts) gaol were subjected, that she forthwith determined to go over there and look into matters herself (p. 73). Miss Dix began to teach in this gaol and found that there were no stoves in the room where some insane prisoners were confined. Failing to induce the authorities to obtain one, she appealed to the court, and succeeded in her application. Shortly afterwards she became acquainted with Dr. S. G. Howe, the well-known instructor of Laura Bridgman, and with Charles Sumner, who warmly seconded her efforts to improve the condition of the inmates of the prison. Unfortunately this was only a sample of what was to be found in the other prisons and almshouses of Massachusetts. Her memorial addressed to the Legislature, one of many, is a matter of history. In it the following sentence occurs, written in the year 1843, when she was about 40 years of age:—

“I proceed, gentlemen, briefly to call your attention to the present state of insane persons confined within this Commonwealth, in *cages, closets, cellars, stalls, pens—chained, naked, beaten with rods, and lashed into obedience*” (p. 76).

Miss Dix's remedy for the deplorable state of the insane was a new asylum. Her memorial was referred to a Committee of which Dr. Howe was the chairman, and Miss Dix's statements were endorsed. A resolution was introduced recommending the erection of additional buildings in connection with the State Lunatic Hospital at Worcester (Mass.). A Bill was passed by a large majority, and thus Miss Dix achieved her first Parliamentary victory.

Then follows the history of the succession of benevolent enterprises undertaken by this indomitable woman, for the understanding of which we refer the reader to the book itself. We cannot, however, omit the unexpected success she obtained in her appeal to Mr. Cyrus Butler, an account of which we heard from her own lips.

“He was a man of large business capacity, who ultimately left an estate of £800,000, but who, like so many men absorbed in the pursuit of wealth, had contracted a passion for accumulation that rendered it well-nigh impossible to persuade him to give a dollar away. . . It was a singular interview. For some time, through sheer force of life-long habit, Mr. Butler sought to put her off by diverting the conversation to the weather. Preserving her temper and self-control, Miss Dix pleasantly adjusted herself to the humour of the scene, until finally, feeling that the thing had gone far enough, she arose with commanding dignity and said: ‘Mr. Butler, I wish you to hear what I have to say. I want to bring before you certain facts involving terrible suffering to your fellow creatures all round you—suffering you can relieve. My duty will end when I have done this, and with you will then rest all further responsibility.’ Miss Dix then told her story. Mr. Butler listened with spell-bound attention, and then abruptly said, ‘Miss Dix, what do you want me to do?’ ‘Sir, I want you to give £10,000 towards the enlargement of the insane hospital in this city (Providence).’ ‘Madam, I’ll do it,’ was his answer.”

Everyone who knows anything about asylums for the insane has heard of the “Butler Hospital,” but comparatively few are aware of the origin of the name. It was here that the well-known and esteemed Dr. Ray resided and wrote his classic work on the “Medical Jurisprudence of Insanity.” His successors have been worthy of the institution and the first superintendent. The memory of one who died in the early prime of his life—Dr. Goldsmith—lamented by all who knew him on both sides of the Atlantic, should be fresh in the minds of the readers of this Journal.

It must be remembered that but few States had built at that time any asylums for their insane. It was Miss Dix who was the means of founding the asylum at Trenton, New Jersey. She herself christened it her “first-born child.” It is an interesting circumstance that in her declining years she here found a quiet haven in which she could anchor her now frail bark till the end of her days. Forty-two years after its

establishment we visited her, and found her still able to feel an interest in the progress of the humane treatment of the insane in her own country and in Great Britain. Three years later she passed away to her rest at the age of 85.

To fill up the interval is to write the history of her life, and this cannot be done within the limits of a review. It will always remain a remarkable circumstance that a woman could carry out and sustain such a revolution on behalf of the insane in the United States, and could effect so great a change in their condition in Scotland. It is the less necessary to refer in detail to her benevolent and spirited work in that land, as we have already described it in the obituary notice of Miss Dix in this Journal (October, 1887).

During the war she worked as a nurse in the most devoted manner among the wounded. "She was very unpopular in the war with surgeons, nurses, and any others, who failed to do their whole duty, and they disliked to see her appear, as she was sure to do, if needed. . . . She was one who found no time to make herself famous with pen and paper, but was a hard, earnest worker, living in the most severely simple manner, often having to be reminded that she needed food" (p. 341).

Less known, but scarcely less remarkable as showing her wonderful energy, was her mission to the Channel Islands in 1855. When at York in poor health, after her invasion of Scotland, she felt bound to inquire into the unsatisfactory condition of the insane in Jersey, of which she had heard something when in Edinburgh. At that very time a young Dutchman, Dr. Van Leuven, had drawn up a report on the provision for the insane in that island. On our showing her this pamphlet her interest was excited, and she requested us to obtain more definite information from the doctor. His reply was, "If Miss Dix will come to Jersey I will give her a hearty welcome, that she may counterbalance the odious *insanity trade* now begun." In July, 1855, Miss Dix visited Jersey. Writing thence to Dr. Buttolph, she says:—"I took a carriage and drove with Dr. Van Leuven to the hospital—found the insane in a horrid state, naked, filthy, and attended by persons of ill-character, committed to this establishment for vice too gross to admit of their being at large. . . . After faithful inspection of the forty insane in the cells and yards, I drove with my letter of introduction to Government House; the Governor not at home. At three o'clock drove to look at a site for the hospital, les Moraines. I approved of it for our use, if it could be had a free gift; we then proceeded to

visit several insane persons in private families—a sad, very sad scene. Went early, Wednesday, to General Touzel's; had a long conversation wholly on business affairs. He went with me to see the governor, who received my evidence in the case (Mr. Potheary's), summoned the Attorney-General, thanked me for the information, and would resume the subject. Next we took up the Jersey Hospital question. I was promised all the Government support, but had to *fight* my way with three dozen members of the States. Thursday, drove into the country, still surveying farms, and seeing the scattered insane. In the evening some members of the Committee of the States called. Friday, other members called, and settled that the full Board of fifteen should be summoned to an extra meeting if I would attend. I consented to remain till the full Board reported, and *not* present the subject to the Government at home, if they would do the work without" (p. 269).

The Committee resolved unanimously to build a hospital for the insane with the least possible delay. It is sad to have to record that the good intentions which were then professed did not take practical effect until seven years afterwards. In 1862 the Local Parliament ("States") decided to build an asylum. This was opened six years later (1868). So slowly was the proposal brought about, although the Committee of the General Hospital had minuted a resolution in December, 1855, recommending the States to erect a building for the insane in consequence of "having received much important information from an American lady, Miss Dix," as also the reports of medical men appointed to visit asylums. We are able to state from an inquiry recently made of the Superintendent of the Jersey Asylum, Dr. George Moore, that the number of patients on December 31, 1890, amounted to 140, the number of admissions since the opening of the asylum being 741.

We cannot leave the episode of Miss Dix's visit to the Channel Islands without paying a tribute of respect and admiration to the young Hollander who was fired with enthusiasm on behalf of the insane in his own country and in Jersey, where he went to reside for the benefit of his health. He was a native of Utrecht, where we first met him in 1853. He received his education at Leyden, but studied in Berlin and Vienna. In 1848 he visited England with Dr. Everts,* subsequently the Superintendent of the Meerenburg Asylum, near Haarlem. Dr. Van Leuven acted as the Assistant Medical Officer, and threw his whole mind into his arduous

* See Obituary Notice in this Journal, Oct., 1883.

duties, the result being a complete breakdown in his health. When in Jersey the States appointed him to examine and report upon the asylums of France. The report appeared in November, 1853, and does him the highest credit. When, in spite of change of climate, the disease of the lungs under which he laboured made rapid progress, he returned to his native land in May, 1857. With difficulty did he make the journey, so great was his exhaustion. Let the remainder of the story be told by a Jersey paper of the period. "He arrived at the railway terminus at Utrecht, and from thence was conveyed in a carriage to the home of his childhood. Retaining his mental faculties to the last moment, he pointed out to the companion of his journey the objects of interest between the railway and the town. A few minutes more and he will cross his father's threshold—but not in life. The carriage stops. There is the house. There is his father. He places his wife's hand in that of his father. 'Be kind to her,' are his last words. They lift him to bear him to his boyhood's fireside, but they bear a corpse."

It is only right to record and hold in respectful remembrance the names of men like Dr. Van Leuven, who worked side by side with Miss Dix in endeavouring to forward her noble purpose.

We conclude our notice of the biography before us with the editor's description of the close of the good American philanthropist's life:—

"The end came on the evening of July 17th, 1887. For a month she had been growing steadily weaker. Still with her habitual fortitude, and that desire to pass unobscured through the portal of death, so characteristic of believing natures, she had begged her dear friend, Dr. Ward, to avoid the use of anodynes, and to tell her distinctly when the last hour was at hand. This was not to be. Although Dr. Ward had given his pledge that he would apprise her as soon as he saw the end near by, it came as unexpectedly to him as to her. He was sitting at the tea table when the nurse suddenly ran down to report that Miss Dix was sinking away rapidly. Mounting the stairs, on opening the door, just as his eye fell on her, she breathed a quiet sigh, and all was over."

The burial took place in Mount Auburn Cemetery, near Boston, Mass. Occurring when, in the height of the summer heat, so many are away at the seashore or in the mountains, a few friends only stood by the grave. Communicating to her English friends the intelligence of her last illness and death,

Dr. Nichols, who had been so long and intimately associated with her throughout her great career, closed with these words his letter to Dr. Tuke :—

“ Thus has died and been laid to rest, in the most quiet, unostentatious way, the most useful and distinguished woman America as yet produced.”

The Principles of Psychology. By WILLIAM JAMES, Professor of Psychology in Harvard University. Two Vols. American Science Series. New York : Henry Holt and Co. 1890. London : Macmillan and Co. 1890.

Professor James modestly declares in his preface that he does not hope for many readers of his “ fourteen hundred continuous pages,” a number that no one “ can regret more than the writer himself.” As a matter of fact, no one but the writer will regret them, for by allowing himself ample space, Professor James has not only been able to make his own theories clear and his book entertaining by abundant illustration, but by copious extracts from the works of other writers he enables his readers to judge fairly of his argument or contention with their opinions, without imposing upon him the trouble of hunting up authorities, or running the risk of receiving a false impression by misinterpretation.

Rarely in a scientific work does one gain (as one cannot help supposing) an impression so vivid of the personality of the writer—of an honest, simple, kindly man, with a remarkably unprejudiced mind, ready to entertain every suggestion, even to the extent, in some cases, of apparent inconsistency; generous to those from whom he differs, while merciless in setting forth their errors; immensely industrious, and with unbounded curiosity and ready memory, shown by his familiarity with the works of many kinds and of many nations; of great ingenuity and perspicuity, with a certain uncertainty of conclusions, sometimes decided and definite, sometimes leaving the reader in doubt whether at another time he might not think in another way. A “ spiritualist ” (or “ common-sense ”) man, in his assumption of the origin of thought, he is a materialist of materialists in his theory of the emotions, and in some respects of the “ association of ideas,” although, while accepting in places

the associationist argument, he especially points out the fallacy of "ideas" as an explanation of cerebration, and substitutes a total object of thought. The conclusion of the chapter on "Will" is "determinative." Most of the analyses and arguments therefrom could be used by the advocates of free will, and very much such as his would be their description of the ego, while the lesson of that and of the related chapters, especially of the one on "Habit," without any pious intention on the part of the author, would furnish matter to every Sunday School and pulpit in the land.

Although Professor James is an evolutionist, he unflinchingly controverts Spencer, to whom, however, he does justice for his cleverness, while he utilizes him as the "horrible example." Let it not be thought that the conclusions drawn or the reasoning is wanting in logic or clearness; nothing could be less true of Professor James's method. Most of the apparent inconsistencies are due, no doubt, to the fact that the book was not written (in the first instance) as a whole, but is composed of lectures, essays, etc., written at different moments, thoroughly revised, however, to keep them abreast of the progress of the science, and to establish the connection between them. This fact accounts also for considerable inequality of composition, some of the chapters being written with a completeness-beauty that makes them literature of the first class, while others lack this finish, although the vivacity of style, originality, and variety of illustration and ingenuity of argument make every page full of life, fulness, and originality.

Professor James treats Psychology as "a natural science, assuming as its data (1) *thoughts and feelings*, and (2) *a physical work* in time and space with which they co-exist, and which (3) *they know*," leaving the explanation of the origin of thought to the metaphysician, claiming for this "positivist point of view the only original feature of the book." In spite of this disclaimer he cannot keep away from the metaphysical, and his suggestions for the solution of these questions (although his conclusions are not always definite) are not the least valuable part of his work. Equally, although he leaves zoology and "pure nerve-physiology" to the professors of physiology, his discussion of this latter subject especially gives evidence of his mastery of the matter, and tends to its elucidation.

Finally, Professor James best describes his whole position. "The boundary line of the mental is certainly vague. It is

better not to be pedantic, but to let the science be as vague as its subject, and include such phenomena as these if by so doing we can throw any light on the main business in hand. It will ere long be seen, I trust, that we can, and that we gain much more by a broad than by a narrow conception of our subject. At a certain stage in the development of any science a degree of vagueness is what best consists with fertility."

The book opens with a chapter on the Scope of Psychology, in which the presence of mind is described as evidence by the pursuit of ends and choice of means. This is followed by two chapters on "The Functions of the Brain" and "Some General Conditions of Brain Activity," in which the latest physiological results are reviewed and illustrated, and the various theories of reflex actions, centres of sensation, and the seat of consciousness are considered. The next chapter on "Habit," from a literary point of view, is the best. It was published in the "Pop. Science Monthly" in 1887, and although it has its place in the scheme of the book, it is an essay complete in itself. In the next chapter, the "Automaton Theory" is discussed and rejected; and here end the preliminary chapters, so to speak, from which point Professor James advises beginners to skip forty pages, but for students the most interesting part of the book begins. A consideration of "Mind-Stuff" shows Professor James's "spiritualistic" bias, although he makes the thesis of this chapter and of that on the "Consciousness of Self":—"Whether after all, the ascertainment of a blank unmediated correspondence, term for term, of the succession of total brain processes be not the simplest psycho-physical formula, and the last word of a psychology which contents itself with verifiable laws, and seeks only to clear and to avoid unsafe hypotheses" (2)—the result of this latter chapter being that "the consciousness of self involves a stream of thoughts, each part of which as 'I' can (1) remember those which went before and know the things they knew, and (2) emphasize and care paramountly for certain ones among them, as 'Me,' and *appropriate to these* the rest." The answer to the question "Why the successive passing thoughts should inherit each other's possessions, and why they and the brain-states should be functions (in the mathematical sense) of each other" is—"the reason, if there be any, must lie, where all real reasons lie, in the total sense or meaning of 'the world.'" The preceding chapters, "The

Stream of Thought," the substance of which appeared in "Mind" in 1884, and the "Relations of Minds to Other Things" lead up to this.

The remaining chapters of Vol. I. deal with "Attention," "Conception," "Discrimination" and "Comparison," "Association" ("Pop. Science Monthly," 1880), "Perception of Time" ("Journ. Speculative Philos.," Vol. XX.), and "Memory."

Volume II. begins with the chapters on "Sensations," "Imagination," "Perception of Things," which may be taken together. The likeness and difference of sensation and perception are pointed out, and the former is defined as "the first things of consciousness," and the opinion is reflected that sensations are primarily subjective, with the conclusion "that there is no truth in the eccentric projection theory." As regards relativity of knowledge, the psychological theory most ably supported by Helmholtz is compared with the physiological one adopted by Professor James, in support of which he quotes Hering at great length. "Imagination" is described as the consequence of the modification of the nervous system by sensations, so that copies of them arise again in the mind after the original outward stimulus is gone. The probable identity of locality of imagination and sensation is pointed out, and the fact that the more the intellect is cultivated the less is the visualizing power.

"Perception" is next treated, false perceptions or illusions and their causes leading up to the consideration of the psychological process "that whilst part of what we perceive comes through our senses from the object before us, another part always comes out of our own head" by the reaction of nerve-centres on sense-impressions. Hallucinations come from the same process carried further, and are considered only the "extreme" of the perceptive power, the secondary cerebral emotion being out of all proportion to the cerebral stimulus which occasions the activity.

The chapter on "Perception of Space," "a terrible thing" as described by its writer, is reprinted from an article in "Mind" (1887), so notwithstanding its revision it is unnecessary to describe it here. It takes up the subject in great detail, and although this is conducive to a clear understanding of the author's views (which are most interesting and instructive) it occupies an almost unduly large space in the volume.

The "Perception of Reality" also appeared in "Mind" in 1869, but is much longer here. While the perception of space is shown to be purely sensational, that of reality is held to be more nearly allied to the emotions than to anything else. "The psychological opposites to belief are doubt and inquiry, not disbelief."

"Reasoning" was published as "Brute and Human Intellect" in the "Journ. of Speculative Philos." in 1878. "Associative Thinking" Professor James finds is common to men and animals. "Reasoning" is differentiated as the "ability to deal with *novel data*." "The most elementary single difference between the human mind and that of the brute lies in the deficiency on the part of the latter to associate ideas by similarity, the logical conclusion of which is that "genius is identical with the possession of similar association to an extreme degree," Newton's perception of the connection between an apple and the moon, Darwin's between the rivalry for food in nature and the rivalry for man's selection being quoted as instances of action possible only to exceptional minds.

The physiological conclusion is, briefly, that the cerebral difference between habitual (or instinctive) thinking or reasoned thinking is in the former case a certain system of cells, or one part of the brain, vibrates persistently, and discharges regularly into another system of cells, while in the second case, part of the first system keeps vibrating in the midst of the second one, without regard for time. "Production of Movement" comes next—some form of bodily activity being the result of the escape of central excitement through the outgoing nerves. These movements take three forms—(1) Instinctive or impulsive performance; (2) Expressions of emotions; (3) Voluntary deeds.

The next chapter, on "Instinct," was published in 1887. The argument is that instinctive actions all conform to the general reflex type, but they are not regular, for they are modified by the inhibition of habit and by their transitoriness.

"The Emotions" is an amplification of the original article in "Mind" in 1884, in which Professor James first presented the subject of their physiological origin, the vital point of the theory being—"If we have some strong emotion, and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind, no mind stuff out of which the emotions can be

constituted." Then follows the author's most curious and apparently incontrovertible theory (if the brain process that rules both be taken into account) that the expressions cause the emotions, not the emotions the expression of them.

"Will" is a revision of two articles previously published. The only immediate end of will is movement; the idea of a movement is the anticipation of its sensible effects, "the contents and material of this consciousness of movement, as of all things else, being of a peripheral origin," as are also sensations relative to space, emotions, and beliefs, which is the tie that unites these chapters. The psychology of will stops, however, with the prevalence of the motive idea; the supervention of motion depends on the executive ganglia, and is outside the mind. The "essential achievement of the will" when it is most voluntary is to attend to a difficult object and hold it before the mind. Still the question remains whether this idea is sufficient, or whether it must have some mental antecedents.

Professor James holds that "Free Will" is insoluble on grounds of psychology, though the will may and ought to be educated.

The chapter on "Hypnotism" is an able review of the progress and conditions of the subject, and its results will be generally accepted by those who are not disciples of any of its (as yet insufficiently investigated) special teachings.

The last chapter, on "Necessary Truths and the Effects of Experience," is devoted to proving three propositions:—

1. "That taking the word experience as it is universally understood, the experience of the race can no more account for our necessary or *à priori* judgments than the experience of the individual can."

2. "That there is no good evidence for the belief that our instinctive reactions are fruits of our ancestors' education in the midst of the same environment, transmitted to us at birth."

3. "That the features of our organic mental structure cannot be explained at all by our conscious intercourse with the outer environment, but must rather be understood as congenital variations, 'accidental' in the first instance, but then transmitted as fixed features of the race. On the whole, then, the account which the apriorists give of the *facts* is that which I defend; although I should contend for a naturalistic view of their *cause*." That is to say, we inherit a certain nervous system; that the nature of this system, the

organic structure of the body, the state of the brain, and the variation in bodily conditions all influence our thoughts and feelings, and by change in them, or by affecting the senses, is our only way of changing our conscious life. Our conceptions of the world and our reactions on it are mainly due to the sort of brain we have, not to the objects among which we live.

So ends with a positive "Confession of Faith" a very remarkable book, the apparently inconsistent conclusions, by the way, being reconciled in this perhaps the most interesting chapter at the end.

Outlines of Psychology. By HARALD HÖFFDING, Professor at the University of Copenhagen. Translated by MARY E. LOWNDES. London, 1891: Macmillan.

This students' manual is a translation from the German of the Danish work, and is so excellently rendered by the translator that in reading it there is no feeling of the inelegance and want of clearness which are so often present in translations. With the exception of a few unimportant and obvious slips of expression, the language is clear and simple, and remarkably free from any special psychological shibboleths.

The work is in seven chapters, the first three being devoted to general psychology, their titles being "Subject and Method of Psychology," "Mind and Body," and "The Conscious and the Unconscious."

Psychology is, provisionally, described as the "science of mind," i.e., of that which thinks, feels, and wills; and the author endeavours to preserve it as a pure science of experience.

The author, from this empirical (phenomenal) standpoint, excludes both the spiritualistic and materialistic views from his conception of psychology, and allows to the English school the merit of liberating the subject from metaphysical speculation.

The existence of prenatal consciousness, on which Ladd considers it wiser not to speculate, is accepted as probable, and the evolution of consciousness is followed through infancy and the savage state.

Höffding insists on the study of our own consciousness as the secure starting-point for a knowledge of the mental world, pointing out the difficulties of introspection, the influences of

individual differences, the assistance to be derived from experimental and objective inquiry, both physiological and sociological.

In the chapter on Mind and Body, the distinction between material phenomena and mental facts is drawn, by the former resting on the assumptions of the persistence of matter and energy. A sketch of the functions of the various parts of the nervous system, their mutual relations and relation to the body, leads to the statement of conscious life consisting of three main characteristics:—(1) Change and contrast as condition of the individual elements entering consciousness; (2) preservation or reproduction of previously given elements, together with the connection between them and the new elements; and (3) the inner unity of recognition.

The term unconscious cerebration (Mill) is objected to as implying the existence of conscious cerebration. Höfding concludes that the difference between human consciousness and "the psychical element associated with the group of atoms," may be one of degree only; but asserts that this does not exclude the possibility of the emergence of absolutely new forms and properties to which there is no parallel in the lower stages; and that we cannot form any idea of those forms of mental life which lie lower than what is to us the threshold of consciousness.

Psychological elements are described (p. 88) as the different sides or qualities of the states or the phenomena of consciousness, and are divided as usual into cognition, feeling, and will.

Under Cognition follow divisions on sensation, ideation, "the apprehension of time and space," and "the apprehension of things as real." Feeling is treated under the heads of "feeling and sensation," "feeling and ideation," etc., ending with a division on the influence of feeling on cognition.

Will is described as the most primitive and the most derivative mental expression, its higher developments being conditioned by the development of cognition and feeling, and the reaction of the will on these and on itself is traced. The concluding division is devoted to individual character, the elements of which are physical, social, and inherited conditions. Temperament is pithily described as the "fundamental mood," the "feeling regulator" of the individual; as a background determining the mode in which all experiences are received. The author thinks that bright and dark temperaments (related to the influence of the vegetative functions on the brain) might be added to the old four, which "can be traced back to

the greater or lesser ease with which external stimuli can set in motion the central nerve organs."

Throughout the work there is a wonderful crispness of expression, and although the views advanced are not strikingly original, yet the careful order in which they are marshalled, the simplicity and clearness of statement, make the appreciation of the matter both easy and pleasant. The work cannot fail on this account to be both popular and useful with students of psychology, to whom it may be commended as a most satisfactory handbook.

Le Sommeil et la Système Nerveux. By S. SERGUEYEFF.
Two vols. Félix Alcan. Paris, 1890.

This ponderous tome is the first volume of M. Sergueyeff's work on the "Physiologie de la Veille et du Sommeil," dedicated so far back as 1881 to the late Emperor Alexander II. of Russia.

Starting in the first chapter with the statement that vital alternations of sleeping and waking are essentially vegetative, the assumption is made that these are dependent on an "aliment," which should be ethereal, "sthenic," or dynamic, and the conclusions arrived at in the final chapter are that there is an assimilation of the so-called "imponderable ether," or "dynamisme ambiant;" that this is effected by the ganglio-epidermic apparatus, and its application to the needs of the body made by the ganglionic elements of the sympathetic system.

A serious criticism of the deductions made from the numerous quotations from writers on physiology, and of the facts advanced in support of these, would occupy much space and time; the statement of the theory will probably suffice for those who are interested in such speculations.

One quotation, however, must be alluded to, viz., on p. 777, from Benjamin W. Richardson: "C'est ce même ether produit dans l'économie, à l'aide duquel on perçoit, on sent &c."

The production of the "ether" in the economy, our author naively says, seems going too far, and for once we can agree in his conclusion, although we doubt the correctness of the translation which attributes powers of creation to the human economy.

H.R.

Hérédité et Alcoolisme. Étude Psychologique et Clinique sur les Dégénérés, Buveurs et les Familles d'Ivrognes. Par le Docteur M. LEGRAIN. Avec une préface de M. le Docteur MAGNAN. Paris : Octave Doin, Éditeur. 1889. pp. 424.

It will be interesting to note some of the conclusions arrived at in 1875 by a conference of members from various temperance societies in the United States, and which the author, in an early chapter of the present treatise, enumerates as follows:—

1. That intemperance is a disease.
2. That it is curable according to the same principles as other diseases.
3. That it has for its principal cause a constitutional susceptibility to the action of alcoholic drinks.
4. That this constitutional tendency may be hereditary or acquired.

To the first only of these M. Legrain draws attention, and sets himself the task to prove it in the following pages. He divides drunkards into two great classes—"les buveurs inconscients" and "les buveurs conscients," remarking that the former, though rare, do exist; that some are the victims of ignorance, whilst others are the victims of an imperfect social condition. The second, much the larger class, he arranges into three groups:—(1.) Those in whom the moral sense is feebly developed or completely obliterated; these come into the category of "*fous moraux.*" (2.) Those in whom the moral sense exists, but the will is defective. It is a transition stage towards the next group. (3.) Dipsomaniacs, or "*les buveurs impulsifs,*" in whom "the will alone is completely annihilated by the fit, under the predominant influence of an impulse, the character of which is the most absolute irresistibility." The second chapter concludes with the final analysis that "the great majority of drunkards are predisposed."

In the following chapter on the genealogy of alcoholic cases and their hereditary antecedents, a very instructive table gives a classification of cases, recorded throughout the book, in which alcoholic excess in the antecedents acted as the almost exclusive cause. Another gives an elaborate tabulation of cases where alcoholism and some form of neurosis co-existed in the antecedents, on either paternal or maternal side or on both, or where alcoholism occurred on one side and a neurosis on the other. "Heredity," remarks the author, "predisposes not only to excess in drink, but also to precocious excess," and he recites several very interesting cases. In another chapter he discusses the physiological action of the various forms of

alcohol (ethyl, methyl, butyl, propyl, amyl), and absinthe, and the individual predisposition; the reaction of alcohol and epilepsy, one on the other, and the special influence which absinthe has in causing explosions of epileptic fits.

The fifth chapter is the longest, occupying 203 pp., and by far the most important. Its subject is the *rôle* which heredity plays in alcoholic delirium. The amount of resistance offered by individuals to the action of alcohol absorbed from day to day, rather than at any given time, enables M. Legrain to classify drinkers for the sake of description under five heads:—1. Those who drink to excess in a regular manner all their lives, and in whom, though they show signs of health deficient in tone, cerebral alcoholism never makes its appearance. "Their well constituted brain is proof against delirium, and the only intellectual troubles imputable to alcohol which one observes amongst them consist, apart from drunkenness, in what are common to all people." 2. Also a very resisting class in which delirium, at length, but after a very great number of years of excess, breaks out. "The delirium seems to make its appearance only with reluctance," and when age is advanced, but muscular trembling may have been present for some years. 3. Cases of simple heredity. They are simply the predisposed who "do not yet present the mental state." "They are, for example, the sons of drunkards, the heirs of an elementary insanity, as melancholia, mania." They are attacked with delirium at a much earlier age than the preceding class. 4. Here we have cases where "heredity is much more powerful, and in which alcoholic delirium will be completely modified." "Henceforth the alcoholic factor will have much less importance in the clinical table. It will have the same value as, or a value even less than, the hereditary factor. The more intense the predisposition, the more lively will it be felt." 5. The most degenerated class—"those whose resistance against the action of alcohol is very considerably lessened. In the clinical table all, or nearly all, result from predisposition. Alcohol only plays the *rôle* of an additional factor." The author then proceeds to give in three comprehensive articles, into which the remainder of the chapter is divided, the history of the period of incubation, the period of attack, and the period of regression.

The three concluding chapters are taken up with a study of alcoholism in relation to the convulsive states—alcoholic and absinthic epilepsy; a form of alcoholism special to hereditary subjects—dipsomania; and a medico-legal sketch. Finally

the author sets forth some thirty-five conclusions, but space will only permit us to give extracts from a few here:—

That alcoholism and pathological heredity react one on the other.

The knowledge of the hereditary antecedents of alcoholics is of the first importance. It furnishes the reason for alcoholic habits, as also it explains the different varieties of conduct of those affected.

Heredity predisposes to precocious excess.

The predisposed get intoxicated more easily than others.

Maniacal and melancholic alcoholism are the two principal hereditary forms. The other forms described—comatose, apoplectic, convulsive—are found amongst hereditary subjects, but they find their cause more particularly in the nature of the alcohol absorbed.

The varieties of form which alcoholic delirium of the predisposed assumes are infinite. They depend on the nature of the predisposition, its intensity, and also the amount of excess committed in a given time.

Those least predisposed become delirious slowly.

Drunkards beget epileptics as also they beget drunkards.

No one can read M. Legrain's book and not be struck with the important and very active rôle which heredity plays in the great majority of cases of alcoholic excess. The arguments in favour of his conclusions are well sustained, and the cases recorded are numerous, interesting, and to the point. It is a work which well merited the prize awarded to it by the Société Médico-Psychologique in 1888, and will no doubt be read by all with the greatest interest.

Etude Médico-Légale sur L'Alcoolisme. Des Conditions de la Responsabilité au point de vue Pénal chez les Alcoolisés.
Par le Docteur VICTOR VÉTAULT. Paris: J. B. Baillière et Fils. 1887.

The author, in his introduction, draws special attention to the increasing abuse of alcohol since the beginning of the present century, and also to the fact that writers on the subject have, during the same period, become specially alive to its deleterious effects on the intellectual faculties. That the abuse of fermented liquor is becoming of more frequent occurrence every day, and that the number of intellectual troubles due to it is on the increase, are, he tells us, facts

sufficient to enable us to judge of the immensity of the danger. Dwelling at some length on the connection of drink with crime, and the laws relating to drunkenness in various countries, he passes on to give an historical account of the use of fermented drink from the earliest times.

The first chapter is devoted to the consideration of inebriety, which the author divides into simple and complicated or pathological. The effects of various intoxicants—wines, brandy, rum, kirsch, tafia, whisky, liqueurs, absinthe—on the system are described; but it is on intoxication from absinthe and beer that M. Vétault specially dwells. "In simple and occasional intoxication by alcohol," he writes (p. 45), "hallucinations are exceedingly rare; in intoxication due to absinthe they are, on the contrary, frequent, and as M. Magnan remarks, this liquid contains two poisons; the essence of absinthe acts first, it produces delirium and hallucinations before the alcohol has had time to exert all its action." In beer, not only has the alcohol (not always the purest) it contains to be taken into account, but also the action of hop and other ingredients used in its manufacture, *e.g.*, box, gentian, woody nightshade, hellebore, stramonium, Indian berry, nux vomica, glycerine, salycilic acid, etc. "Very little has been written on intoxication from beer, perhaps because of the difficulty of observation. It is rare, indeed, to find beer an exclusive cause of intoxication, and the composition of this liquid is so variable that one is often puzzled to know exactly what agent is the cause of the phenomena observed."

The author recognizes three stages of intoxication, which, nevertheless, cannot be defined with anything like exactness for medico-legal purposes. "The state of the memory, however, can give some valuable information on this subject. It is admitted that voluntary acts determine a certain number of intellectual observations, which fix themselves and leave an impression more or less lasting in the mind. When the amnesia of certain acts is proved, it is that they have been performed without deliberation, resolution, or consciousness. In inebriety it is a matter of daily observation to recognize facts according to the degree of intoxication, sometimes partial amnesia, sometimes, on the contrary, complete amnesia.

"This phenomenon of amnesia is of the greatest importance. Denied by some, held by others, it is much more common than is supposed, and we have gathered a great number of facts, enabling us to say it is the rule in all great intellectual disturbances under the influence of profound alcoholic intoxication.

When a violent delirium—a fit of alcoholic fury—breaks out, when homicidal impulse of an irresistible brutality arises, there is no recollection of the acts. The oblivion is as complete as that which follows the attack of epileptic mania, with which indeed the fit of alcoholic mania has numerous points of resemblance” (p. 60).

In deciding the question of legal responsibility no set rule can be laid down, and as alcohol acts on no two individuals in exactly the same way, each case must be judged by itself, and many circumstances must influence the decision, such as temperament, heredity, previous history, form of alcohol imbibed, stage of alcoholism at which the offence was committed, the memory of what has occurred, etc. A person is culpable in that he imbibes too freely of what he knows has power to render him intoxicated; beyond this every case differs.

Referring to the law in France, he writes:—“If our legislation does not expressly include acts committed under the influence of alcoholic intoxication, if even the law makes no allusion to drunkenness as a circumstance extenuating culpability, are we to conclude that it does not take into account the state of inebriety under the influence of which illegal acts have been committed, and can we not apply in a certain measure the provisions of article 64 of the penal code in spite of its silence on this subject.” Laws dealing with drunkenness in connection with crime as an extenuating circumstance or otherwise must of necessity, we think, allow of a considerable degree of latitude, and to insert clauses defining clearly the relation which the several stages of drunkenness should bear in mitigating the punishment of criminals will be no light task for the legislator, when we consider the diverse opinions held by medical jurists at the present time.

Complicated or pathological intoxication is described as “fits of excitement or maniacal fury which are observed in predisposed individuals under the influence of spirituous liquors,” and two varieties are distinguished—maniacal and convulsive—conditions which cause great difficulty when it becomes necessary to determine the responsibility of a delinquent. Several very interesting cases of complete and partial responsibility are quoted.

The second chapter is devoted to *delirium tremens*. Like M. Magnan, the author regards three classes of cases:—
1. Those in whom “the acute symptoms have only a relatively short duration,” and in whom convalescence is “*benigne, rapide et complete*.”
2. When convalescence is slow and relapses

occur on slight provocation. 3. The predisposed in whom convalescence is impeded by the persistence of delirium. Alcoholic delirium in absinthe drinkers, though showing the same intellectual symptoms, and characterized by similar hallucinations as ordinary alcoholic delirium, presents instead of incessant muscular trembling, a state of torpor described by M. Delasiauve as "*stupeur ébrieuse*."

Chronic alcoholism occupies another chapter, and after passing in review the various symptoms under the head of disorders of intellect, sensation, and motion, M. Vétault proceeds to consider the medico-legal question. The work terminates with a chapter on dipsomania. Trélat says, "Drunkards are persons who drink whenever they find the opportunity, dipsomaniacs are *sick persons* who get drunk when the mania seizes them." The drunkard, says M. Vétault, "seeks for occasions to drink. He does it openly, joyously, with a noise, and in company of his friends. The dipsomaniac, on the contrary, tries to escape the temptation. He flies from them; he does all he can to make himself dislike alcoholic drink, and when the resistance he has offered is conquered, he isolates himself, and surrounding himself with a thousand precautions, hides himself from the observation of others."

The work, indeed, is a valuable exposition on alcohol and its bearing on medico-legal questions, written by an eminent physician in a clear and masterly style, and cannot fail to repay a careful perusal to all interested in the subject; but, in our opinion, more prominence might with justice be given to intemperance as a disease, and to a very great extent an inherited one, when summing up the question of responsibility, for at p. 152 we find:—"For our part, the habitual drunkenness of a subject, which has not yet given place to the permanent and irreparable lesions of chronic alcoholism, can in no case extenuate the part of responsibility which is incumbent on him for the unlawful acts of which he has been the agent." And in a previous chapter, p. 68: "To sum up, every time that a man who is not affected by chronic intoxication or any other form of mental aberration, commits an offence or a crime under the influence of drink, he is responsible."

The Origin of the Aryans: An Account of the Prehistoric Ethnology and Civilization of Europe. By ISAAC TAYLOR, M.A., Litt.D., Hon. LL.D. London, Walter Scott.

(Continued from p. 286.)

The fourth chapter upon "The Aryan Race" is an extremely interesting one. After alluding to the fact that the general tendency of families resulting from mixed marriages is either that they die out, becoming infertile in the second or third generation, or that the children throw back upon the pure type of either parent, thus preserving the purity of one of the original types, he points out that language, on the other hand, is much more likely and liable to change than physical racial characteristics. One race may implant its language upon another and then disappear, so that language is no safe criterion of race.

Having shown in the last chapter the similarity of the civilization described by the language of the undivided Aryan, with that possessed by the neolithic, brachycephalic, lake dwellers of Europe, Canon Taylor proceeds to point out that he considers this people to be the real Aryan race. For, although representatives of all the four European races now speak Aryan languages, neither the "Iberians" (whose language is lost) nor the "Ligurians," who spoke an Altaic language, can be reasonably considered the original Aryan speaking race; nor does he consider that the degree of civilization attained by the "Scandinavians" at an early time would give them sufficient title to support this claim. He tells us that, at the present time, German scholars generally still hold the opinion that the "Scandinavian" is the true Aryan, while French writers take his own view that the "Celts" and their round-headed cousins of Europe were the Aryans proper.

The subject of the fifth chapter is "The Evolution of Aryan Speech." "The undivided Aryans doubtless roamed as nomad hunters and herdsmen over a considerable territory, gradually multiplying in numbers and incorporating other tribes. The modifications of the primitive speech are believed to be largely due to the acquirement of Aryan speech by these alien races."

The linguistic evidence has now to be taken into account, as to whether the brachycephalic race of Central Europe or the dolichocephalic northern "Scandinavians" were the original speakers of the Aryan language.

Of the various Aryan languages, the Lithuanian or Lettic languages appear to have changed the least and Teutonic the most. But the Teutons have the largest proportion of Scandinavian blood, while the Lithuanians and other Aryan speaking populations of Central Europe are still brachycephalic and have adhered more closely to the primitive linguistic type. "Thus it would seem that the Lithuanians (and not the Teutons) have the best claim to represent the primitive Aryan race, as their language exhibits fewer of those phonetic changes and of those grammatical losses which are consequent on the acquirement of a foreign speech."

The affinities between Aryan and Semitic speech are not sufficient to bridge over the impassable gulf between them; no such gulf, however, exists between the Aryan and Altaic languages. Statements to this effect are followed by an interesting passage upon the possibility of the development of Aryan languages from an Altaic stock. The arguments made use of possess considerable force.

"The Aryan Mythology" forms the subject of the concluding chapter. From it we learn that the "undivided Aryans" appear to have possessed a very feeble conception of religion—some crude form of Shamanistic worship. After their separation, however, they appear to have borrowed largely from Phœnician, Etruscan, Mesopotamian, and other Asiatic peoples. (Higgins, the Yorkshire antiquary, held very similar views early in the present century. Though, owing to the imperfect knowledge in his times, his facts and premises are more faulty than his deductions.) The origins of Grecian, Roman, and Indian mythologies are to be found in Phœnicia, and Asia Minor, and Etruria, or in Egypt and the Euphrates valley, and not in the country of the undivided Aryan race. Scandinavian mythology has little in common with those of Greece and Rome, and any resemblance between those of the latter countries with one another or with the Indian mythology, can be traced to a common non-Aryan source.

Thus viewing the various races of Europe from the different standpoints of geology, archæology, history, philology, and mythology, Canon Taylor arrives at the same conclusions, that the Aryan language was developed in Europe, and that the Turanian roundheads were the original Aryan race.

It must, however, be confessed that, if we accept his con-

clusions, we are compelled to regard the Aryan race as a branch of the great Asiatic Turanian family, which embraces also the Asiatic Dravidians in the south and the Ugro Finns or Mongolians in the north, and probably the Lapps and French Basques in Europe. But the original home of this family is, however, still supposed to be Asia and not Europe. Is Max Müller, then, altogether wrong in his extremely guarded statement, "that our Aryan ancestors dwelt somewhere in Asia before their separation?" For this writer is now careful not to state that this separation took place in Asia, although this was his original hypothesis. The case would appear to resolve itself into this—that if the brachycephalic people of Central Europe are the Aryan race (*i.e.*, the original speakers of the Aryan languages), they were already settled in Europe at the time when the separation of their various tribes took place, which resulted in the formation of the various Aryan languages. As, however, brachycephalic man does not appear in Europe in Palæolithic times, and as his Aryan language is possibly a development of an earlier language of Altaic form, and as Altaic languages are the usual languages of other Turanian races, it would appear highly probable that he did migrate from Asia into Europe about the commencement of the Neolithic age. Further, that as the pure Turanian type is black-haired and black-eyed, we must look to Northern Europe or North-Western Asia for the causes which modified the type, and changed it to a light-eyed, red-haired variety, with fair freckled skin, and also for the causes which caused this particular type to develop a different form of language from that spoken by his cousins, the Ligurians to the south-west, the Lapps in the north, and his Tartar brother nomads of the Steppes of Asia, or the Accadians of the Euphrates valley.

That the pure Turanian type does occasionally produce a red-haired variety and that red is the sub-colour of the black Turanian hair, we have ourselves had the opportunity of ascertaining to be a fact in the island of Japan. It is even possible that this tendency to rufous albinism (to use a *contradictory* term) is more common than we imagine, and that red-haired Turanians would be often observed if they did not dye their hair. Fair-skinned Turanians do further exhibit a tendency to freckle.

Are we then to suppose that the original undivided Aryans were a tribe of red-haired Turanian albinos, owing their

persistence of type to natural selection, or that they gained these red-haired, light-eyed characteristics from intermarriage with some other race? Again, are we to attribute the development of Aryan languages in a different direction to the Altaic forms of speech of their Turanian brethren to a sort of mental left-handedness, which accompanied their physical rufous characteristics, or to their contact with some alien race?

To endeavour to prove that because the Scandinavian dolichocephalic rowgrave inhabitants of the North Sea coasts were barbarians in the time of Cæsar, that, therefore, they had no civilized cousins in South Europe, is like trying to prove that the Etruscans or Egyptians cannot have been civilized at the time when the Celts invaded Britain, because the "Iberian" aborigines of that island were unacquainted with metals.

The positive evidence of archæology is excellent, so far as it goes, but its negative evidence is not equally satisfactory. If, for example, we imagine that the Southern Scandinavians were in the habit of cremating their dead, the absence of Scandinavian skulls in Greek or Roman graves would rather support than negative the theory that the Greeks and Romans proper were of Scandinavian blood.

The gigantic "Scandinavian," brainless and stupid though he may have been, must have possessed a position of no mean level as a warrior among the Turanian tribes in early times. It would be but natural to find him affiliated amongst the European nomad clans, just as we find negroes affiliated amongst the Semitic Bedouin tribes of Arabia. Personal prowess in barbarous times rapidly led to the chieftianship. Nor would it be at all inconsistent with historical evidence to suppose that the early invasions of the Iberian seaboard of the North Mediterranean were effected by Turanians, headed by Scandinavian chiefs. The physiognomies of the northern invaders of the Egyptian Delta, as depicted upon the walls of Egyptian tombs, are Scandinavian in appearance rather than Turanian. In the present day we find the aristocracy of Northern Europe to consist more of the Scandinavian than of the Turanian type. This type assumed its supremacy after the downfall of the Roman Empire, during the fighting times of the middle ages. It requires no great stretch of imagination to picture the prehistoric condition of non-Iberian Europe. Upon the advent of the nomadic Turanian, besides his

earlier Ligurian relations, he found the more barbarous Scandinavian giant of fighting proclivities in possession of the northern coasts. Intertribal wars of the Turanians would cause the enlistment of the Kitchen Midden warrior on either or both sides. His prowess would be rewarded with presents of *wives* and *weapons*, which would result in his gradual absorption into the tribe. His savage and brutal nature would lust after power, and from a leader in war he would become the chieftain in times of peace. By the plurality of his wives the racial characteristics of the tribe would tend to become modified, and he might not unnaturally affect the language by his incapacity to acquire it. His Teutonic stupidity would demand the complicated and definite forms of expression employed in Aryan grammar, and which would be unnecessary to his more intelligent subjects. The impersonality and somewhat vague imagery and construction of an Altaic tongue would convey but little meaning to his dull and narrow brain. The construction and grammar of the language would change to suit his inferior and intellectual capacity; while his limited vocabulary would require an almost endless number of words to be borrowed from his more civilized Turanian people. Even in cases where a Scandinavian word did already exist, it might not unnaturally be agglutinated in the harem or the nursery with its Altaic equivalent.

It is impossible to avoid asking whether some external causes, such as this, did not modify the racial and linguistic characteristics of the undivided Aryans.

No matter how inferior the intellectual capacity of the "Scandinavian" may have been, he has always possessed, so long as we have been acquainted with him, that personal power over his fellow men which is so often the accompaniment of great bodily strength. The power of ruling is notably deficient among the Turanian races; while the long-headed European aristocracy, or their orthocephalic descendants, are the rulers of more than half the whole world.

Brachycephalic Goethe may have written Faust, but the long-headed Fredericks have governed Germany. Canon Taylor does not overlook this possible Scandinavian influence, but he appears inclined to under-estimate it. Until the supporters of the Turanian hypothesis can furnish us with some more satisfactory explanations for the modification of the race, and the development of the language of the Aryans,

it is difficult to accept the author's conclusions in their entirety.

In his endeavour to bring out the Aryan race in a strong light he has somewhat thrown into the shade the rival candidate for the honour of being our Aryan ancestor. He would also appear to rather under-estimate the degree of civilization which had been attained by the Iberian of the Continent in early times. Upon the Mediterranean he must have been something more than a mere troglodyte fisherman, even if he did not bury metals and pottery with his dead, and cannot have been far behind if he did not excel the Turanian Aryan in the arts of life.

The identification of the Basques and Iberians with the Hamitic race is, in many respects, highly satisfactory. The explanation that the modern language of both the Spanish (Iberian) Basques and of the French (Ligurian) Basques was originally that of the Altaic-speaking Ligurians, and not that of the conquered Hamitic Iberians, is almost conclusive. Both hypotheses seem to clear a vast extent of ground, hitherto covered with difficulties, if they will bear subsequent criticism.

Canon Taylor has stated the case of the supporters of the European hypothesis clearly and concisely. If we cannot endorse all his views, perhaps it is chiefly because it is unpleasant to unlearn theories we had previously accepted. To many Europeans it may be unpleasant to learn that we are indebted to our Turanian blood for most of our best racial characteristics. Those of us who are brachycephalic will be surprised to hear of their newly-discovered cranio-logical and physiological relationship with the Tartars, Chinese, and Japanese. Those who are dolichocephalic, on the other hand, may be disgusted at being assigned a "Kitchen Midden" ancestry, aristocrats though they be. Nor will the dark, long-headed Scot, Irishman, or Welshman altogether rejoice at the idea of his possible Hamitic paternity.

In conclusion Canon Taylor says, "The work of the last ten years has been mainly destructive. The work of the previous half century has been revised, and ingenious, but baseless, theories have been extensively demolished, and the ground cleared for the erection of more solid structures.

"While, on the one hand, science has been specialized, on the other it has been shown that the correlation of the pre-historic sciences is as intimate as the correlation of the

physical sciences. The whilom tyranny of the Sanscritists is happily past, and it is seen that hasty philological deductions require to be systematically checked by the conclusions of prehistoric archæology, craniology, anthropology, geology, and common sense."

The Science of Fairy Tales. By E. S. HARTLAND, F.S.A. Contemporary Science Series, edited by Havelock Ellis. London: Walter Scott.

To those familiar with the writings of Professor Tylor and of Mr. Andrew Lang, the views summarized and exemplified in this volume of the origin and meaning of the meaningless in fairy tales will not be entirely new; and those who have read Mr. Sidney Hartland's papers on the "Luck of Edenhall," etc., in the "Archæological Review," and Mr. Edward Clodd's "Rumpelstilzkin," in the "Folk-Lore Journal," will be prepared for a science of fairy tales, strange as it sounds. It is difficult even in these days of new sciences to think of nursery tales being gravely classified, arranged, and explained—their origin, growth, and metamorphoses shown and elaborately set forth like any other—"organism," shall we say? And to most readers the idea, we may venture to predict, will be both novel and distasteful.

In the first place let us disabuse our minds of the supposition that those delightful stories, "Jack and the Beanstalk," "The man who wanted to learn to shudder," "The Yellow Dwarf," and countless others, were invented to cause a cold chill in the nursery circle, or to stimulate small boys to deeds of daring in countries where the beans are woefully short and feeble. They were told, so we learn, in the first place by men to whom there seemed nothing unlikely in the events related.

Fairy tales are divided into two classes, those belonging to Sagas, and supposed to embody history or account for phenomena, and those simply told for amusement—Märchen. These latter, however, may, and often have been told, at some time or by some other nation as Sagas, but from one cause or another have degenerated into Märchen. There are, indeed, known instances of stories told by some savage tribe to account for the rise of their own nation, "at bottom identical with those told as Märchen among nations that have reached a higher plane."

What is the state of mind of the man who can hear and tell,

without seeing anything extraordinary about them, such incidents as the following, all common and occurring in the tales of nations widely separated both by race and geographical position ?

Lovers, fleeing from a wizard or parent, throw down a comb in the way of their pursuer—it becomes a mighty hedge ; they throw down a bottle of earth—it becomes a mountain ; a bottle of water—it becomes the sea ; a man obtains three oranges, breaks them open one after another, a bird flies out ; on giving the bird water it becomes a beautiful maiden, whom he marries ; a woman, jealous of the beauty of another, runs a pin into her head, and she changes to a bird. Strange things to us, but to those from whom the stories came there was nothing unlikely about them, and if such things did not happen every day, it was simply because there did not arise any sufficient occasion.

In the savage, "first we have that nebulous and confused frame of mind to which all things, animate or inanimate, human, animal, vegetable, or inorganic, seem on the same level of life, passion, or reason. The savage draws no hard and fast line between himself and the things in the world" ("Myth, Ritual, and Religion," by Andrew Lang, Vol. I., p. 47). "Conscious personality and human emotions are visible to him everywhere and in all things. It matters not to the savage that human form and speech are absent. These are not necessary, or, if they are, they can be assumed either at will or under certain conditions—for one of the consequences, or at least one of the accompaniments, of this stage of thought is the belief in change of form without loss of individual identity. The bear whom the savage meets in the woods is too cunning to appear and do battle with him as a man, but he could if he chose" ("Science of Fairy Tales," p. 26).

Such are some of the grounds on which our author and others of the school—which might be called the school of Dr. E. B. Tylor—found their claim for a "Science of Fairy Tales."

"It is not science to fill one's head with the follies of Phœnicians and Greeks, but it is science to understand what led Greeks and Phœnicians to imagine these follies," quotes Mr. Andrew Lang, so they boldly tackle the "follies," and the science grows.

The theory of "confusion in early Aryan thought and speech," as accounting for all the strange stories of the classic mythologies, gives way before the facts of the wide distribution of the tales among non-Aryan races.

The distorted-history theory breaks down also. Mr. Hartland is able to show how our own story of Lady Godiva has no historical foundation, but its incidents and the ceremonies connected with its celebration are traced from Coventry and St. Briavel's to Smyrna and the country of the Mahrattas, and have doubtless some origin quite independent of the good Leofric and Godgifa, Earl and Countess of the Mercians ("Science of Fairy Tales," pp. 71-92).

Mr. Hartland starts from ascertained facts in savage intellectual life. We have first the belief held by savages that man consists of body and spirit; that it is possible for the spirit to quit the body, and roam at will in different shapes; that in the spirit's absence the body sleeps; that the universe swarms with embodied and disembodied spirits—which it appears are as likely to do one thing as another, and that it is the spirit of a rock in it which makes it roll over and crush a man, is not less clear to the savage than that it is the spirit of a man in him which makes him pick up a stone and throw it at a stranger. Again, there is the belief of the possibility of change of form while preserving identity, and the belief that some people have power to cause these changes. In a word, the belief in spirits, in transformation, in witchcraft, accounts for all the extraordinary incidents in the tales of savages, which the evolution of civilization and accidents of conquest and borrowing have degraded from "history" taught and recited by the tribal bards to simple Märchen, still told by the old folk in the chimney corner in out-of-the-way places, but which Miss Edgeworth, in the preface to "Parents' Assistant," declares unfit for children, as they may thereby have their ideas of truth destroyed.

Where so much is excellent and the matter so interesting, it is unpleasant to find fault, but Mr. Hartland's system of references is most confusing. On pp. 120-121 there is a paragraph of 27 lines; in it are 11 different incidents from nine different authorities, all referred to one foot-note, so that it is very difficult to find out who is the author responsible for any particular statement.

To say that this is the only fault in the book is to say more than we know in these early days of the science, but it is at least a most able and interesting exposition of the method and views of the modern school of folk-lorists. Anyone who has carefully read the book will not for the future dismiss as mere nonsense the most wild-sounding superstition; and if the idea can be diffused that perhaps once there was sense in what

seems so foolish now, it may be that intelligent people will carefully note any strange tale or custom of which they may hear, and thus important links be found connecting modern superstitions with long-past religious festivals and ceremonies—the superfluous and unaccountable in civilization with every-day savage life.

Jacob Herbert. A Study in Theology. By the Rev. JOHN EVANS, B.A. London: Hodder and Stoughton.

For a writer to balance the opinions of three different schools of thought after the fashion of the author of this book is a form of literary juggling to which we are now-a-days little accustomed. We always know, however, which ball will come down safest, for each is marked, and one represents the real opinions of the author. Mr. Evans introduces us to three persons, representing the orthodox theologian, the scientific agnostic, and the broad evangelical, and the avowed object of their discussions is to show that more is claimed for science than can be sustained, and that dogmatism is not confined to theologians. Jacob Herbert, Roger Adam, and Jeremiah Smith are the representatives of the three schools above-mentioned, and their arguments are directed to the elucidation of such subjects as the universal belief in God (viewed from the moral, cosmical, and other points), the attributes and personality of God, the theory of evolution, etc. The book can scarcely be called either a metaphysical or a psychological work. It is rather a gymnastic exercise of a semi-religious nature, and it ends by giving the impression that science and religion are not always incompatible, but that where the former fails, the latter (seen from Jacob Herbert's, *i.e.*, Mr. Evans' point of view) is unerring, and if it does not agree with "Science" it is because the latter is incomplete. Surely, this is dogmatism *à l'outrance*, but it is, perhaps, what was to be expected from a divine with a large amount of reading on sectarianism and the political events of the day, a physiological education of rather more than a superficial character, and a knowledge of just such an amount of natural science as may be gained by the study of Darwin. It is not our experience that the best scientific men are inclined to doubt the fundamental truths of religion, although Mr. Evans

rather assumes it, but the book will serve to steady the wavering, and we can recommend it as a fair exposition of the *pros* and *cons* of the questions raised in it. One great feature of interest is that by following up the various arguments as they are propounded, we may anticipate the objections that will be made, and we shall find that Mr. Evans' ingenuity often places things in a new light and leads us to a conclusion that we cannot resist, although at one time the maze seemed inextricable. A philosophic broadness of treatment is conspicuous throughout much of the work, and as the pages bristle with facts of one kind or another, there is no lack of interest to the general reader. The book thus forms a very efficient addition to the armoury of those who have to combat the crudities of neophytes, or the careless statements of others, who, whilst advocating materialistic views, have a very superficial knowledge of the bases upon which theologians rely.

T. C. S.

The Watering-Places of the Vosges. By HENRY W. WOLFF.
With a Map. London: Longmans, Green, and Co. 1891.

The author of "Rambles through the Black Forest" has just placed in the hands of the public an equally interesting little book under the title of "The Watering-Places of the Vosges." Though occupying but a small space—155 pp. in all—it gives much valuable information, concerning over a dozen delightful resorts in the French Vosges. There numerous springs are to be found of various temperatures, diverse composition, and quite close together. At Contrexéville, the author tells us, two springs are to be found issuing from the ground, not a foot apart from one another, which are of totally different qualities. Great changes have taken place in these resorts within a comparatively short period. Bad roads, dirty baths, uncomfortable rooms, and distasteful food have disappeared, and now give place to all that is clean and comfortable. Numerous *établissements* and well-managed hotels have sprung up and supply accommodation more than sufficient for the number of visitors who frequent these watering-places, which are not known as well as they deserve. Indeed, English visitors are few, excepting at Contrexéville and Plombières.

Plombières, situated at an elevation of 1,310 feet above the sea-level, is attractively situated in a narrow valley, "and

for many miles round, the country is charming, a mass of picturesque hills and dales, magnificent forests, with rockeries and cascades, velvety meadows and heathered moor." Twenty-seven different springs are now utilized at Plombières, and bathing establishments are distributed over different parts of the town. Only four of the springs, however, are used for drinking, as the main treatment consists in prolonged baths from half-an-hour to an hour-and-a-half duration. Of the springs used for treatment, one is chalybeate, another is mildly laxative, and the others are alkaline.

The watering-place of the Vosges most frequently resorted to by the English is Contrexéville, and it is the only one which can boast of an English church. Its waters have been generally acknowledged to be efficacious in the treatment of gravel and gout, and large quantities are drunk daily for this purpose, and the export trade of the water in bottles is rapidly increasing. Only three miles from Contrexéville lies Vittel, where the waters are very similar to those of the last place and of service in similar complaints. Martigny-les-Bains, only a quarter of an hour's railway journey from Contrexéville, supplies a cold water which is rich in lithia. Bourbonne-les-Bains, with its springs of 140° to 147° F., has strongly mineralized waters, corresponding somewhat to Wiesbaden. Springs of two different compositions—alkaline and chalybeate—exist at Luxeuil. The other places described are Bains-les-Bains, Bussang with its tonic water containing arseniates of iron, and some small spas on the German or Alsatian side of the Vosges, which include Kestenholz (called by the French Châtenois), Niederbronn, Sulzmatt, Sulzbach, and Wattweiler.

People who are contemplating a visit to the Continental spas will do well to read Mr. Wolff's little book, and physicians who are frequently asked to recommend a health resort will find much practical information here in a small compass. Patients suffering from slight forms of mental trouble associated with gout, might derive much benefit from being sent to one of the watering-places of the Vosges. Analyses of the waters from the various sources are given in tabular form, the complaints likely to receive benefit enumerated, and the historical and geographical relations of the places are pleasantly described. It may be considered a useful guide-book, written by one who is thoroughly conversant with his subject, and we cordially recommend it to our readers.

Atlas of Clinical Medicine. By BYROM BRAMWELL, M.D., F.R.C.P.Edin., F.R.S.Edin. Edinburgh: T. and A. Constable, University Press. 1891.

We are pleased to see the first part of this important work, and hope we may be able to congratulate both author and publishers on succeeding parts as sincerely as we can on the first issue. Myxœdema, sporadic cretinism, and Friedreich's disease (ataxy) are the subjects dealt with in the text. Three remarkably well executed coloured plates illustrate myxœdema; the first two, but in particular the first, are typical, the third is much less so, but is for that very reason the more interesting, for the clinical history, as given, can leave no doubt in the mind as to the nature of the disease. We would suggest that the œdematous sacs under the eyes are not sufficiently strongly put in; one is likely to overlook them, but perhaps our suggestion would force the artist's hand. The injection of the cheeks and nose is, as the author points out, atypical in its excessive degree. Friedreich's disease is fully illustrated, both in its pathological and clinical aspects, and by inserting the genealogical tables of some of the now classical cases, the graphic principle is still more completely carried out. The woodcuts are excellent. A valuable addition to the text, in the case of each disease described, is a section headed the clinical investigation of the disease in question. In this the chief points to which we should pay attention are accentuated. This section, both from a teaching and learning point of view, will prove of much assistance.

Mental disease is well illustrated by coloured plates, *e.g.*, melancholia, dementia, mania. Some of these plates, printed on different coloured papers, are reproductions of older plates. Of all we can speak in high praise of the artistic qualities. The work, if carried out in text and illustration as carefully as it has been begun, will prove a very valuable possession.

Psychologie de l'Idiot et de l'Imbécile. Par le Dr. PAUL SOLLIER. Félix Alcan, Boulevard St. Germain. Paris, 1891.

This is an ambitious and fairly successful attempt to work out the morbid psychological condition which exists in idiots and imbeciles. A short paper on the subject appeared in

1866 in Vol. XI. of the "Journal of Mental Science," but this book contains no less than 276 pages. The author is well qualified to undertake the work, as he was formerly one of Dr. Bourneville's assistants at the Bicêtre, where is a school for training idiots and imbeciles, and he is now curator of the museum at that institution. His object, he says in his preface, has not been to show the more or less frequency of some of their psychological peculiarities, but to make a study of them all.

He describes the sensations, instincts, and sentiments which are known to exist, and examines fully the amount of intelligence, will, and responsibility which idiots and imbeciles possess. He confines his research to individuals who are young in age, partly because his field of observation has been limited to these, but chiefly because the period of youth is the most interesting time in which to study the evolution of the different faculties. He mentions the various definitions which have been given by authors, and maintains that the faculty of attention serves as the best basis of classification. This opinion he defends at some length.

Intelligence, according to Ferrier, is proportionate to the development of attention and to the development of the frontal lobes, and those of us who are engaged in the education of idiots are aware that the frontal lobes are often defectively developed in those whose power of attention is very feeble. Perez has remarked that in young children, as well as in young animals, the most attentive are apparently those in whom nervous sensibility is well developed. Sensation is known to be defective in idiots, so that anatomy and physiology equally tend to show the impossibility of normal attention in these beings. To develop intelligence it is necessary to develop the senses and the muscular movements; but when the relation of the latter to one another is altered one can easily conceive the difficulty of developing the attention.

The author then refers to the three periods which Ribot distinguishes in its formation, and applies the knowledge thus gained in examining the development of this faculty in idiots and imbeciles. Attention is spontaneous or voluntary: the first is the primitive form; the second is the result of education. Imbeciles are almost as difficult to educate as idiots who are a little elevated in the intellectual scale; in the latter it is difficult to attract the attention, in the former it is impossible to maintain it.

Outlines of Physiological Psychology. By GEORGE TRUMBULL LADD. Longmans, Green, and Co: London. 1891.

There has been a general demand for a smaller work, containing the essential parts of Professor Ladd's somewhat ponderous work "On Physiological Psychology," and we are glad that this want has been met by the volume, the title of which is placed at the head of this notice. The larger work we have already reviewed. It was published in 1887 under the title of "Elements," etc. The author points out that the "Outlines" is not a mere abridgment of the former work. Parts I. and III. of the large volume, which treated of the nervous mechanism and of the nature of mind in relation to the body, have, we think wisely, been shortened. On the other hand, Part II., which gave an account of the relations between the excited cerebral organs and mental phenomena, has been enlarged. As a whole, the work forms a valuable text book, and we have no doubt that it will be much used in this country. The illustrations are good.

The Asclepiad. By BENJAMIN WARD RICHARDSON, M.D., F.R.S. 2nd quarter, 1891.

This journal loses none of its interest, and is continued with the same spirit by its unwearied and able author. An account of Dr. William Hewson, F.R.S., constitutes a worthy addition to the valuable series of biographies with which Dr. Richardson has enriched the "Asclepiad." As usual, he has succeeded in obtaining an excellent portrait to accompany the notice.

The prevailing epidemic is treated of under the title "Influenza as an Organic Nervous Paresis," for as such the author regards it. The confusion which reigns in regard to the best remedy is accounted for by our ignorance of the cause. In his experience the speediest relief is obtained from breathing the vapour of ammonia. When, however, the nervous depression comes on, this remedy is useless. Dr. Richardson does not tell us what he should administer for this condition. He only tells us what he should not give. "The successful remedy, when found, will not be an alcoholic stimulant. According to my observation, alcohol has added largely to the dangers of influenza."

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *Retrospect of Criminal Anthropology.*

By HAVELock ELLIS.

Crime and its Causes. By W. D. Morrison, of H.M. Prison, Wandsworth. "Social Science Series." Sonnenschein, London. 1891.

This is an excellent little introduction to the study of criminality in its various aspects. In French there is a somewhat similar book of a more brilliant and elaborate character—Tarde's "*Criminalité Comparée*"—but Mr. Morrison's book is the first of its kind in England, and deserves a hearty welcome. The author is throughout in sympathy with the modern methods of studying criminality; he deals first with the cosmic factors in the production of criminality (climate, season, etc.), then with the social factors (destitution and poverty), and finally with the biological factors (criminal anthropology proper), with a concluding chapter on punishment. At the outset Mr. Morrison shows that crime is not diminishing in England, either in amount or in seriousness, but is on the whole increasing, and he points out the various fallacies which have led to a contrary supposition. In an interesting chapter on Climate and Crime he brings together much of the evidence on the subject, examines the various fallacies involved, and shows that the whole body of evidence, from whatever quarter it is collected, points with remarkable unanimity to the conviction that, as far as European peoples and their offshoots are concerned, climate alone is no inconsiderable factor in determining the course of human conduct. Although this matter has often been dealt with by continental writers, it has not before been shown so clearly that in England and English Colonies the same factor of climate exerts the same influence in increasing or diminishing crimes of violence. The same may be said of the influence of season on crimes against property, which is dealt with in Chapter III. Mr. Morrison shows that the constant augmentation of crime in England during the summer cannot be traced to an increase of drinking, vagrancy, or other social causes, but is due to the influence of season, and "that any considerable rise of temperature has a tendency, as far as Europeans and their descendants are concerned, to diminish human responsibility." He points out that this influence may be traced in prison and out of it, among children in schools, soldiers in the army, workmen in factories. In a chapter on Destitution and Crime, founded on English statistics, Mr. Morrison brings forward arguments to show that the number of offenders who fall into crime through the pressure

of absolute want is five per cent. of the annual criminal population tried before the courts, and that consequently even "although there was not a single destitute person in the whole of England and Wales, the annual amount of crime would not be thereby appreciably diminished." In the next chapter on the allied question of Poverty and Crime, Mr. Morrison shows that where there is most poverty there is least crime. This also corresponds with the result of foreign investigations; in France, for instance, it has been found that crime is associated with prosperity. This fact is in curious contrast with an opinion widely spread to-day. As Mr. Morrison remarks: "It has been reserved for this generation to propagate the absurdity that the want of money is the root of all evil; all the wisest teachers of mankind have hitherto been disposed to think differently, and criminal statistics are far from demonstrating that they are wrong." After devoting a chapter to Criminality in Relation to Age and Sex, Mr. Morrison turns to the biological factor and considers the evidence regarding the mental and physical characters of criminals, and summarizes some of the evidence which enables us to demonstrate that "criminals, taken as a whole, exhibit a higher proportion of physical anomalies and a higher percentage of physical degeneracy than the rest of the community," and that "the bulk of the criminal classes are of a humbly developed mental organization," by whatever scientific term we may choose to describe this low mental organization. In the last chapter on Punishment, Mr. Morrison has little that is new to bring forward, but he gives a good description of the methods now adopted in this country, and makes some sensible remarks on the necessity of properly training prison officers. The book is throughout simply and clearly written, and should do much to revive an interest in the scientific study of criminality in England.

The New York State Reformatory in Elmira. By Alexander Winter. "Social Science Series." Sonnenschein, London. 1891.

Mr. Winter's little book, published simultaneously in England and Germany, is the best available account of the work carried on in the famous "Moral Sanatorium" of New York. It presents in a concise and yet interesting form all the various aspects of that many-sided institution, dealing with the organization of the establishment, the reception, promotion, and liberation (on parole) of the prisoners, their daily routine and diet, the school and library of the institute, the "Summary," a newspaper edited and printed by the prisoners, the technical training and industrial occupations of the prisoners, the results of the experiments in physical training and in military training, together with a summary of the general results attained in the fifteen years during which the reformatory has been in existence.

Fifteenth Annual Report of the New York State Reformatory at Elmira. 1890.

There were 1,500 inmates at Elmira during 1890, 1,111 of whom received trade instruction, while with few exceptions they all received more or less military training. Admirable facilities for the physical training which forms so important a part of the treatment at Elmira have now been provided by the completion of the gymnasium. This includes a Turkish bath with rubbing, warm and hot rooms and plunge, and a light and well-ventilated exercising room, equipped with developing apparatus of approved model and construction. Dr. Wey tells us in his report that 128 men have received treatment in the gymnasium during the year, either for physical renovation, for intellectual or for moral improvement. "The effect upon the dullard of the bath, exercise and dietetics, quickens and widens the scope of motor and sensory functions, draws out latent energy, and establishes in a degree a susceptibility to class-room influences. Thus qualities of cerebration become reasonably certain that were possible but not probable during a continuance of the patient's vegetative state. He needs cyclonic action to institute a proper mental habitude and dispel his crudities of mind. Those selected for ethical improvement were instances of low and faulty bodily conditions operating to the detriment of order and behaviour." The report is followed this year by a most remarkable descriptive appendix, such as has probably never before followed a prison report. "This appendix," we are told, "is entirely the product of inmate labour in the institution. The text has been prepared by the Editor of the "Summary," the illustrations have been made from photographs taken by an inmate operator, and from drawings made by inmates; the etchings were made on the premises by inmates in that special department, and the entire pamphlet (including the annual report) was printed on the reformatory press, and bound at the reformatory book-bindery." The illustrations are nearly fifty in number, half-a-dozen of them representing various aspects of the Physical Culture Department. It must be remembered that the "inmates" of Elmira are ordinary criminals, many of whom would here be convicts. It may be added that of the 324 men discharged on parole during the year, 148 went directly to the trades learned at the reformatory, 127 took other situations in expectation of adopting later on the trades they had learnt, and 49 were given paid employment at the reformatory.

Les Grands Criminels de Vienne. Étude Anthropologique des Cerveaux et des Crânes de la Collection Hoffmann. Par le Professeur Benedikt. I. Hugo Schenk. ("Archives de l'Anthropologie Criminelle," 15 May, 1891).

This is an interesting study, carried out in Prof. Benedikt's usual elaborate style, of an interesting subject, and is illustrated

by a number of tables and diagrams. Hugo Schenk was accustomed to form *liaisons* with old and ugly cooks, and when he grew tired of them, which was usually very soon, he sometimes murdered them. He appears to have been gifted with unusual sexual vigour, and being of a lazy disposition he exercised it for a living. Sometimes, however, his victims were young and honest girls, of whom also he soon grew tired. He was handsome, very intelligent, and an excellent talker. If he had been born a "*grand seigneur*" Benedikt thinks that he would have had a most happy and successful career; and on account of his eloquence would probably have attained high eminence as a statesman. He was executed at the age of 36.

The total weight of the brain was 1,455 grammes. This weight was not, however, in proportion to the cranial capacity (1,700 c.c.m.), and there was a considerable amount of hydrocephalus. The brain alone weighed 1,261 gr.; the left hemisphere being 629 gr., the right, 632 gr.; the cerebellum weighed 194 gr. The brain was very abnormal; thus the hippocampal convolution was separated from the posterior parts of the brain by a fissure (called by Benedikt limbic, or fissure of Broca), which Giacomini had only observed once in man, and then in an idiot. The frontal and parietal lobes on the left side (especially the first parietal convolution) were found to be very small, though here and there abnormally large and with frequent peculiarities. On the other hand there was an enormous development of the external part of the occipital lobe. The brain was therefore marked by a multiplicity of points both of over-development and of under-development. Benedikt hesitatingly suggests the possibility of a connection between the vicious cerebral development of this subject and his excessive sexual activity. "Knowing the intimate relations of the sexual life with all the elements of the intellectual life, with the most various sentiments, with the energy of the will, with the intensity of life generally, and with the visual and cutaneous impressions, it may be said that the centres of sexual life should be found on various points of the cerebral surface. . . In presence of this case one may in fact ask oneself if the occipital lobe and the neighbouring parts of the temporal lobe are not the centres of the sexual faculty; and if this centre is not unilateral and on the left side. One may also ask whether the sexual centre does not possess other localized spots, on the left in the two central ascending convolutions, on the right in the anterior central convolutions and the second parietal." He also suggests that this point might be elucidated by the comparative study of normal and castrated animals; he had begun researches in this direction, but found difficulty in obtaining suitable brains.

On turning to the skull the face is found to be very well developed, the dentition complete and regular, the lower jaw "classic," the orbits large and remarkably high, and the face

generally symmetrical. The head, on the other hand, is very abnormal. The sutures are united to an extraordinary and almost pathological extent for the age (36); internally there are only traces of the sagittal suture; the coronary, lambdoid, sphenoidal and spheno-occipital sutures have disappeared. The cranial asymmetry is also very great, even on simple inspection; thus the parietal region is larger on the right, the parieto-occipital on the left. It is, however, impossible to summarize Prof. Benedikt's minute examination of the various cranial abnormalities. This is the first of a series of studies which promises to be of considerable interest.

Un Faux Regicide. Par Les Drs. G. Ballet et P. Garnier.
("Archives de l'Anthropologie Criminelle," 15th May, 1891.)

This is a report on the mental condition of a man, M. J., who discharged a revolver, having first removed the bullet, in the presence of the President of the Republic. There were no physical peculiarities worthy of mention; the forehead was rather large, the aspect mild. The prisoner speaks with difficulty and cannot easily find the right word. But he seems pleased to talk about the adventures and miseries of his life, and his narrative, though rather confused, has every appearance of perfect sincerity. He has been always in search of inventions and of the solution of problems which are perhaps insoluble. When this tendency is allied to a strong intellect, it may result in genius; when, however, as in this case, the intellectual faculties are feeble, it can only lead to misfortune or even insanity. M. J. is neither a genius nor insane; he belongs to the group which may be described as unbalanced, some of the mental faculties being remarkably developed, while others are almost embryonic. M. J. has always had a taste for mechanics, which has at last become a passion with him. His father would not encourage his tastes and he left home at the age of fifteen. Ever since he has been pursuing his ideal, and endeavouring to save money for his mechanical hobbies. His occupation has usually been that of a waiter in a *café*; he has never been able to be a waiter in a restaurant, because his memory is so bad. Everywhere he has met with misfortunes and disappointments. He exhibited his inventions, some of which, especially a mechanical bed, showed great skill and ingenuity. Yet he has always had a feeble memory and was not able to learn at school. "I can easily understand the working of a machine," he said, "but I cannot recall words or names." But even his inventions are often absurd, and there is no doubt that he is intellectually weak. He has an enthusiastic belief in his own skill, and has long sought means to overcome the indifference of the public. All his attempts to attract attention failed, and he resolved, at last, to discharge a revolver as the President was passing. He meditated his act and was responsible, conclude

Drs. Ballet and Garnier, but he had no criminal intention. He is weak-minded; he is a candidate for insanity, though a candidate who may never arrive. The right place for him is a work-room, not an asylum. In consequence of this report M. J. was liberated.

Dr. Emile Laurent: *L'Année Criminelle* (1889-1890). Lyons and Paris, 1891.

It can scarcely be said that this volume is worthy of the reputation of the author of the "Habités des Prisons." It is the first of a series in which the "celebrated" criminals of the year are to be scientifically classed and analyzed, and the motives and consequences of their crimes considered. "These analyses will thus be," says Dr. Laurent, "studies in criminal psychology, at the same time as studies in moral hygiene." And a short preface by M. Tarde, written in his usual thoughtful and felicitous style, expresses the same idea. But the greater part of the book is founded on ordinary newspaper reports, and, notwithstanding the intelligence with which they are treated, such reports are extremely unsatisfactory from a scientific standpoint. The most interesting section of the volume is that dealing with political criminals, and the interest of this is due to the fact that here Dr. Laurent has taken a wider outlook, not confining himself within the limits he had prescribed. He maintains that political criminals, more even than ordinary criminals, are eccentric and mentally unhinged, or even sometimes feeble-minded. "From the physical point of view, also, political criminals appear to me to present certain particular characters. I have examined a great many portraits of regicides and revolutionaries, and I have found—I do not say constantly or fatally, but with remarkable frequency—certain morphological abnormalities, exaggerated prominence of the orbital arches and of the cheek-bones, prognathism or elongation of the lower jaw, and, in women, the characteristics of virile physiognomy, already noted by Lacassagne and Lombroso as common among criminals, and, I would add, among the insane." There is a curious chapter on Boulanger and the Boulangists, in which the physical and moral characteristics of Boulanger and his followers, Rochefort, Dillon, and Naquet, are presented in a very unpleasant light as abnormal, eccentric, or feeble. Dr. Laurent finds some significance in the fact that a year or two ago Boulanger was extremely popular among the insane and imbecile in asylums. The volume is illustrated by twenty-four portraits.

Le Crime en Pays Créoles. Par le Dr. A. Corre. Lyons and Paris.

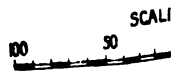
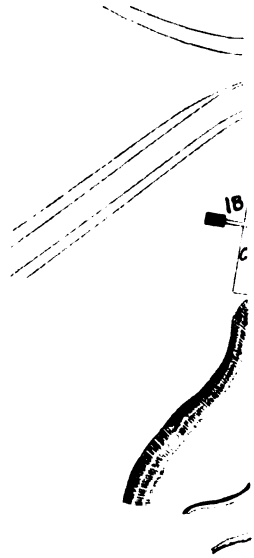
This "natural history of crime, as it may be observed in countries of old French civilization, but of distinct races and opposite tendencies," is by the author of "Les Criminels" and of other

valuable monographs in criminal anthropology; his experience of Creole lands has been gained both as physician and magistrate. The term Creoles (*criollos*), applied originally only to children of white race born in regions conquered and exploited by their fathers, is now extended to all elements of the population, white and black, found on the spot. Dr. Corre deals with Martinique, Guadeloupe, Guiana, and Réunion, and considers the general evolution and history of criminality in Creole countries, the general factors of local criminality, the special forms of Creole criminality, and the forms of imported (coolie) criminality. A considerable portion of the book deals with the painful record of the cruelty and oppression of the whites towards the blacks. The epoch of emancipation led to a period in which both sides practised abominations. Now, criminality is diminishing, though it is still large. Emancipation, Dr. Corre concludes, has certainly ameliorated the negro. His chief motives of crime are passion and superstition; his sexual instincts are strong and he is quarrelsome, but not cruel; he has few needs and is not avaricious. Dr. Corre is strongly of opinion that the social order best adapted to the white races is not suited to the negro.

L'Anthropologie Criminelle. Par le Dr. Xavier Francotte.
Bruxelles, 1890.

In this reprint from the "Revue des Questions Scientifiques," Professor Francotte, of Liège University, brings together into a small space a considerable mass of the alleged data of criminal anthropology. The author's own conclusions are confused and uncertain. At one moment he appears to accept the scientific attitude in approaching these questions of medical jurisprudence, and the next moment he faces the opposite way. He is hardy enough to affirm that the treatment of the body can have no influence on the passions and vices of the mind, and considers that the prison chaplain is amply competent to cope with crime. The experience of Elmira may be unknown to Professor Francotte, but Elmira is founded on a truth which was known very long before the reformatory was established. In conclusion, the writer repeats a very reasonable wish, often expressed before, that lawyers should be initiated in legal medicine and criminal anthropology. The lawyer must either be competent to decide in medico-legal matters, or he must, to some extent, give place to a competent medico-legal tribunal. There seems to be no other way of stating this dilemma.

1. STEWARDS OFFICES
2. OBSERVATION AND RECEPTION ROOM FOR WOMEN
3. *do.* *do.* MEN
4. *do.* *do.* WOMEN
5. *do.* *do.* MENA
6. INFIRMARY FOR WOMEN
7. *do.* MEN
8. HOUSE OF DETENTION FOR WOMEN
9. *do.* MEN
10. HOSPITAL
11. OBSERVATION STATION FOR WOMEN
12. *do.* MEN
13. POST WOMEN HOUSE
14. WATER TOWER
15. KITCHEN BUILDINGS
16. LAUNDRY
17. DETACHED VILLAS FOR WOMEN
18. MORTUARY
19. BREWERY
20. SHEEP AND CATTLE HOUSES



2. *German Retrospect.*

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

So much attention has been directed for some considerable time, and is more especially at the present moment, to the provision for the insane in separate buildings on the same estate, that we have thought it would be of some interest and profit to give a brief description of the now celebrated asylum in Germany, near Leipzig, called "Alt-Scherbitz," which we visited last autumn. A plan is appended, as we think there ought to be a permanent record of it in this Journal.

We give, at the same time, a short description of another asylum we visited in Germany, "Gabersee," near Munich, the buildings of which are arranged on the same principle.

These are examples of the pavilion, or, as some term it, the cottage plan. In a few instances the number of patients in one building is larger than was originally associated with the idea of a pavilion—still less a cottage.

To illustrate still more fully the system now gaining an increasing number of supporters among asylum men, we add a few references to asylums of a similar character in the United States, where the principle receives the name of "Segregation," that is to say, "a separation from others" (Johnson). The institutions we have now in view are the Willard Asylum and Kankakee.

Lastly, as in some measure pointing in the same direction, although not so fully carried out, we refer to Craig House, Morningside—which aims at very complete differentiation by classification in separate wards, as well as in distinct buildings—which may profitably be studied in connection with the arrangement of the buildings adopted in Germany and America, to which we are now drawing the attention of the readers of the Journal.

Alt-Scherbitz.

We met Dr. Paetz, the medical director of this asylum, at the Berlin Congress, August, 1890, and he kindly made arrangements for our visit, although unable to return home himself at that time. Taking the train from Berlin to Halle, one changes there, and proceeds on the Halle and Leipzig line until the station Schkeuditz is reached. Thence to the asylum of Alt-Scherbitz is an easy walk of little more than a mile. It is one of the asylums of Saxony, the other being situated at Halle. It was projected by John Maurice Koeppe, who was the first superintendent, occupying the post until 1869, when he died, and was succeeded by the present superintendent. The asylum was designed for the curable and incurable of both sexes. A committee, composed of a certain

number of the Assembly of the Province of Saxony, meets from time to time, in order to direct the affairs of the institution. Practically, however, the Medical Superintendent manages the asylum. It is nominally subject to the State. It was opened fifteen years ago.

The impression received on approaching the institution is an agreeable one, and conveys no idea of the object for which it is designed. The road from Schkeuditz to Leipzig goes through the estate. On the estate were fields of corn, some of which was cut, and was being carried in waggons drawn by oxen at the time of our visit. The trees on the grounds half conceal some of the buildings, while the river Elster winds its way through meadow and orchard. When one thinks of some of the gigantic and monotonous structures which have grown up in England as county asylums, one is thankful, indeed, that the spirit, under the influence of which such cumbrous piles of buildings have been too frequently erected, was far away, and could not desecrate this pastoral scene. Dr. Yellowlees could not pronounce Alt-Scherbitz to be "another gigantic mistake."

Dr. Hordt, Assistant Medical Officer, showed us round, and imparted all the information in his power during the two long visits on the succeeding days we spent there. The great help which was rendered us by the very intelligent Carl Wichmann, who has charge of the grounds, and superintends the gardening operations, must be here acknowledged. He has been in England, and speaks English perfectly.

There are six medical men on the staff, including Dr. Paetz, being about one doctor to 116 patients.

Alt-Scherbitz provides for 700 patients, and will eventually allow of 1,000 being under care. Provision is made for the poor, the middle classes, and the rich, the character of the accommodation varying according to the amount paid. One-third of the patients are in the central building, the remaining two-thirds in villas. The average cost per bed, without land, was only 1,000 marks (or £50); the land cost 50,000 marks, or £2,500. One villa cost 43,000 marks, or £2,150, and provides for 30 patients, being at the rate of about £70 per bed (above the average).

Of the 700 patients 630 are either paid for by the parish, or are in very poor circumstances. The remainder—70—belong to a higher class, and consist of two divisions, one paying £80 a year, and the other £40 a year.

For the better patients of the first class the furniture is very good; for the second class the rooms are not quite as well furnished, but are excellent. A villa, providing for some patients of these two classes, was built in the style of a Swiss chalet.

In a villa, providing for 36 patients of the third or pauper class, there were three sitting-rooms downstairs, and three dormitories above. In one bedroom were 13 patients. There is a large dining-

room, where all meet at meals. There is a small kitchen, but the dinners are not cooked in it, but in the one large kitchen, which is provided for the whole asylum.

There is a villa for the same number of patients (36 females) who are excited, but not dangerous. There are four attendants. There is a sewing room, to which poor patients from the central building also come. The airing-court is, in truth, a pleasant garden.

In another villa, for 24 poor women, there were two large dormitories, there being an attendant in each. Here was a sewing-room also, and 15 patients were at work. A patient was sitting under a verandah at the front door. In most of the villas the open-door system is carried out.

The villas have two storeys; the administrative buildings of the central asylum have three storeys.

Although the institution was opened in 1876 some of the buildings are still unfinished, namely, two additional villas for the female and one villa for the male patients. About 80 per cent. (male and female) of the patients are employed; on the farm 130 men are at work. An epileptic patient has the charge of the pigs. There are 80 cows; some of the women patients were engaged in milking. In the fields men patients were cutting the corn, and a group were engaged in shelling peas. There are workshops for carpenters, tailors, etc.

There are pavilions for the men and another for the women of the chronic infirm class, each building containing 50 to 60 patients.

To meet the difficulty arising out of the distance of some of the villas from the central kitchen, the meals are sent in a four-wheeled conveyance. There are tin boxes for the food and the milk. The vehicle is large enough to supply all the separate buildings in two visits, but as the women patients' buildings are near the kitchen they carry a good deal by hand. It occupies about ten minutes for the conveyance to go from the kitchen to the most distant villa.

It should be stated that bricks are made on the estate. Sufficient details have now been given to convey an idea of the kind of provision made for the various classes of patients received into this asylum. In the plan which is appended it will be seen that the central buildings consist of blocks, including the administrative offices, the observation stations for men and women, the hospital in the centre, the houses of detention for both sexes, and the reception rooms for the men and women of the third social class, while outside this central group there is an infirmary and reception rooms for men and women of the first and second class. In front is a large pleasant garden, while to the spectator's right are two buildings of considerable size, called the "Emperor William-Augusta Foundation." The high road to Leipzig, already

mentioned, separates the buildings we have enumerated from the pavilions or cottages. It would be seen that these are scattered about and are surrounded by plantations, fruit gardens, and pleasure grounds, the men's colony being to the east, and the women's on the west. Some of the villas have been in use in former times in one way or other. No. 32 was the old inn.

Gabersee.

This is an asylum established near Munich. When completed there will be provision for 500 patients, men and women.

On entering the grounds one sees on the right the administrative building, an unpretentious erection, and a little further on to the left the house of the Medical Superintendent. Next in position is the building in which there is the kitchen, washhouse, mangle and drying rooms, store room, dwelling rooms for the head cook and laundry women, and provision for 16 female patients who work. There is also a sewing and day room.

We then have three entirely distinct pavilions for female patients, the first being for the tranquil, the second for the semi-tranquil, and the third for the excited. These pavilions are separated by gardens and wood from three exactly similar blocks for the male patients.

The pavilions are built of red brick with slate roofs, and consist of ground floor and one storey. There are 30 patients accommodated in each, or, in all, 180, to which number must be added 30 in the house on the farm, 16 in the administrative building, and 16 in the block containing the kitchen and other offices, making a grand total of 242. When the additional buildings are completed the total number of patients will be 500.

The cost of each pavilion ranges from £1,500 to £2,000.

On the general plan of the estate, an unoccupied space to the west remains. Upon this will be erected a pavilion, to be called the reception house, where patients can be admitted in the first instance after admission.

Another pavilion will be used as a hospital. A third will be partly used for accommodating the second medical officer and the chaplain. Lastly, there will be other pavilions in the cottage style, containing from 20 to 30 beds in each.

It must be stated that to the east of the existing pavilions and equi-distant from those for the male and female patients is the chapel, and that still further east is the mortuary and post-mortem room.

About 100 of the men are employed, and about 80 of the women.

The estate covers 250 acres.

All forms of mental disorders are admitted, but there are very few idiots.

The medical staff consists of a Superintendent and two Assistant Medical Officers, or one to 80 patients.

The weekly charge is 8s. 2d. per patient.

No mechanical restraint of any kind is used.

Kankakee.

In the United States there are at least two remarkable institutions built on the principle of providing a large number of buildings distinct from the central one.

In Illinois, the Eastern Hospital for the Insane at Kankakee provides for about 1,500 patients. The cost per bed for the buildings was £112, and including the land £116. It may be stated that the cost per bed of thirty-one institutions for the insane in America, built on the old-fashioned plan, was £236. The number of acres at Kankakee is 476. There are one central and eighteen detached buildings, built of stone with slate roofs. The central building for both sexes, three storeyed, provides for 275 patients. Taking the detached buildings, which accommodate 1,225 patients, the cost per bed was only £76. They consist of two storeys. These buildings are about 85 feet apart.

As to the medical staff, we can only state that in addition to the Medical Superintendent, there were three Assistant Medical Officers at the time of our visit in 1884, but at that time there were only 615 patients, some of the buildings being in course of erection. This is a proportion of about one medical officer to 150 patients.

This institution has been in operation sufficiently long to test the wisdom of the plan adopted of a central building with a large number of entirely distinct pavilions. We are able to give the opinion of a high authority who has watched the experiment from the beginning to the present time with great interest. Mr. Frederick Wines says :—" Kankakee has already accomplished all that the originators expected from it. It shattered at a single blow the superstitious veneration formerly felt for the old-fashioned type of hospital construction. The ideas embodied in the Kankakee Asylum have been more or less carried out in three other institutions, namely, at Toledo (Ohio), at Richmond (Indiana), and another in Dakota. A new asylum for pauper insane on Long Island (New York) resembles it, although it owes its inspiration not so much to Kankakee as to Alt-Scherbitz. The other Superintendents of Institutions for the Insane in the United States are beginning to take the ground that a cheaper style of architectural construction is indispensable, and that detached villas in connection with existing asylums are practicable and the best method of providing for an increase of insane patients."

*The Willard Asylum.**

The other institution in the United States to which we have referred is the Willard Asylum in the State of New York, the object in view being (1), economy of construction; (2), economy of maintenance; (3), facility for taking patients out to work on the farm. It provides for 1,800 patients, the largest number in one asylum in the United States. In the main building there are 600 patients, but the Superintendent considers that half the number would have been much better. There are twenty detached blocks. Experience has convinced the Superintendent that it would have been preferable to have had only 50 patients in each. It is found possible to erect these buildings at a cost of £50 per bed, exclusive of land.

This State Asylum was opened in 1869 for the chronic insane of the indigent class, but we observe that during one year 106 cases of acute mania and eight cases of puerperal mania were admitted, so that it is evidently not restricted to the incurable class. In fact an Act of the Legislature creating the Willard Asylum required that recent as well as chronic cases should be admitted. The guiding principle in the building has been the segregation of patients according to their mental condition, the buildings being so placed that they would permit economical enlargement of the asylum by the erection of similar blocks. It has been found that this plan has materially reduced the cost of construction, favoured a good classification, and increased the health and happiness of the patients. It allows of an increase of accommodation when necessary in such a way as to "obviate the objections to a large establishment under one roof."

The Willard Asylum is stated in a recent report to have involved a total expenditure for the erection of buildings of all kinds, land, furniture, waterworks, and all purposes, except salaries and maintenance, of £297,968, the capacity of the asylum being 1,800 beds, or £165 per bed.

The number and position of the buildings are as follows:—

1. The main building.
2. A group of five buildings for men, 1,400 feet east of the preceding.
3. Further east—1,700 feet—a similar group.
4. An infirmary for 150 men, located 700 feet from the preceding group.
5. An infirmary for 225 women, 1,800 feet east of the same, and one mile from the main building.
6. A detached block for 250 women, 350 feet south of the main building.

* For the part taken by Dr. Chapin in the organization of this institution see "The Insane in the United States and Canada," by D. Hack Tuke, M.D., 1885.

7. A similar group for women, 400 feet further south.

The Willard Asylum covers an area of 930 acres.

To the foregoing description should be added a statement in a recent article on the institution by one of the medical staff:—

“Since the inception of the Willard plan many asylums have adopted the principle of the segregation of a large number of the insane in separate asylums upon a great farm, with accessible out-of-door work for the strong, and a main hospital or building for acute cases and for the more feeble and infirm. The increased personal liberty which results, the larger freedom enjoyed, the classification of the disturbed and quiet and of the demented, helpless class, which is thus rendered possible has an everlasting effect upon the whole population thus provided for. . . . The nearer an asylum can be made to approach the village household, and still serve the purpose of a useful institution, the better it will become. The poor do not require and do not appreciate extravagant surroundings and palatial structures to which they have never been accustomed in their own homes.”

In the examples we have given there is a full recognition of the institutional as well as the pavilion or cottage system. In insisting on the importance of the latter it is not intended to detract from that of the former. We wish to show, however, that there may be a considerable number of isolated buildings, along with sufficiently effective supervision, and without any practical difficulty in the supply of hot meals from the kitchen in the central building.

Craig House.

Dr. Clouston in his plans of Craig House has endeavoured to combine the advantages of a central building and villas to as great an extent as possible. How different classes of cases shall be distributed must depend upon the careful consideration of the mental condition and tastes of each patient. It is very important, however, for the guidance of those who are providing accommodation for the insane to have some general rules before them—the outcome of large experience. For this end, we add the distribution of patients, which Dr. Clouston proposes to make in the new building, including the separate houses.

The exact problem before him was to provide accommodation for 190 patients of the more educated and richer classes, each paying from £80 up to £1,000 a year, and on the assumption that he would have about 80 admissions of new cases a year of every kind of mental disorder. He had long before laid down the principle for asylum construction that “the house should be adapted in its various parts to the various mental states of the patients it was to receive,” and he had to provide also for a certain degree of classification for the rates of board paid. The hospital

and the home ideas had to be combined in different degrees in different parts of the new institution according to the mental state of the patients who inhabited them. Before carrying out his principles into stone and lime, Dr. Clouston states that he went carefully and repeatedly over his individual patients at different times, both alone and with his chief heads of departments, classifying them to the best of his judgment according to their medical requirements.

It was thus a classification of individuals each known intimately to him from a medical point of view. The progress of the cases from the acute into the convalescent or chronic stages was taken into account in the classification, each stage being assumed to require a change of ward or house.

Dr. Clouston's final conclusions were as follows, and he has provided for them in his plans:—

The 95 patients of each sex he divided into ten groups. Of these groups three are to live in three distinct and separate houses not attached to the central buildings, or necessarily very near them, one of them being at the seaside twelve miles away, and of the whole number of patients about 25 per cent. are to occupy those three separate houses. The next three groups are to live in three houses—not “wards” or “pavilions,” as ordinarily understood—attached to the central buildings by glass corridors. Those houses will contain about 25 per cent. of the patients. The last four groups are to occupy four wards in the central building, near the medical officers, and consist of the remaining 50 per cent. of the cases. Those wards are to be of two distinct kinds, differently constructed and arranged, two “corridor wards” and two “domestic wards” to give variety.

The first three groups, those in the distinct houses, are to consist mostly of the convalescent and the safe, the moderately sociable, and those generally near sanity and not much liable to deteriorate mentally, in fact, those who would be happier there. The doors of the houses will not be locked, and in each house both sexes may live and dine together. A lady companion will be at the head of each.

The next three groups in the attached houses are to consist of the convalescing, those needing more medical supervision, those who are more or less social. Some of them may need night nursing and attention. One of those attached houses is a Hospital or Infirmary for the sick and those needing much and special bodily nursing and care. A trained bodily nurse is to be in charge, and the patients will dine there. In the other two there will be lady companions for the ladies. All the patients in the attached houses will go to the central dining-rooms in the main building for meals, except the sick. They will go much to this central drawing-room, bowling alley, billiard-rooms, and to other amusements in the evenings. The mildly melancholic cases, for whose

disease amusements are so directly curative, will be chiefly in these attached houses.

The last four groups, those in the four central wards, will consist of the acutely excited, the dangerous, the very suicidal, the cases of chronic excitement, the dirty, the very demented, the very delusional cases, and those who tend to rapidly deteriorate in habits. Nearly all these will dine in the central dining-rooms, of which there are five, to secure classification. Two of these wards will, with the infirmary, be for the reception of most of the acute recent cases who need special study, special care, frequent medical visits, and constant watching by day and night. By means of these arrangements and this classification Dr. Clouston hopes to provide for each patient, in the degree his case requires, the following most desirable things, viz. :—

1. Medical study.
2. Supervision.
3. The therapeutic contact of sound with unsound mind.
4. Recreation.
5. Social enjoyment.
6. Safety.
7. Changes of conditions and surroundings as the symptoms require.
8. Tests of recovery.
9. Individualization.
10. Antagonism to a dull monotony of life.
11. Leaving the institution contented, with the feeling that he had not been shut up and "associated with lunatics" most of the time he had been under treatment.

Dr. Clouston does not advocate these exact arrangements as being necessarily the best for a pauper asylum, but he contends for the application there of the general principles he has followed out.

We might sum up his arrangement for each sex as follows :—

1. Three distinct houses for convalescent and quiet cases, to contain 25 per cent. of the whole.
2. Three houses attached by glass corridors—one of these being a hospital—for the improving, the quiet, the mild melancholics and the sick, and those needing special nursing and medical care, 25 per cent.
3. Four wards in central buildings near the medical officers—two of them being distinct in arrangement from the other two—for the acute cases, the dirty, the destructive, the very suicidal, the dangerous, and the troublesome, nearly all of whom require constant medical care and observation, 50 per cent.

3. Therapeutic Retrospect.

By HARRINGTON SAINSBURY, M.D.

The Sedative and Hypnotic Action of Atropine and Duboisine.—Dr. Nicolaus Ostermayer (Budapesth) reports an undoubted sedative action as belonging to atropine, also, indirectly, a hypnotic action, in that the drug by lessening reflex irritability predisposes to sleep. In this latter action atropine would, according to the author's view, resemble the bromides, sleep being favoured by rendering the organism less susceptible to disturbing influences. The author regards atropine as decidedly less certain and less powerful than hyoscine, but as free from the danger of causing collapse. With continued use the dose must be raised. Disagreeable by-effects were witnessed in one case, viz., diarrhœa and vomiting. Atropine may be tried in cases in which morphine and hyoscine have proved ineffectual; it is scarcely a drug to have recourse to in the first instance. The dosage employed was 1-2 mg. ($\frac{1}{75}$ - $\frac{1}{35}$ grain) pro dosi, injected subcutaneously. The largest dose pro die was 3 mg. (about $\frac{1}{15}$ grain).

Duboisine, the sulphate, is a prompt and powerful hypnotic and sedative in the stage of excitement of psychic disease. The effects of the drug generally appear in from 10-15 min., and sleep is produced in about 20-30 min. The dose in cases of much excitement should be 2-3 mg. ($\frac{1}{15}$ - $\frac{1}{15}$ grain), but in sleeplessness without motor unrest half this dose. No serious toxic symptoms or bad after-effects follow these doses. Habituation shows itself with prolonged use. The author recommends the use of duboisine in place of hyoscine, especially in cases of circulatory trouble. Duboisine is much cheaper than hyoscine.

Dr. Serger, of Sachsenberg, reports unfavourably of the use of hyoscine in the treatment of mental diseases; in this he agrees with Gnauck. The inconstancy of the action of hyoscine and the very unpleasant by-effects, e.g., dryness of the throat, difficult swallowing, hebetude and lassitude, but above all important circulatory symptoms, these render the drug unsuitable as a hypnotic and sedative.—"Therap. Monatsh.," Mch., 1891.

These results, apart from their practical significance, are of interest as indicating that these alkaloids, hyoscine, atropine, and duboisine, must be isomers of and not identical with each other.

Sulphonal.—A new method of administering this compound is recommended by David D. Stewart in the "Medical News" for 1891, No. 5. The sulphonal is to be dissolved in boiling water, say about 6 oz. ($\frac{3}{4}$ tumbler), agitation accelerates the solution, then cold water is to be added carefully, so as to cool the drink just sufficiently to enable it to be swallowed. Some flavouring agent,

e.g., peppermint, may be added to cover the bitter taste of the drug. Taken thus sulphonal acts much more promptly and more efficiently.—“Lancet,” Feb. 21, 1891, and “Therap. Monatsh.,” Mch., 1891, p. 216.

Piperazine in Mental Affections.—In the April number of the “Therap. Monatshefte” Drs. Schultze and Umpfenbach report on experiments with piperazine in the asylums of Bonn and Andernach. In the last number of this Journal we referred to experiments made with piperazine, and we drew attention to the contrast between its action and that of the spermine of Professor Poehl, with which piperazine was at first thought to be identical. The present observers confirm the negative aspect of the subject which we then recorded, for they fail to find in piperazine the powerful tonic action claimed for spermine by Poehl and other observers. Schultze employed the subcutaneous injection of the drug in doses of from 1 centigramme to 1 decigramme ($\frac{1}{4}$ grain— $1\frac{1}{2}$ grains); he records over 200 injections. The injections were painful, so much so in some cases that they had to be discontinued; they were frequently followed by a weal at the site of the injection, with surrounding hyperæmia, but never was an abscess occasioned. Thirty-three patients received the injections, and of these 11 suffered from melancholia, 4 from stupor, 3 from senile dementia, and 4 from general paralysis. Schultze was unable to detect, either by the finger or sphygmograph, any signs of a more vigorous circulation after the injections. Of sixteen patients whose muscular power was tested by the dynamometer as carefully as the method admits of, only one showed a decided increase of strength. The method, however, is obviously a very coarse and uncertain one, and could only be used advantageously on a large scale. Subjectively, several patients maintained that they felt much stronger after the injections, and that they had slept unusually well; but injections with sodium chloride proved equally beneficial with one exception, that of a case of delirium tremens, who in the convalescent stage suffered much from restless nights and during the day was very fidgety. This patient expressed his sense of improvement after the injections of piperazine only.

In two cases—one of dementia in a woman, the other a paralytic, a man—the effects, whether post or propter, were harmful. The woman became very restless and garrulous, and in the end had to be transferred to the quarter for restless patients. After improvement, a repetition of the drug in half-dose brought a return of the unrest. The paralytic suffered from an epileptiform attack within twenty-four hours after each of two injections, though for some six weeks before and twenty days after no attacks occurred.

The four cases of stupor were in no wise benefited.

These observations suggest that in piperazine we have a base which differs from the spermine of Poehl, and, indeed, MM. Majert and Albrect-Schmidt, of the Schering Laboratory, come to this

same conclusion on the ground of the chemical reactions of the two bodies.

Dr. Umpfenbach, working with the same product, viz., Schering's pure piperazine and the hydrochlorate of piperazine, administered it by the mouth in doses of 7.5 grains several times per diem, and subcutaneously to the extent of about 4.5 grains pro die. (The watery solutions of these salts do not keep very well, they become turbid.) He records that some pain is excited by the injections, and that induration may follow and persist for some weeks.

Umpfenbach experimented on some sixty cases. In three cases out of eighteen, marked by anergic stupor, there appeared to be some stimulation of the faculties. In melancholics no benefit resulted. In three cases of dementia (Blödsinn) an unusual restlessness developed, and in the case of a melancholic woman with hallucinations the unrest and anxiety were much increased.

In certain cases of nervous affection, e.g., disseminated sclerosis, hereditary chorea, epileptic tremor, tabes dorsalis, piperazine was tried, but without noteworthy effect.

Umpfenbach concludes that piperazine does not show any decided effects as a nervine tonic.

A few cases which he records show a decided influence upon the kidneys, the flow of urine being notably increased, and in one case of albuminuria the loss of albumen much diminished. The experiments in this direction are but few.

Somnal is reported on by Dr. Umpfenbach in the May number of the "Therap. Monatsh." p. 289. He leaves open the question of the chemical constitution of the body, viz., whether it is a simple mixture of chloral hydrate and urethane in solution in alcohol, or whether it is a definite compound. He employed it in doses of 2-4 grms. at night, rarely 6 grms. (30-60 grains, rarely 90 grains). It was given in water with a little syrup.

On healthy people, attendants, etc., it for the most part gave good results in simple insomnia; in insomnia from pain it did not serve.

In mental cases it was tried on 70 individuals, ranging between the ages of 15-76 years. Twenty-eight of the cases were acute, the remaining 42 were treated during periods of excitement and noisiness; in a few cases only was there simple insomnia. The desired effect was attained permanently in 33 cases, temporarily in 13 cases; in 24 cases it was absent.

Strangely, Umpfenbach finds a very striking difference between the effects of the drug on men and women. It is far more effective with the former. The differences in his results are so marked that according to them *somnal* would be a bad hypnotic for women, but a good one for men (of the 70 cases, 36 were women, 34 men). Where *somnal* was effective it acted in from $\frac{1}{2}$ - $\frac{3}{4}$ hour, some five hours' good sleep were obtained, and no bad effects followed, with few exceptions. In these latter, headache, confusion, unrest,

vomiting were among the symptoms, but they were not prominent. No case of eruption occurred. The effect of age was not obvious. The general nutrition of the patients did not suffer.

Nutritive Enemata.—According to Huber ("Correspond. Blatt. für Schweizer, Aerzte" 29, 1890) eggs are best adapted for injection if given along with salt—for each egg 15 grains of salt. Of the egg about 12 per cent. is absorbed. Each enema should contain two to three eggs, and be given two to three times a day. An hour before the first nutritive injection a cleansing injection of simple water should be given. The injection should be thrown as high up the intestine as possible by means of a long soft tube. From time to time peptone injections should be given, milk and egg, broth and egg, etc. For the intestines also, so we read, the saying holds *variatio delectat!*—"Therap. Monatsh.," May, 1891, p. 319.

The Treatment of Epilepsy by the Combined Use of Bromides and some Agent capable of producing Anæmia of the Nervous Centres. By V. POULET, Bulletin général de Thérapeutique.

The following are M. Poulet's conclusions:—

The bromides constitute the basis of the treatment of epilepsy. Among them the bromide of gold does not possess the advantages ascribed to it by some, and must yield the palm to the bromide of potassium.

There are always a number of cases of epilepsy which though benefited by bromide treatment are not as efficiently treated as they admit of being.

In such cases the addition of one of the following drugs, calabar bean, picrotoxine, belladonna, and, in cardiac epilepsy, digitalis, will frequently bring about the desired result, viz., the suppression of the attacks. This will hold in general for epilepsy, pure and simple, as well as for many cases of Jacksonian epilepsy, though in this latter disease the search for the exciting cause, and its removal where possible, must always precede the above palliative treatment.

The sulphates of eserine (physostigmine) and atropine may replace the use of the crude drugs, calabar bean and belladonna, and digitaline may replace digitalis.

The selection from among these drugs will be in most cases haphazard.

The doses suggested by M. Poulet are: $\frac{1}{4}$ to $\frac{1}{2}$ grain of sulphate of eserine or picrotoxine, and $\frac{1}{16}$ to $\frac{1}{8}$ grain of atropine sulphate in addition to the bromides, which the author gives in general to the extent of 75-90 grains to women, 105-120 grains to men. These, of course, will be pro-die doses. In place of the alkaloids about 30 drops of the tincture of calabar bean or 12 grains of the powdered bean; 30 drops of the tincture of belladonna or 7.5 grains of the powder.

In cardiac epilepsy 24-30 drops of the tincture of digitalis or about four grains of the powder may be given along with the bromides.

The doses of the tinctures will be of preparations according to the Codex Français.

Antipyrine in Mental Disease. By M. ROSCIOLI. "Annuaire de Thérapeutique," p. 125.

The author has employed antipyrine in doses ranging between 4-7 grammes (60-105 grains) pro die in the treatment of epilepsy, with the result of diminishing the number of attacks. Antipyrine thus used acts more rapidly than bromides, but less enduringly. The mental torpidity of bromism tending even to dementia is not observed in the case of antipyrine, or rather, it should be said, that the torpidity of antipyrine is very fugitive. Antipyrine has completely failed in the hands of M. Roscioli in the treatment of mania, of melancholia, and of general paralysis, *i.e.*, it has failed as sedative and as hypnotic (*Il Manicomio moderne*).

The Insomnia of Children. "Annuaire de Thérapeutique," p. 143.

M. Jules Simon, commenting on the treatment of infantile insomnia, insists on the value of opium, which, in spite of the endeavour to proscribe it, is "the king of hypnotics." The precautions to be adopted in the case of opium are to withhold it if there be constipation, scanty urine or pruritus (?) (*démangeaisons*). Saving such, to administer it in half-drop doses under twelve months, and for each year above this to add one drop of opium to the mixture.

The syrup of codeine is an excellent hypnotic. Dose, one teaspoonful of the syrup in a mixture if the child be a year old, half a teaspoonful if under one year.

The bromides may be given in 4.5 grain dose at six months, 7.5 grains at one year, after this in 15 grain dose. These represent the total dose pro die; it is best given at one time, *horâ somni*. The administration should be interrupted after 5-6 days, and then resumed. Chloral may be administered in the same doses as the bromides, and best as an injection in emulsion in the yolk of an egg, along with a little camphor water. Chloral is especially indicated if convulsions threaten.

[We should be inclined to hold the dosage of chloral here prescribed as unsafe. Fifteen grains of chloral for a child of, say, 2!]

4. Swiss Retrospect.

Histological Technique of the Central Nervous System. Methods of Staining. By A. MERCIER, M.D., Assistant Physician in Burg-hölzli Asylum, Zürich.*

In dealing with this subject I must mention the preliminary steps in the preparation of sections, and since the hardening of pieces of the central nervous system is perhaps the most important part of the whole process, it will be necessary to enter into many details which are not usually given. I shall also have to describe shortly the manipulation of sections, and, to ensure success, may have to describe things which may seem foreign to the subject, but which are really essential. The subject will be divided into sections.

SECTION I.

Portions of the central nervous system which are to be hardened must first be carefully removed. The best method after removal of the brain and spinal cord (the dura mater of the latter having been opened up) is to cut the tissue into smallish pieces, *e.g.*, not exceeding two or three c.m. across. The site whence each portion was obtained is to be recognized by placing each in a separate and labelled vessel. This should be done as soon as possible after death, care being taken that the pieces do not get soiled in any way. They must not be touched with the fingers, but the whole operation performed with scalpel and forceps only; these instruments must be handled most delicately. Pieces must not be washed before being put into the hardening fluid. If the pia-arachnoid is not easily separable the piece must be allowed to harden in the fluid till the membranes can be removed with safety.

As to hardening liquids, alcohol serves well for anatomical preparations, but not for the preparation of sections which are to be stained, since some reagents, *e.g.*, carmine, fail to stain sections which have been in alcohol, even for a short time.

Potassium bichromate is essential for hardening purposes when the myelin fibres are to be stained. The liquid most usually employed is known as Müller's liquid. Its formula is:—

Potassium Bichromate	20 grammes.
Sulphate of Potash	10 "
Distilled water	1000 "

Although this liquid enjoys a great reputation, its employment has appeared to me to have some disadvantages, *e.g.*, it hardens unequally. This is most observable when large pieces are taken; but even small pieces may not be hardened centrally when the outside is quite hard. This is the experience of others besides myself. Moreover, several methods of staining are not available when Müller's liquid has been used. The solution I prefer is a weak solution of bichromate of potash: such will harden the piece equally throughout.

A common fault in the hardening of tissues is the employment of too small a quantity of liquid. For five or six of the small pieces mentioned above the minimum quantity must be not less than 50 c.cm. For large pieces the quantity

* Having had an opportunity of seeing Dr. Mercier's beautiful sections of the cord in the laboratory of the Zürich Asylum last autumn, we requested him to favour us with his method of staining, etc.—EDS.

to be employed must be proportionately large, *e.g.*, for the hemispheres four or five litres, for the cerebellum two or three litres, for the medulla oblongata, pons and crura approximately one litre.

The next fault, almost always committed, is to allow the pieces to remain too long in the same quantity of liquid. Fresh pieces decompose sooner or later even in solutions of bichromate of potash. The products of this decomposition foul the liquid, and after a short time such pieces become mouldy. It is no wonder then that pieces are so often badly hardened and cannot be properly stained. During the first eight days of hardening the liquid ought to be changed every 48 hours, after this time it should be changed weekly till the desired hardness is obtained. Bichromate of potash being an inexpensive substance fresh solutions should be prepared each time.

The position of small pieces need not be changed, since in the changing of the liquid this will take place to the needful extent. But when large pieces are taken it is necessary to change their position frequently. In the case of the hemispheres, cerebellum, etc., the parts should rest upon a layer of wadding, and wadding must also be inserted between the two hemispheres and between the cerebellum and the medulla in order to prevent the apposition of two brain surfaces. The position of these large pieces must, as has been said, be frequently changed. In each case the object in view is to have every part in contact with as much fluid as possible. I consider that vessels which contain pieces for hardening must always be kept in the dark, for daylight decomposes the bichromate. The vessels must also be well covered.

For the first days when small pieces are taken it is quite sufficient to employ a solution of $1\frac{1}{2}\%$. After this, and for large pieces earlier, the solutions should be stronger— 2% to $2\frac{1}{2}\%$. It is necessary to remember that pieces of the spinal cord harden more quickly than pieces of the brain and medulla oblongata, and that in the case of the lower animals pieces harden more quickly than in the case of the higher species. No general rule, however, can be laid down respecting this. The solutions should be made, especially at the commencement of the process, with distilled water. Solutions containing pieces keep better with the addition of small pieces of camphor.

The time which is necessary to obtain the desired degree of hardness is very variable; it depends on many circumstances, *e.g.*, the nature of the piece, its freshness, the care employed in changing the liquid, etc., and the temperature of the liquid (with regard to this last I do not hold that there is any advantage in raising the temperature, though, no doubt, a medium temperature is better than a low one).

The hardening process takes place generally in from two to four months when the pieces are of moderate size; the whole brain will not take less than five or six months, while on the other hand small pieces will harden in from four to six weeks.

The right degree of hardness is recognized by experience; a well hardened piece is capable of being cut easily in thin slices with a well whetted razor. The hardness should be combined with a slight elasticity, the colour of the grey and white substance should be nearly the same. Over-hardening is a danger to be avoided, since pieces cannot then be well cut, as they are too brittle. Further, they stain badly afterwards. A well hardened piece, if for some reason it cannot be immediately cut, may be kept for some time longer in a weak solution of bichromate, $\frac{1}{4}$ to $\frac{1}{2}$ or 1% , to which a small piece of camphor has been added.

The next point to determine is the nature of the histological elements which we specially desire to study. On this question depends the further treatment of the hardened piece, the choice, *e.g.*, of a colouring agent.

Suppose that we wish to study the cells and axis cylinders of a continuous series of sections. We must then soak the piece in water to get rid of the excess of bichromate which it contains; clean water which has been boiled and cooled may serve for this purpose in lieu of distilled water. The water must be changed every day so long as it continues to be coloured by the bichromate. So soon as

this ceases the piece is imbedded in the microtome of Gudden and cut under water and stained according to appropriate methods.

The removal of the bichromate from the hardened piece is accelerated by using the water slightly warmed, and to this end the jar or vessel containing the piece may be placed in a warm place, *e.g.*, near a stove.

Should we desire to stain the myeline fibres as well as the cells and axis cylinders we shall have need to employ a combined or mixed method. The hardened piece is now embedded directly in the microtome of Gudden and cut into sections. Of the sections thus obtained we put aside a certain number for treatment by the method to be described later—for staining myeline fibres. The others, in which the cells and axis cylinders are to be coloured, are placed in distilled water, where they get rid of their excess of chrome salt. They are then stained with carmine or aniline, etc. The reason for this procedure is that the chrome salt is necessary to fix the colouring matter employed to stain the myeline fibres, whilst on the other hand cells and axis cylinders, which are strongly impregnated with chrome salts, will not take carmine and aniline dyes. We have therefore to keep the chrome salt in the one instance and to get rid of it in the other.

The preliminary preparation of *pieces* whose sections are to be stained for myeline fibres only is as follows:—The piece is placed in alcohol 70%, and left there for a certain time; it is then imbedded in celloidin, and subsequently undergoes a special treatment to be described further on. Special microtomes, not that of Gudden, are employed to cut these sections.

Accordingly we may proceed according to three methods:—

a. We may cut with the microtome of Gudden and stain the sections for cells and axis cylinders only.

b. We may cut with the microtome of Gudden and treat the sections obtained in two ways—1st, for axis cylinders and cells as above, 2nd, for myeline fibres by a modified Weigert process.

c. We may adopt from the first a special method of cutting sections and of staining in order to demonstrate the myeline fibres—method of Weigert and of Pal.

(To be continued.)

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

The quarterly meeting of the Association was held at Brislington House, Bristol, on Friday, May 1st, at 3 p.m. The chair was taken by Dr. Yellowlees (the President), and among those present were:—Dr. Hack Tuke, Dr. Fletcher Beach, Dr. Thos. Webster, Dr. E. Markham Skerritt, Dr. Geo. H. Savage, Dr. David Nicolson, Dr. Charles S. Wigan, Dr. J. H. Paul, Dr. E. B. Whitcombe, Dr. R. Percy Smith, Dr. Samuel Craddock, Dr. T. Outterson Wood, Dr. T. Seymour Tuke, Dr. H. T. Pringle, Dr. Ernest W. White, Dr. A. Law Wade, Dr. A. C. Suffern, Dr. L. A. Weatherly, Dr. John Ewens, Dr. Augustin Prichard, Dr. J. Michell Clarke, Dr. Vincent Milner, Dr. Samuel Smith, Dr. Harry A. Benham, Dr. R. Shingleton Smith, Dr. F. G. Heyman, Dr. Wm. A. Moynan, Dr. H. Rayner, Dr. M. J. Nolan, Dr. Charles H. Fox, Dr. Bonville B. Fox, Dr. W. J. Fyfe, Dr. J. Hannoche Wathen.

The **PRESIDENT**—I think we must proceed to business, and happily for ourselves and our visitors the business shall be very brief. The first part is pleasant; it relates to the next annual meeting, and the Council have fixed the date of that meeting for the 23rd July, and the place of meeting will be

Birmingham (hear, hear), our President there being Dr. Whitcombe. The next matter is the election of new members. (Hear.) I have not troubled you with the minutes of the last meeting because they are in the Journal; therefore we now come to the election of new members, and there are before us seven names, namely, Dr. James Henry Earls, of Fairholme, Weybridge; Mr. William Harris Heygate, of Cranmere, Cosham, Hants; Mr. Archibald Robertson Douglas, Assistant-Medical Officer at the East Riding Asylum, Beverley; Mr. George M. P. Braine-Hartnell, Senior Assistant-Medical Officer, County and City Asylum, Powick, Worcester; Dr. W. Gordon Sanders, Pathological Assistant-Medical Officer County Asylum, Rainhill; Mr. T. E. K. Stansfield, Junior Assistant-Medical Officer and Pathologist, Banstead Asylum, Sutton, Surrey; and Dr. Charles A. Mercier, Lecturer on Insanity, Westminster Hospital. These gentlemen, seven in all, are duly certified by members of the Association, and the recommendation is concurred in as required by two other members, and the ballot-box will now go round. According to our habit we will ballot for the seven names, and if there are any "Noes" we ballot again.

The Hon. General Secretary (Dr. Fletcher Beach) took the ballot, and after scrutiny,

The PRESIDENT said—I have now to announce that these seven gentlemen are all elected members of the Association. The next matter is an announcement on behalf of Dr. Benham, that he will be glad to see any members to look over the Stapleton Asylum to-morrow. I have not been there for many years, but I know it was quite worth seeing when I was there, and I am sure it is now. When we decided to come to Bristol, Dr. Hack Tuke was kind enough to say that he would read a paper on Prichard and Symonds, and I have now great pleasure in calling upon him to read a paper on "Prichard and Symonds in Especial Relation to Mental Science." (See Original Articles.)

After the reading of the paper, Dr. Tuke handed round a framed portrait of Dr. Prichard, and a photograph of Dr. Symonds.

The PRESIDENT—I am sure we are all very greatly indebted to Dr. Tuke for this most interesting paper, all the more interesting because it has so much in it that is personal as well as professional. I shall be glad to hear any remarks, not necessarily confined to the subjects of the paper, but dealing with the great doctrine which Prichard advocated and Symonds approved. I can hardly expect you to add to the tribute that has been paid to the memory of these men by the reader of the paper, and so worthily paid.

Dr. NICOLSON (Broadmoor)—Personally I feel that I owe a debt of thanks to Dr. Tuke for his interesting paper, and I am sure that all the members of the Association and the visitors, the members of the local branches of the profession who have honoured us by coming here to-day, will feel that we have every reason to be grateful, not only for Dr. Tuke's reading a paper, but for his taking up the careers of two physicians whose names are household words to us (hear, hear), who live very much in the memory of Bristol people. Moreover, they will carry weight for anything that they have ever said upon the speciality to which we belong. I can hardly imagine a subject more in accordance with Dr. Hack Tuke's sympathies than that which he has put before us this afternoon. After the admirable luncheon at which we have been entertained, I thought that any paper must be torpid and heavy (laughter), but my anticipation has not been realized. (Hear, hear.) The question of moral insanity which Dr. Prichard foresaw so clearly and defended so strongly is one in regard to which we are only now seeing the practical results arising from what were in his time more or less matters of theory. And it is the more to the credit of one who lived in those, what we may call darker days of superstitious notions about things, to have evolved this and brought it into the clear daylight of science, so that in our day it should be capable of bearing good fruit, as it undoubtedly does. Having been 25 years connected with criminals at all angles, I suppose I may claim some kind of right to say something on this subject. (Hear.) Moral insanity is a subject that can, no doubt, be made too much of, like everything

else, and in individual cases we have to be careful not to let our feelings carry us away, otherwise a most objectionable result will come of it. If we were to screen a man whose mere moral obliquity had brought him to a court of law, if we were to allow the term to be too influential in our minds, we would be thwarting justice and cutting our own throats as men who were endeavouring to carry out scientific ideas; so that instead of carrying weight in the courts of law we would be laughed at. With that caution I think we may very safely allow ourselves to accept it as a fact that there is such a condition of mind as may be rightly and properly described as "moral insanity." But then we must be careful not to allow this term to be a stepping-stone to the criminal to evade justice. It being a term which is less acceptable than some others to the legal minds on the Bench, we must be very careful not to make it a convenience in our difficult cases, when we have to give an opinion in cases where the individual has committed a criminal act. I can only say from my own experience in prisons that we have it very largely demonstrated that there may be cases of insanity in which the intellectual faculties are not involved; and a very brief experience amongst convicts and amongst prisoners will satisfy anyone who turns his mind to the subject that such and such an individual is perfectly capable of reckoning up the value of his conduct, but that he is unable, whether under measures of repression or under measures of the utmost possible kindness, to conduct himself as he knows he ought to; so that there can be no question about the existence of a condition of the moral sense which has to be borne in mind in dealing with individuals at this angle: and the fact is now universally observed and given attention to in all regulations in regard to convicts, that certain individuals are unable to behave themselves in the face either of whipping or kindness; and this consideration has compelled the authorities, even against their own will, to introduce measures of leniency in certain instances where they find that the ordinary penal discipline fails to take effect. These cases are very numerous, and have largely compelled our prison authorities to modify the old—what is now called hard—treatment towards those who come under their sway, so that that may be taken as a practical outcome of Dr. Fritchard's life and work. And I think we may point to that distinctly as one of the ultimate and present outcomes of the grave and responsible work he initiated. When we come to moral insanity in relation to such a case as murder we all know that the attachments, the emotions, and affections generally must be considered before we can say whether the insanity is such as would warrant the reprieve of a man from punishment. I am extremely reluctant to say that, in any cases, we are able to admit it. We have to get an amount of cumulative evidence, not only with regard to his relations to the individual killed, but also as to his impressions at the time, and his antecedents, so that unless we have some other evidence we scarcely are able to point to merely moral conditions, or rather the absence of moral conditions, as sufficient grounds for saying, "You are doing wrong if you inflict any degree or measure of punishment upon that individual." And I think there are instances in which, although we have moral insanity or grave moral obliquity, we are not able to avoid inflicting some kind of punishment just as you would punish a child that had done some moral wrong or had committed some offence, although you would not punish it by death. I ask you, Mr. President, to allow me to convey to Dr. Hack Tuke the thanks of this meeting for his extremely interesting and able paper. (Applause.)

Dr. SAVAGE—My professional paths have led me to an experience of criminality as well as insanity. Now one has to recognize that the moral and the intellectual grade one into the other; that one sees cases in which there is a very slight, almost imperceptible, intellectual perversion and very great moral perversion—however difficult it may be to meet with absolutely pure cases of moral insanity. We see certain individuals who do not grow up into moral manhood, and on the other hand one sees many degenerate through insanity into moral weakness. One

feels that one may have too much of a good thing, and I must say that some of the anthropologists, and criminal anthropologists of Italy, are going very far indeed. A reviewer recently wrote: "It seems to me that in the next generation we shall hang at sight." (Laughter.) That is, we shall hang on such and such a face at once and there will be no further evidence. We shall then agree that a certain formation of head, chin, or nose implies "that man must be bad." Some of us who have had experience with the foreigner from Central Europe, in America, know that he was willing to place his hand upon you or me and say "Forger," and of course he was able to say "If you live long enough you will become so." (Laughter.) Joking apart we have the fact that there are certain cases in which moral insanity is detected, and where intellectual insanity cannot be detected at all. One would, however, hesitate to accept the moral insanity that could be detected by either the reflexes, or the shape of the head, or any one physical characteristic. In nearly all these cases it is a question of cumulative evidence, and there is no doubt that the chronic lunatic and the true criminal do approach one another very much indeed in the type of face and body. I can only add that one feels particular pleasure in hearing this paper at the scene of the work of these eminent men. We, all of us, feel much pleasure in coming here, and still greater pleasure in having heard such an interesting paper; and I trust that some of our local friends and brother members will contribute something to the subject.

The PRESIDENT—There is Dr. Prichard's son among us. (Applause.) For his father's sake as well as his own we would like to hear his voice. (Hear, hear.)

Dr. PRICHARD, who was received with applause, said—Mr. President, I feel, with others, very much obliged to Dr. Tuke for the paper he has read, but I am entirely unqualified to discuss this matter. My lines of life have been entirely different from that in which you are employed and in which my father was employed, and I really should not be able to discuss with any of you the question of moral insanity, firmly as I am convinced of the existence of such a disease. I rise as you have asked me to do so. I felt very much pleasure in listening to Dr. Tuke's paper, and feel very much obliged to Dr. Bonville Fox for asking me to come to this very pleasant meeting. (Applause.)

The PRESIDENT—With regard to moral insanity it has always seemed to me that the most significant proof of its real nature, the proof that it is disease and not mere depravity, is found in the subsequent history of the cases. If you watch the progress of confirmed cases you find in the course of years that they gradually deteriorate and eventually sink into dementia. I have in my mind several cases in which moral perversion was for long periods the only sign of the brain degeneration in which they terminated. I should like to ask Dr. Nicolson whether this accords with his large experience.

Dr. NICOLSON—I am a little bit handicapped in having to deal with such a question on the spur of the moment, but I will say that a great many of the convicts, whose acquaintance I made twenty years ago, and who used to be sent from prison to prison—I mean men who were not insane enough to be moved to an asylum, but who were unable to be dealt with under the ordinary prison rules—we all remember the cases of men unable to bear the prison discipline, and I can say that these men—a number of these men—we now have in asylums who have come there, not through the prisons, but by direct transmission from social conditions to asylum life. And I have a strong feeling, especially in recent years when there is a cry about the diminution of crime, or in the number of criminal occupants of prisons, that at the same time we find that our asylums are becoming more largely populated. I am quite sure that there is a considerable element of that explainable on this footing—that men formerly dealt with purely on the criminal footing subsequently become so insane that they are placed in asylums and become chronic demented, and thereby diminish day by day the number of prison occupants. I think this is well worth working out; as the important question of early diagnosis

of insanity will show one of the reasons why the number of prisoners is diminished. Of course there are the training ships and schools for street arabs and individuals of that class, and these tend to relieve prisons of a certain proportion of inmates, as well as a great many other philanthropic schemes. The Discharged Prisoners' Aid Society is also an element in the matter. But after all I think it will very likely be found—the relative proportion being in the inverse ratio that the fewer we have in prisons the more we have in asylums—that these will be observed to be explainable in relation to each other. Of course I am only giving what is my own impression; yet there is a good deal in the facts that asylum life is very different from what it used to be, that relations are more willing to allow their afflicted to be placed in asylums because they are satisfied that asylums are doing what they can for them, and they know that they are better off than they could be at home: and domestic life is so strained now that they could not be bothered with them. I think, Mr. President, that the suggestion you make, so far as I am able to express an opinion, is perfectly correct, and would be proved on the question being investigated. (Applause.)

The PRESIDENT—That is a very interesting answer, and I am glad it was elicited. It confirms the opinion that many cases begin in purely moral insanity, undergo gradual degeneration and sink into dementia ultimately, thus affording the best possible proof that the moral perversion into which they first fell was truly the beginning of the insanity. Very seldom do we meet a case which we can call pure moral insanity. I had one the other day, one of the purest cases I ever met. A man and wife came together to see me, and the man implored me to take care of him because he had a dreadful and unaccountable impulse to kill his wife. They were quite comfortable and happy in their daily life; nothing ailed him so far as he knew. He had no delusion of any kind whatever, but he had this horrible feeling impelling him to kill the wife whom he dearly loved. He is now with me as a voluntary patient, and he does not wish to leave until he gets rid of that feeling. Dr. Nicolson spoke of the perplexity and difficulty of dealing with these moral lunatics, and said you must measure to them some sort of punishment or retribution to mark your sense of the wrongness and your desire to right it. That is to me a most significant confirmation of the wisdom of gradations of punishment according to the mental condition in each case, which I believe to be the only medium course between no hanging at all and the terrible doctrine of hanging at sight, which some one anticipates as a revulsion from undue leniency. (Hear, hear.) Dr. Tuke, we thank you for your paper, and for bringing before us the lives of two such remarkable men as Prichard and Symonds. (Applause.)

Dr. HACK TUKE, in reply, said—I have to thank you for the kind way in which you listened to my paper. I confess I expected when I saw those comfortable couches and easy chairs to see you all fast asleep. (Laughter.) I am glad that this was not altogether the case. I had just finished writing my paper when I received a letter from Dr. Herbert Major, who says he has been consulted about a girl of 14, and goes on to mention a number of defects and delinquencies which indicate moral disease, and then he says, "I am unable to detect any intellectual defect whatever. The child is intelligent, assiduous, and plodding as to lessons, and well behaved in every other way." Now, whether that child becomes in the course of 10 or 20 years a dement does not affect her present condition in the eye of the law should she commit a crime. And therefore if, as the President says, the subsequent condition is a degeneration of the former moral insanity, it does not in the least detract from the position taken by Prichard. It does not affect the question in the eye of the law, because no judge or jury can decide what is to happen 10 or 20 years hence. (Hear, hear.)

Dr. LIONEL WEATHERLY read a paper on "The Use and Abuse of Hyoscine." (See Original Articles.)

The PRESIDENT—We shall be very glad to hear any remarks on this very

practical paper. Not a few gentlemen here have used hyoscine, and it is worth while to let us know something about it.

Dr. PEECY SMITH—I have very little to say about hyoscine. I have used it, of course, for ordinary cases of acute mania, and I cannot say that my results have been so good as those Dr. Weatherly has obtained. I have not found cases in which one or two doses have been given and there has been rapid recovery. My experience is that one has had to go on for some time, as with other drugs, and the effect has been slower than in the experience of the reader of the paper. Then, with regard to the dose, of course one has to begin with small doses, the two-hundredth of a grain given hypodermically, and increase it up to a seventy-fifth or a sixtieth or so, but I do not think I have ever given a larger dose than that, and then one has had to give it two or three times a day. With regard to sleep, Dr. Weatherly said it did not produce ordinary sleep—a profound sleep, and then a less profound sleep—and that has been my experience. I cannot say that I have seen serious effects from hyoscine, but from hyoscyamine there have been serious effects. I suppose there are some patients, however, so susceptible that a two-hundredth of a grain would produce collapse.

Dr. SAVAGE—This being a practical paper, I venture to make a few remarks on the unfavourable side. I know of a case where a two-hundredth of a grain had a fatal effect. The patient was a woman who was extremely maniacal—a woman of 45 or 46—who would have been moved at once to an asylum, and it was a question how to pass the few hours of the night, and it was suggested that there should be artificial food, and that then the two-hundredth of a grain of hyoscine should be given, as there was great difficulty in getting her to take the food. The woman seemed to be sleeping satisfactorily, but from that sleep she never roused. One has seen cases in which a small dose in anemic or hysterical cases has been injurious—cases in which they have passed rapidly into a stuporous condition. In alcoholic cases one has used it with success, but the cases in which I should use it by preference would be cases of folie circulaire and of recurring maniacal excitement. I have seen no good results following from its use in melancholia.

Dr. NICOLSON—Of course one fatal case makes a great impression. In our maniacal cases at Broadmoor, when hyoscine has been used, it has generally been a hundredth to the seventy-fifth of a grain that has been injected, and it has been beneficial. We do not use hyoscine or any other hypnotic largely, but very carefully, and my experience and that of my colleagues has been that hyoscine is attended with benefit, and has given a quiet night to those who, I am quite sure, would have been outrageously noisy during the whole of it.

Dr. LAW WADE—My experience is decidedly against the hypodermic use of the drug at all. The result has been a state of stupor, and afterwards the patient has been as bad as ever. In cases in which there have been definite general paralysis, chronic restless mania and delirium, advantages may be found by giving it by the mouth. A patient was a long time with me as a quiet, weak-minded man, so that the Guardians were always pressing me to discharge him. I did so very much against my wish, and he returned noisy, dirty, and troublesome. To that man I have given the drug by the mouth, and he is quiet and goes to work in the ordinary way. But hypodermically I have seen no good effect. The patient is knocked down, and there he lies, but as soon as he recovers he is as bad as ever.

Dr. WEATHERLY, replying to the discussion, said—I meant that the drug should be used in distinct and suitable cases of irritability, and in such cases hyoscine seems to tide a patient over that period. I am glad that Dr. Smith bears me out in the opinion that this drug is not so dangerous as hyoscyamine. I protested against the abuse of hyoscine, but if it is properly used I do maintain that it is a very valuable drug; and in cases of hysteria it is almost invaluable. I have found in cases of melancholia that it has no effect at all, and as a rule it produces a very great feeling of fatigue. Dr. Nicolson again seems to

bear me out in my opinion that it is a very useful drug in many cases of excite ment and mania.

Dr. BONVILLE FOX read a paper entitled "Notes on a Few Unusual Cases of General Paralysis." (See Clinical Cases.)

The PRESIDENT—I am sure we thank Dr. Fox very much for his valuable paper, and for the admirable record of interesting cases. (Applause.)

Dr. WHITCOMBE—Mr. President, the first case in Dr. Fox's paper recalled to my mind one which I had in the asylum many years ago, in which the patient, a commercial traveller, with a history of drink, came with all the physical and mental symptoms of general paralysis. He went into the stage of complete paralysis, and from that condition he made to all intents and purposes a perfect recovery—such a recovery that he went out and took a situation again as a traveller at the rate of £300 a year, and after he had held it for some eighteen months he returned to the asylum and died in a very short time from general paralysis. I was not a little interested to hear Dr. Fox's treatment of the convulsions in general paralysis, and I must say I have found considerable benefit from hyoscine, probably a better effect than I have found from bromide and chloral. With regard to remarkable recoveries, I should just like to refer to two cases in my experience. The first case was that of a man admitted to Bethlem in 1885. Dr. Savage will remember him perfectly well. He was the captain of a steamer, and came in with a maniacal attack. After a few months of this excitement, with exaltation, he quieted down, and seemed perfectly to recover. There was no tremor left, and there were no physical signs which would make one diagnose paralysis, although it was suspected. He went to sea again, and for 18 months commanded a ship, and the only difference noticed in him was that from having been an extremely arbitrary man, who used extremely bad language to his crew, he had become much more placid and complaisant. Then he returned to England, and rapidly broke down. He became demented, had extreme tremor, and in the course of two months died from epileptiform convulsions. That was a case in which a man apparently recovered, and was able for a period to perform complicated duties. The other case was that of a man admitted at the end of 1884 to Bethlem, and he was supposed to have general paralysis. He had some maniacal excitement, and great inequality of the pupils. There was some blurring of speech and some alteration of handwriting—missing words and letters—and the knee reflexes were affected. Early in 1885 he had serious convulsions, accompanied by temporary loss of power on the left side. But the curious thing was that after the occurrence of these convulsions he improved mentally very much, and he became apparently perfectly well. Then it was pointed out to him that he had probably got a disease which would progress, and it was a serious thing to think of returning to active work, and so he consented to remain as a voluntary boarder, and so he remained until a few weeks ago—over five years. Then he became excitable, his handwriting altered, he left out words and letters, and one has very little doubt that he has reached the final stage. He is occasionally wet, and restless, and unmanageable; tumbles about, and has exalted ideas and schemes for producing great wealth. That seems to be an extremely interesting case considering the question which has been raised of trephining for general paralysis. Here was a case which would seem suited for trephining, but these symptoms all passed off without anything of the sort being done, and one does not see that anything would have been gained by trephining in a case of that kind, although it would have got the credit. (Hear, hear.)

Dr. RAYNER—I, like others, have been much interested by Dr. Fox's paper, and that particular point of the patient's apparent recovery, or actual recovery, is especially interesting to all of us. And I suppose that we have all seen such cases. One of the most striking cases in my own experience was that of a man with well-marked symptoms of general paralysis, which went on for nearly two years, and he very nearly died from general convulsions. Indeed, I thought he would have died within a few days, but, however, after a time he steadily

improved, and got quite well as far as I could see, though I kept him for a long time in the asylum, because there were reasons why I should not discharge him prematurely. He remained three years, and then he went abroad to entirely new conditions of life, and when I heard of him two years ago he was doing perfectly well in his new condition. Whether he has broken down or not since I do not know, but that was about the most striking recovery I have seen. I remember the case of a medical man with marked symptoms of paralysis. He had taken alcohol and all sorts of drugs, and he had very well marked symptoms of general paralysis, but gradually they passed away, and he was discharged. I saw him two or three years afterwards, still following his occupation as a dispenser. The traumatic cases interested me, because I remember especially two of general paralysis developing after blows on the head. One was a man in the dockyards, with a blow on the head, and another was a butler, who fell downstairs and knocked his head. Both of these immediately developed general paralysis. It seemed to me that in both the blow was merely the exciting cause of a predisposition which already existed. At first I did not think that that was the case, but when I came thoroughly to get at the histories of the actual lives of the men, I found there really was sufficient predisposition. But then one has seen other cases of general paralysis following injuries generally more severe than those I have quoted, in which general paralysis had developed. One case I remember specially in which a man had well-marked symptoms. They passed away after some time, but he never recovered. I believe he remains insane to this day, but with no symptoms of paralysis. With regard to treatment, we know it has been said that if we contrived to give general paralytics compound fractures of both legs in the early stages they would probably get well. (Laughter.) Of course, one cannot adopt that treatment, but acting on this idea, and thinking one might get some good by imitating it, I have tried extensive blistering of the legs, thighs, and sides, and I must say that the effects of the treatment were not satisfactory. (Hear, hear.) Indeed, the cases were decidedly worse. (Hear.)

Dr. WHITE—I have at the present time a case of general paralysis with three carbuncles, and that man is improving. He has been with me for three years; two years ago he improved, and went out to work. He developed these carbuncles, and I expected him to die, but he is now getting better. I had a case that finally terminated in Bethlem, and will be known probably to Dr. Savage, and also Dr. Smith—Mr. H—. He was the son of a well-known artist. He came from Broadstairs, and I diagnosed that he was a general paralytic at the very early stage, and I made a report that I thought he would die in three or four years, to his brother-in-law. At first he could talk perfectly rationally on most subjects, but he certainly was emotional, and once or twice broke down in tears. Then he was very threatening to his brother-in-law, and they packed him off to us, and we kept him. He got quite rational, and was discharged. Then he gave a tremendous amount of trouble in London. He was guilty of all sorts of habits of immorality, and he had finally to be sent to Bethlem, where he died some two or three years ago. Undoubtedly he had been going downhill for some time before he came to us, and yet he got quite well and was discharged. But he broke down again.

Dr. SAVAGE—To continue that case, I may say that it was certainly one of the most difficult cases I have had to deal with. He insisted upon having visits from the Commissioners, and he got them. They were very much inclined to discharge him, but I quite agreed with the opinion of Dr. White, and I said, "If you discharge him you discharge a general paralytic." His friends came to see him, and they threatened proceedings against me, and I had a good deal of abuse from others who were not personally interested in him. At our entertainments he generally took a particularly paralytic position, and everybody asked who that handsome man was. (Laughter.) There is one case I remember in which a man had passed through all the early stages into the stage with epileptic fits, and he was so bad that his friends were sitting up to await his

death. There were three or four bags of pus about his body, and it was just a question whether to let him die as he was or to evacuate these abscesses. I decided to evacuate them, and then he improved, and instead of dying passed into a quiet, weak-minded condition—well, not so very weak-minded—and he has remained in that condition since 1884, and two or three times lately he has challenged me to play lawn tennis with him.

The **PRESIDENT**—This very interesting paper is full of subjects for discussion had there been time for it. I am inclined to think that in the traumatic cases mentioned the disease really existed previously, and the blow merely developed it. With regard to the apparent recovery from general paralysis, I think that many alcoholic cases wonderfully resemble general paralysis, and I suspect that some of those recoveries are in cases of alcoholic origin. General paralysis may develop in the course of another insanity. That is a statement which may probably be received with a good deal of doubt; but I believe I have seen that. It would be interesting to know what the experience of the meeting is, but it is too late now to enter on the question. Some one mentioned *trephining* in general paralysis. I am disposed to think it one of the most unjustifiable developments of brain surgery that we have yet heard of. (Hear, hear.) We all thank you, Dr. Fox, for your very suggestive paper. Before we separate, let me say that those who have not looked into Brislington House ought certainly to do so. It is a most interesting monument of what was done in the early days of the century, when the treatment of the insane was very different from what it is now. (Applause.) The beautiful grounds and the villas you may take for granted, but in the old house you will look with much interest at the kindly and thoughtful provision which was made for the treatment of the insane in years long gone by. (Applause.)

The meeting then terminated.

Members dined together at the Royal Hotel, Bristol, in the evening, under the presidency of Dr. Yellowlees.

THE MEDICO-PSYCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A Quarterly Meeting of this Association was held in the Hall of the Royal College of Physicians, Edinburgh, on 12th March, 1891. Dr. Koeller was called to the chair, in the absence of the President.

The **SECRETARY** (Dr. Urquhart) read the minutes of the previous meeting, which were approved, and signed by the Chairman.

ELECTION OF NEW MEMBERS.

The meeting unanimously elected the following as members of the Association:—John Bruce, M.B., C.M.Ed., Asst. Med. Off. Crichton Royal Institution, Dumfries; Herbert W. Greatbatch, M.B., C.M.Ed., Jun. Asst. Med. Off. Montrose Royal Asylum; John G. Havelock, M.B., C.M.Ed., Sen. Asst. Med. Off. Montrose Royal Asylum.

THE IMPAIRMENT OF THE ARITHMETICAL FACULTY IN INSANITY.

Dr. IRELAND then read a paper on "The Impairment of the Arithmetical Faculty in Insanity" (see Original Articles).

Dr. SHUTTLEWORTH said that, had he known sooner of Dr. Ireland's paper, he would have come better provided with facts and figures which might have had some bearing upon the subject. He had sent home for one of the reports of the Institution of which he was the medical officer (the Royal Albert Asylum), where they had 580 imbecile children; and in an appendix to that report there were statistics which would bear out to some extent the views of Dr. Ireland as to the marked deficiency in arithmetical power of that class of patients

Out of 580, there were only 27 who were able to work sums in the simple rules, and ten of these were able to work sums in the compound rules—he supposed that included compound division. The highest point of mathematical proficiency reached seemed to be the rule of three. At the other end of the scale it was noticeable that of the 580 there were as many as 205 who could not count at all, and 148 who could count but a little; 77 could count only up to thirty; 54 understood the value of unit figures—that was, they could count and show what the meaning of figures was; 69 could work simple addition sums; and 27 worked easy sums in the simple rules. Dr. Ireland had referred casually to some children who were reputed to be imbeciles, but who were said to have phenomenal powers of calculation. He rather agreed with Dr. Ireland that these children were not usually, in the strict sense of the word, idiots—at any rate, not congenital imbeciles. They were children who, during the developmental period, had had certain of their faculties impaired by some fever or something that had caused atrophy in a portion of the brain, leaving the arithmetical powers unimpaired. He had, however, in his Institution a remarkable case of a young man with a history of congenital imbecility, who was able, without much mental effort, to give the day of the week corresponding to the day of the month for several years past and for several years to come. He was puzzled to find out how the young man arrived so speedily at his results, which were invariably correct; and it seemed that there was a certain amount of calculation in the process, but there was more of mechanical memory. This young man had made it a speciality to study the days with which each year began and each month of the year began, for a great many years past; and having excited interest amongst his companions and visitors as to his powers in this way, he had devoted a good deal of attention to the matter. And these fixed dates—the days on which the years began, and possibly the days on which the months began—seemed to be fixed points in his mind, which he had no trouble in recollecting, and it was easy for him to calculate from them forwards and backwards. His ready answers were certainly very surprising to a stranger. He had met one other similar case in an American Institution. It was remarkable in that youth, when he was asked the dates for years back, within his own memory—for nine or ten years—that he gave the answer correctly. When he was asked to give a date a year forward he replied, “No; I cannot see so far ahead.” In his case it was more an effort of memory than an effort of calculation. With regard to training the power of calculation in imbeciles, the great difficulty was their very imperfect powers of abstraction, and it was necessary to use concrete forms, such as beads, balls, etc., for demonstration. In his Institution they had cubical rods, divided into smaller sections, like wooden bricks. The smallest was one inch long, and they increased in size from one inch up to ten. Pupils were taught to arrange these in their order of size, so that there was a series of gradations, counting one to ten, from the smallest brick up to the largest one. In that way they got an idea of the relation of numbers to dimensions. After getting them to understand elementary notions of figures, they found a very convenient plan to give them practical ideas as to the value of money, weights, etc., was the “shop lessons,” which they had in most institutions. There was a cabinet in which were displayed canisters of tea, coffee, and sugar, etc.; and for the girls, tape, ribbons, and other articles. One pupil was made shopkeeper, the others being sent in succession to make purchases. The articles were weighed and measured, and then came the problem of paying for them. The calculation was made under the supervision of the teacher of the class, and the purchases were paid for in actual coins. Problems of change of money were also gone through. By such means one got a number of the imbecile children to have a pretty good idea of the value of small sums of money. Dr. Ireland had mentioned that it was remarkable that, whereas the faculty of number was so much impaired in idiots, the faculty of music was prominent. He had remarked that himself, but as regards any idea of the theory of music they would find that that was entirely absent and not under-

stood in the least degree by the imbecile class. It seemed to him, indeed, that the humming of tunes by idiots amounted to little more than a pleasant titillation of the auditory sense, and might be compared to the to and fro rocking movements of the body, or the passing of the fingers backwards and forwards before the eyes, producing alternations of light and shade, so commonly noticed with low grade cases.

Dr. CLOUSTON said he was sure they were much indebted to Dr. Ireland for his paper, which was learned, interesting, exceedingly instructive, and suggestive. It was a subject to which he himself had paid almost no attention. The arithmetical power and faculty was absolutely innate in the brain, and they knew that a person who had not begun with being fond of numbers and fond of calculating could not be made a good and ready calculator. It was absolutely innate in such cases as Zerah Colburn. He was not aware that there were any figures that showed the exact heredity of the arithmetical faculty. It did run in families in some cases. In many cases the power was automatic. He was somewhat surprised in seeing the results amongst his own patients to which Dr. Ireland had referred. He had not been prepared to see a complete dement sum up large columns of figures, as Dr. Ireland had showed some such cases could do. For those who had to go into the witness-box and be examined as to the medico-legal condition of patients, especially when the question was as to imbecility, and also in dementia and mania, it was a test—that of calculation—that ought always to be applied in every case. Quite lately he had been asked to examine a woman whether she was able to manage her affairs; in fact, whether a *curator bonis* should be appointed. It was alleged on the one side that advantage was being taken of her. She was a person who looked fairly intelligent. In her dress and ordinary conduct she was quite normal, and also in her expression of face. Beyond the fact that she was simple looking, they could not see much wrong with her. It so happened that she derived her income from the interest of a capital sum of money, and part of her income was derived from the rent of a house, on which there was a bond. On examining the lady he stumbled on the fact that she had absolutely no conception of what interest was, and she could not be made to understand what it meant. She was inclined to be very honest, to be ultra-philanthropic in her ideas, and she objected very strongly to the idea of taking interest for money. Then he said to her, "How do you live? Do you not get so many pounds a year from So-and-so, who has your money in his hands?" She replied that she did not know. She thought that taking interest for money was a device of Satan, and she could not be persuaded that the money she was yearly receiving was such interest. The most he could get her to admit was that one sovereign for a hundred in the year must be enough, and beyond that it would be swindling and very wrong. Yet she was receiving four or five per cent. interest. He had made that the chief point of his diagnosis, and pointed out that she was thus at the mercy of anybody who would take advantage of her. Talking of heredity in regard to the arithmetical faculty, while dining in the hall of the Royal College of Physicians on one occasion, he happened to be sitting next a gentleman very well known in the engineering world, the son and grandson of engineers. During dinner that gentleman said that he was next to devoid of the faculty of calculating. He was a first-rate witness before Committees of both Houses of Parliament in regard to engineering subjects, and had devised important engineering projects. He could not himself carry through the minute calculations necessary for these works.

The CHAIRMAN said that he himself was of the same stamp as the gentleman to whom Dr. Clouston had referred as being defective in regard to the arithmetical faculty. He felt that it was a defect, and knew many other people in the same position. There are those of weak judgment who when called upon may exhibit even a wonderful facility in dealing with and correctly calculating figures. This common-enough "Medico-legal test" of determining doubtful intelligence ought to be carefully applied.

Dr. CLARK said he had met cases in which the arithmetical faculty was hereditary. The difficulty was to find out whether it was a case of a rule or exception. Dr. Clouston had said that he was not aware of any data, but he thought that if the subject were investigated it would be found to descend from one generation to another. The spelling faculty had also interested him. Some children learned it more easily from seeing, and others from hearing. There was a visual and an auditory perception and memory in children as in adults, and some could learn better the one way and some the other. This was a question which might be investigated with great advantage to them as psychologists.

Dr. BATTY TUCKE, junr., said that in insanity the musical faculty was often the last one to go. He had two lady patients who, though quite incoherent in speech, played with great accuracy on the piano, the one by ear, the other by reading music, although the latter was quite unable to read a book, and had not dressed herself for twenty years.

Dr. IRELAND said that he had no facts which would enable him to decide whether arithmetical ability was hereditary or not. The only instance which occurred to him was that of the celebrated calculator, George Bidder, whose son was also an excellent arithmetician as well as an engineer. He also thought that the arithmetical faculty was well sustained in the family of the Gregoria, who were professors for several generations. Dr. Ireland observed that Galton had stated that some people conceived of numbers as figures in space as if written on a board in a certain series. Dr. Ireland showed to the meeting a form drawn up by a lady at his request to illustrate the mode in which figures were presented to her mind. It appeared that about five per cent. of the people examined had some such form in their heads. The question in what degree the arithmetical faculty was affected in dementia was far from being settled by the few cases which he had himself examined, but the inquiry might be readily taken up by those who had a large number of such patients at their disposal, and it is likely that curious results might be brought out. What had led him to begin the investigation was the idea that since the arithmetical faculty was the weakest in imbeciles it should be the first to go in dementia. This, however, did not seem to be the case.

The SECRETARY drew the attention of the meeting to the Pathological Index lately published by Dr. Howden, and craved a hearing for Dr. Greatbatch, as Dr. Howden could not be present that day. It would be in the memory of the members that the question of formulating pathological tables was referred to a Committee. That Committee held one meeting at York, which, as yet, remained fruitless. In the interval Dr. Howden had published his scheme in the "Glasgow Medical Journal," and it was now laid on the table for the information of the Association. It was, no doubt, of great importance that this question should be pushed to a conclusion. Take such a branch of this subject as brain weights. It is clearly desirable that the Association should formulate a scheme which could be adopted by all, and place aggregate numbers at the disposal of those making a study of such facts. Dr. C. M. Campbell had given much time to this question, but opposed Dr. Howden's scheme, inasmuch as it took no note of clinical symptoms. He concluded that Dr. Howden's index would be the ground work of any report of the Pathological Committee, and rejoiced that he had again awakened the question.

Dr. GREATBATCH then proceeded to give a description of Dr. Howden's Pathological Index. He said that the post-mortem examinations were recorded in the usual manner, and they were afterwards analysed, the lesions being entered in this index referring to the page in the record where they were described. The index, therefore, was simply an analysis of the pathological record from the reports made in the post-mortem room, and had no relation to the clinical records. The index had been kept for nearly thirty years. It was divided into sections relating to different parts of the body. Each of the tissues were separate, and underneath each heading were the different lesions to which those tissues were subject. Dr. Howden proposed to prepare a book, having the

headings printed, with spaces provided for entering the pages in the record where each lesion was described.

Dr. CLARK asked if Dr. Howden wished to have the matter carried out by the Association.

Dr. GREATBATCH said that Dr. Howden's idea was that the index would be applicable to infirmaries and general hospitals as well as to asylums.

Dr. CLOUSTON said that they had to thank Dr. Howden for sending his index to the meeting. He was sure of this, that the Association was very glad to see one of its oldest members, Dr. Howden, who made the very best pathological records when he was an assistant at the Royal Edinburgh Asylum, now showing an index in the kingdom such as nobody else could produce. He thought it was a most impressive thing to look through that index embodying the result of thirty years' work. It filled one with envy and despair.

Dr. JOHNSTONE moved, "That the Secretary be instructed to request the Pathological Committee to consider Dr. Howden's scheme, and to embody their opinion of it in their report to the Association," which report he trusted would be furnished at an early date. The Committee had now been in existence for over two years, and the Association were still in ignorance as to the result of their deliberations.

Dr. CLOUSTON seconded the motion. Dr. Howden's index would give them some data on which to prepare a report, and they could then give their opinion as an Association.

The motion was unanimously adopted.

DEVELOPMENTAL GENERAL PARALYSIS.

Dr. CLOUSTON then proceeded to describe "Two Cases of Developmental General Paralysis." He said they all knew that general paralysis was a disease of retrogression, and occurred most frequently between the ages of 35 and 45. There had been a few cases published of this disease which had occurred at very early ages—a few sporadic cases. There was one published by Dr. Turnbull, and he had himself also published one in which the disease had begun about the age of 12 or 13. A few cases had been published as occurring at early ages in France and Germany. So far as he knew general paralysis had not been considered in any case as a developmental disease or in connection with puberty. Lately, when he was investigating the developmental diseases, there were in the Royal Asylum, at Morningside, two very remarkable cases. One of them was that of A. K., 19 years of age on admission, and had been four or five years ill. She had been a smart and genial girl, and worked as a book-folder up to the age of 14, and had passed the fourth standard at school. No signs of puberty had occurred. Her father was undoubtedly syphilitic. She herself had syphilitic teeth, and a certain kind of choroiditis, which almost invariably indicated hereditary syphilis. The mother was a smart, intelligent woman, who had one miscarriage before and two after the birth of the patient, and another sister was deaf, dumb, hydrocephalic and epileptic. She had several convulsive fits when she was six years of age, but otherwise she had been free from neurosis or any other disease. About the age of 15 she began gradually to become stupid. In consequence of this stupidity and carelessness and inattention she became unable to follow her occupation. She made mistakes, and could not be trusted to go about the streets. It was a gradual enfeeblement of memory, judgment, volition all along the line. Along with this paralytic speech symptoms appeared. She was sent more than once to the Royal Infirmary, and she was very carefully examined, and there was a kind of provisional diagnosis made of cerebral spinal sclerosis. Another physician thought he had seen a case of locomotor ataxy very like it. On admission to the asylum she was stupid and had an idiotic expression, and she was with difficulty made to speak. She made incoherent remarks in answer to questions, and answered slowly and listlessly. She was quite uninterested in anything that took place around her. Her memory was very much impaired. Her appearance was that of a young woman

before the age of puberty. The mammae were not developed. Her nervous symptoms presented very great interest. There was more than ataxy in her walk. When she laughed the characteristic trembling of the muscles about the mouth of general paralysis was apparent. The tongue was exceedingly tremulous. She hesitated in her speech; began a sentence and did not finish it. In fact it was exactly like a typical case of general paralysis. As is usual in the second stage of general paralysis there was a sort of wiping out of the expression of her face. She could not equilibrate well, and could not turn round without walking into her dress. The pupils were unequal, very much dilated, and very sluggish. There was disseminated choroditis, which, as Dr. Argyll Robertson said, almost invariably arose from syphilis. When put down on the floor she could not rise. The muscles were flabby and soft. He was in the habit of showing this patient to many physicians, but no one would venture to make a definite diagnosis, and he suspended his own diagnosis for a time at first. He asked himself—Was this not a case of diffused syphilitic inflammation with degeneration of the cortex, but non-general paralytic? She was admitted on the 11th July, 1890, and she gradually and steadily became worse and died on the 12th January, 1891. After her death Dr. Middlemas made a very careful examination, and he found that the skull-cap was adherent, that there was some convolitional atrophy, that the membranes were thickened, that the adhesions were chiefly on the lower surfaces of the frontal lobes, also on the vertex to some extent, the two hemispheres being adherent. The convolutions were well marked and numerous. The grey matter was not congested. After giving some further details of the post-mortem examination, Dr. Clouston exhibited portions of the brain under the microscope, and pointed out that the characteristic lesions in general paralysis were found. He then went on to say that at the same time that they had A. K. in the asylum they had also another patient, J. F. This girl was 16½ years of age, and had been lively and playful up to the age of 14. J. F. had never menstruated. The family consisted of eight, of whom the one older than the patient and the three next younger were stillborn. There had been syphilis on the father's part. She had been a particularly bright and clever girl at school, having passed the sixth standard. She was nearly two years in a compositor's place, and did her work well until about ten months before her admission to the asylum. She then became forgetful and stupid. In her case there was a short period of elevation, during which she thought she had money, but without maniacal excitement. On admission she presented all the symptoms of general paralysis. Her walk was not ataxic, but it was a general dragging walk. Dr. Clouston then exhibited the patient to the meeting, and demonstrated the characteristics of the case. He then went on to sum up the facts connected with these two cases. In these cases they had diseases developed in which there were mental and motor symptoms occurring before puberty in the undeveloped stage. Both of them had hereditary syphilis. His theory was that in these two cases general paralysis was developed at puberty and before menstruation, with hereditary syphilis as the predisposing cause and the putting forth of the nervous energy for full reproducing development as the exciting cause. The novelty of those cases seemed to be that this disease, which in 999 cases out of 1,000 was a disease of retrogression, might happen when puberty should occur under the conditions of hereditary syphilis and of heredity towards neurosis, and might run on all-fours with the other developmental diseases that so much abounded at this period of life.

Dr. B. Tuke, junr., said that he had heard general paralysis described as an inflammatory and as a degenerative disease, but if a third viz., developmental, was added, what became of the pathology? the three conditions being obviously quite incompatible. He could not see anything in these cases at all distinctive of general paralysis, but looked on them as being purely syphilitic. Both syphilis and alcohol produced symptoms closely simulating general paralysis. Dr. Clouston seemed to look upon general paralysis not as a distinct disease, but merely as a congeries of symptoms.

Dr. CLOUSTON said that he believed in the degenerative theory of general paralysis and not the inflammatory, and in the absolute unity of the disease. If they had all the symptoms of general paralysis and death as in the case of A. K., what was wanting to make a case of general paralysis? And what other disease could have the same symptoms with the same pathology? He affirmed that no known type of brain syphilis explained these cases, and that having most carefully watched and studied them, he had no doubt whatever they were cases of general paralysis. The microscopic appearances in brain syphilis were entirely different from A. K.'s case.

Dr. B. TUKE said that they could get similar symptoms in alcoholism and syphilitic cases.

The SECRETARY said that the impression left on his mind was that these cases more resembled syphilitic diseases than general paralysis. The heredity pointed that way. Then there was the great confusion of the symptoms—the symptoms not going in regular progression, but alternating. There was another point, and that was in regard to the motor symptoms being as it were deferred. He had reported to this Association some four or five years ago two cases of syphilitic insanity which precisely resembled general paralysis. These were cases of primary syphilis, and the patients were alive yet. The remission had now endured for so many years that he would be perfectly justified in claiming these two cases as syphilitic, and not as general paralytic.

Dr. JOHNSTONE said that they had not seen the first case, and were accordingly unable to confirm Dr. Clouston's diagnosis, but the case exhibited did not strike him as being distinctly one of general paralysis. He quite admitted that female general paralytics presented very vague symptoms, but his experience of such cases led him to be very cautious in diagnosing general paralysis.

Dr. SHUTTLEWORTH had amongst his imbecile patients cases resembling those described by Dr. Clouston, and had been in the habit of regarding them as cases of syphilitic dementia, there being invariably either history or evidence of inherited syphilis. A break down, both mental and physical, took place about the period of the second dentition, previous to this the children having usually passed through three or four standards at school. The first onset was often attributed to a "fit," followed by muscular inco-ordination. The gait, tremor, etc., certainly resembled the features of general paralysis. Three or four such cases had been received into the Royal Albert Asylum, though utterly hopeless as regards training. Progressive degeneration had ensued with, more or less, frequent convulsive seizures, and in the cases that had died thickened meninges and vessels, with atrophied convolutions, had been observed.

Dr. IRELAND said that he could not recall any cases in which congenital syphilis had been assigned as the predisposing cause of general paralysis. In this respect Dr. Clouston had a just claim to originality. He did not clearly make out what was the conception in Dr. Clouston's mind as to the exciting cause. Apparently he attributed the insanity to the strain of the developmental process at the period of puberty. Dr. Ireland thought that the girl's constitution had been struggling with syphilis, and that at last the affection had invaded the nervous system and induced a morbid process, resulting in dementia. He had observed girls who for years showed a tendency to scrofula, and about the age of 14 the cachexy got the upper hand of the healthy processes of nutrition, and there was scrofulous disease of the bones or joints, or strumous ulcers, or tubercle appeared in the lungs.

The SECRETARY proposed a vote of thanks to Dr. Keiller for his conduct in the chair. He said they also would be right to let Dr. Keiller understand how very much obliged they were as an Association for having had the hospitality of the Royal College of Physicians extended to them for their meetings. (Applause.)

Dr. KEILLER briefly acknowledged the compliment.

The members dined at the Edinburgh Hotel in accordance with custom.

Obituary.

HENRY MONRO, M.D., F.R.C.P.

The prevailing epidemic has numbered amongst its victims one of the oldest members, and a former president of our Association. Dr. Henry Monro died at his house in Upper Wimpole street, on May 18th, 1891, aged 74, after a brief illness. He was the last of a long line of physicians, who from father to son followed the same specialty, four being in direct succession physicians to Bethlem Hospital. The first of them was the son of Alexander Monro, D.D., the principal of the University of Edinburgh, who shortly before 1688 was nominated by James II., Bishop of Argyle. The revolution, however, prevented his assuming the dignity, and in consequence he came to London in 1691, and sent his son James to Balliol College, Oxford. The latter graduated M.D. in 1722, and in 1728 was elected physician to Bethlem Hospital, then standing in Moorfields. His son John, after having been educated at Merchant Taylors' School, also proceeded to Oxford, where he had a distinguished career, becoming a Fellow of St. John's College and a Radcliffe Travelling Fellow. He studied medicine in various places, first at Edinburgh, then at Leyden, and also in Paris and Germany. Returning to England he was appointed joint physician with his father to Bethlem Hospital, and in 1752 sole physician. Dr. John Monro "possessed a correct and elegant taste for the fine arts, and his collection of books and engravings was very considerable. He was deeply versed in the early history of engraving, and the specimens he had collected of the works of the earlier engravers were select and curious" (Dr. Munk, Roll ii., 183). His eldest son died at Oxford, and a younger, Thomas, proceeded to Oriel College, graduated in medicine and became assistant physician to his father at Bethlem Hospital, and physician in 1792 on the death of the latter. Dr. Thomas Monro was also devoted to the fine arts, and is well known as the friend and patron of the celebrated Turner, who was a constant visitor at his house. The fourth physician of Bethlem Hospital in this series was Edward Thomas, the son of the last, who like him graduated at Oriel College, and was elected physician to the hospital in 1816. The subject of this notice, Henry Monro, was the second son of the last mentioned. Born in 1817, he was educated at Harrow, and like his father and grandfather graduated at Oriel. He studied medicine at St. Bartholomew's Hospital, and became a Fellow of the College of Physicians in 1848. All these five physicians were Fellows of the College, and the portraits of all five are to be seen there, presented by Henry Monro, while those of his father and himself were painted by him. As visiting physicians at Bethlem Hospital had been discontinued, he became in 1855 physician to St. Luke's Hospital, an office he held till 1882, when he was elected consulting physician. Though the fifth of his family as a psychologist, he was the first who contributed by his pen to the literature of this special subject. In 1850 he published a treatise on Stammering, an affection from which he suffered through life to a small extent. He believed that stammering "is a chronic chorea of the speech muscles arising from a morbid irritability of nervous fibre, resulting in a loss of equilibrium between the mental and motor nervous forces, in which (whether stammering assume the more mental or more physical type) in every case the physical motor power is unequal to the pressure of the mental force and is driven consequently into spasmodic action when pressed upon by the will." In the following year he published "Remarks on Insanity," in which he still further develops the same idea, and applies it to insanity, which he says "is an affection consequent on depressed vitality . . . that when the cerebral masses are suffering from this condition of depressed vitality, they lose that static equilibrium of the nervous energies which we call tone, and exhibit in their functions the two different degrees of deficient nervous action, coincidentally, namely, irritable excess of action and partial paralysis . . . that these two degrees of deficient nervous energy do not fall

alike upon all the seats of mental operations, but that there is a partial suspension of action of the higher faculties, such as reason and will, while there is an irritable excess of action of the seats of the more elementary faculties, such as the conception of ideas, etc., which is exhibited either by excessive rapidity of succession of ideas or undue impressions of single ideas." Dr. D. H. Tuke, in his presidential address (1881), has pointed out that this doctrine of Dr. Monro's is a still clearer statement of the theory that insanity is caused by the depression or paralysis of the higher nervous centres and excessive action of others, a doctrine which Dr. Hughlings Jackson has adopted and extended, applying to it the hypothesis of evolution and dissolution as enunciated by Herbert Spencer. Insanity, according to this view, is dissolution beginning at the highest cerebral centres, the dissolution being either uniform or partial, and also varying in "depth," and Dr. Tuke further remarks in his work on "Sleep-Walking and Hypnotism" that the doctrine of positive and negative states of Dr. Monro is even more applicable to the changes involved in dreaming and sleep-walking, these being a physiological liberation of energy of one portion or centre of the brain, and a persisting stability of another part which, freed from control, may come into active play (p. 7). The whole of this treatise by Dr. Monro is characterized by thoughtful observation, as is an article published by him in the second volume of our Journal on the Nomenclature of the various forms of insanity. Among other topics he gives a good account of so-called "acute dementia," to which other names have been assigned by different writers. He proposed the name of cataleptoid insanity, "the symptoms bearing a striking resemblance in some points of view to catalepsy."

Dr. Monro was a regular attendant at the meetings of the Fellows at the College of Physicians, where in 1861 he had filled the office of Censor, and in other years that of Councillor. He was greatly interested also in the various Lunacy Bills which were for so many years before the legislature, and a diligent attendant at committees thereon. His genial and kindly nature brought him many friends in both Houses, and their advice was of much assistance at this period. But beyond professional interests he had a great and never failing delight in art, which he inherited from his grandfather and great-grandfather, and he was rarely absent from Christie's when an important sale of pictures was taking place. His taste and judgment here were excellent, and he was no mean artist himself, as the portraits executed by him at the College sufficiently testify. Though latterly he had somewhat failed in strength, yet a few years ago he looked singularly youthful for his age, and no one would have supposed that he had seen seventy years. Among his sons he leaves none, we regret to say, in the profession to carry on the line of psychological physicians.

G. F. BLANDFORD.

H. G. SUTTON, M.D.

We have to record the death of a very old member of our Association, one ill spared from general and special medicine; we refer to Dr. H. G. Sutton, physician to the London Hospital. He, with Dr. Hughlings Jackson, more than 25 years ago began to distinguish himself as a pathologist.

He did very excellent work in showing how few of the so-called local diseases were really local, they were but local manifestations of general pathological states. He pointed out that in such a disease as Bright's not only was the kidney tissue affected, but that there were widespread changes involving the nervous tissues as well. Dr. Sutton was a man of the widest sympathies, and always had a strong liking for affections of the mind and their rational treatment. He was not only a physician but a refined man, who believed in the value of outside culture for the hard-working physician, he himself spending much of his leisure in the study and practice of music and of art. Deeply

sympathetic, a devout man without any sectarian narrowness, he worshipped more often in the temple of nature than in that of churches. He longed for the rest which he has now found.

**RICHARD GUNDRY, M.D., MEDICAL SUPERINTENDENT OF THE
SPRING GROVE ASYLUM, MARYLAND, U.S.A.**

Dr. Gundry was born in 1830, at Hampstead Heath. When thirteen years of age he accompanied his father, the Rev. Jonathan Gundry, who was a Unitarian Minister, to Canada, and commenced the study of medicine at Simcoe, Ontario. He ultimately graduated at the Harvard Medical School, where he carried off the first prize. After a tour through Europe he commenced practice in Columbus, Ohio, and was then appointed second assistant physician in the Columbus Hospital for the Insane. He also held the post of Professor of *Materia Medica* and Mental Diseases in the Starling Medical College, Columbus. In 1858 he was transferred to the Ohio Insane Asylum at Dayton, and in 1861 he was promoted to the superintendency. This post he held until 1872, when he was chosen to complete and organize the asylum at Athens, Ohio. This institution was opened in 1874, and he continued in office there until 1877, when he returned to the asylum at Columbus. "Political manipulations," says a contemporary, "caused a severance of his connection with this institution," and in June, 1878, he commenced his work at Spring Grove, where he continued until his death, which occurred in April last, in the 61st year of his age. He leaves eight children. Two are members of the medical profession; one—Miss Mattie Gundry—is matron of the Home for Feeble-Minded, Baltimore.

**MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT
BRITAIN AND IRELAND.**

THE ANNUAL MEETING.

The Fiftieth ANNUAL MEETING of the Association will be held on Thursday, July 23rd, 1891, at the City Asylum, Birmingham, under the Presidency of EDMUND BANKS WHITCOMBE, M.B.C.S.

COUNCIL MEET at 10 a.m.

GENERAL MEETING at 11 a.m.

AFTERNOON MEETING (PRESIDENT'S ADDRESS) at 2 p.m.

As this will be the JUBILEE Meeting it is hoped there will be a large attendance of members. The Dinner will probably take place at the Great Western Hotel.

Trains run from Snow Hill Station to Soho (G.W.R.), which is a few minutes' walk from the Asylum. Dr. Whitcombe will arrange for some conveyances to bring Members to the Asylum from the Great Western Hotel at the hours of meeting of Care and Treatment Committee, the Council, and the Morning and Afternoon Meetings.

FLETCHER BEACH,

Hon. Secretary.

Darenth Asylum, Dartford,
June 15th, 1891.

ASSOCIATION EXAMINATIONS.

CERTIFICATE OF EFFICIENCY IN PSYCHOLOGICAL MEDICINE.

BETHLEM HOSPITAL.

Examiners :

DR. RAYNER and DR. WHITCOMBE.

I.—PASS EXAMINATION, JULY 16, 11 A.M.

II.—HONOURS EXAMINATION (GASKELL PRIZE), JULY 17, 11 A.M.

Scotch Examinations.

ROYAL EDINBURGH ASYLUM, MORNINGSIDES,

JULY 14.

ROYAL ASYLUM, GARTNAVEL, GLASGOW,

JULY 16.

ROYAL ASYLUM, ABERDEEN,

JULY 25.

For particulars, apply to Dr. FLETCHER BEACH and Dr. URQUHART.

LIST OF CANDIDATES WHO PASSED THE EXAMINATION FOR THE
CERTIFICATE OF PROFICIENCY IN NURSING IN MAY, 1891.

BIRMINGHAM ASYLUM.

*Males.*William Butterworth,
Thomas Connor,
John Andrew Parkes,
George Lees,
George Richard Evans.*Females.*Sarah Ann Devlin,
Mary Ann Kings,
Kate Millward Coaling,
Edith M. Bearpark,
Mabel Moore,
Frances Parkes,
Ann Philipps,
Mary Jane Moore.

RUBERY HILL ASYLUM.

Charles Henry Henson,
Charles M. Clarke.Laura Mary Potter,
Sarah Fisher,
Clara Helen Swift,
Elizabeth Annetta Gittins.

JAMES MURRAY'S ROYAL ASYLUM, PERTH.

James Smith,
Robert Knight,
William Douglas Pennycook.Isabella Scott,
Alice Mary Jamieson.

KIRKLANDS ASYLUM, BOTHWELL.

Duncan Haggart.

Catherine Smith,
Jessie Jamieson.

STIRLING DISTRICT ASYLUM, LABBERT.

Donald Macrae,
James A. G. Mowatt,
George Gladstone,
William Robbie.Jenie McLeod,
Mary A. Mason,
Maggie M. Stuart,
Jane Ross.

Appointments.

CORNER, HARRY, M.B., L.R.C.P.Lond., M.R.C.S.Eng., Second Assistant Medical Officer at the Bethlem Royal Hospital.

CRAIG, FREDERICK A., M.B., Junior Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury.

DISTIN, HOWARD, M.R.C.S., L.R.C.P., Resident Clinical Assistant at Bethlem Hospital.

EUSTACE, JOHN, M.B., C.M.Dub., Clinical Assistant to the Royal Asylum, Edinburgh.

EVANS, WILLIAM GEORGE, F.R.C.S.Eng., L.R.C.P.Lond., Clinical Assistant to the City of London Lunatic Asylum, Stone, near Dartford.

EVERETT, WM., M.B., Senior Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury.

GILL, JAMES MACDONALD, M.B.Lond., Resident Clinical Assistant to the Bethlem Hospital.

GOLDIE, EDWARD MILLIKEN, M.B., M.Ch.Edin., Assistant Medical Officer to the York Lunatic Asylum.

GRABHAM, MICHAEL, M.A., M.B., B.Sc.Cantab., Resident Clinical Assistant to the Birmingham City Asylum.

HENDERSON, JANE B., L.R.C.P., L.R.C.S.Edin., Third Assistant Medical Officer to the Holloway Sanatorium, Virginia Water.

MORRISON, C. S., L.R.C.P., L.R.C.S.Edin., Assistant Medical Officer to the Hereford County and City Lunatic Asylum.

NOEGATE, R. H., M.R.C.S., L.R.C.P.Lond., Third Assistant Medical Officer to the Worcester County and City Lunatic Asylum.

NUTHALL, ROBERT L. S., M.R.C.S., L.R.C.P.Lond., Fifth Assistant Medical Officer to the Hanwell Asylum.

ROBERTSON, T. BEGG, M.B., C.M.Edin., Assistant Medical Officer to the Fife and Kinross District Asylum.

SHAW, ERNEST A., B.A., M.B., C.M.Cantab., Pathologist and Anæsthetist to the West Riding Lunatic Asylum, Wakefield.

SIMPSON, ALEXANDER, M.A., M.B., C.M.Aber., Junior Assistant Medical Officer to the Sussex County Asylum, Haywards Heath.

SMITH, ROBERT G., M.A., B.Sc., M.R.C.S., Assistant Medical Officer to the City of Newcastle Asylum, Gosforth.

WATSON, GEORGE A., M.B., C.M.Edin., Assistant Medical Officer to the Birmingham City Asylum.

WILLIAMS, D. I., M.R.C.S., L.R.C.P.Lond., Junior Assistant Medical Officer to the County Asylum, Shrewsbury.

WILLS, ERNEST, M.B.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer to the County Asylum, Rainhill, near Liverpool.

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OF

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of Great Britain and Ireland).

EDITED BY

D. HACK TUKE, M.D.,
GEO. H. SAVAGE, M.D.

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

FRANCIS BACON, *Proleg. Instaurat. Mag.*

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PART 1.—ORIGINAL ARTICLES.

*Presidential Address delivered at the Fiftieth Annual Meeting
of the Medico-Psychological Association held at Birmingham,
July 23, 1891. By EDMUND BANCKS WHITCOMBE,
M.R.C.S.*

Jubilee Meeting.

GENTLEMEN,—Each member of this Association, if placed in the honourable position of President, would, I presume, have his own special views as to the nature of a Presidential Address, although the selection of a subject might be attended with difficulties. Within the last few years you have wisely determined that such Address shall be a theme for discussion, and it appears to me expedient under these circumstances that the President should aim at bringing before you material of a debatable character, and at the same time that he should endeavour to suggest subjects which may lead to further progress in the special work we all have at heart. Such thoughts give rise in the first place to a feeling of personal inability, and next to a sense of the great responsibility which you have placed upon me. It seems presumptuous on my part to attempt to point out to you new fields of labour, yet I cannot help thinking that the assumption of less reticence as to our individual experiences, and the conclusions such experiences force upon us, would tend towards the development of greater and more beneficial progress.

Gentlemen, I am in the proud position to-day of being permitted to congratulate this Association on the attainment of its Jubilee, and I do this the more heartily because I am able to recognize during the last fifty years a steady advance in Psychological Medicine, in the care and treatment of the insane, and in the management of our institutions. Who, for

instance, will compare the able scientific works on Mental Diseases by Bucknill and Tuke, Clouston, Maudsley, Ireland, Mickle, Bevan Lewis, and others with the volumes on like subjects of half a century back, intellectual and powerful as they are, or the material in our Journal of the present day with that in the earlier numbers, and say we are standing still? Or who will contrast the asylums and their inmates at the extremes of that period, and fail to perceive the greatest improvements? I will not, however, rely upon personal observation in making such a statement, but quote from the report of the *Lancet* Commission on Lunatic Asylums. After speaking in high terms of the valuable services rendered to the cause of humanity and to the interests of medical science by the Commissioners in Lunacy, and especially by the late Lord Shaftesbury, the report goes on to say: "It is not alone that crying grievances have been redressed; the baneful prejudices, which, until comparatively recent times, brooded over the whole subject of mental disease and its victims have been uprooted, the entire system of socio-medical treatment reformed." "Speaking generally, enlightened emulation has taken the place of ignorance and indifference, a real desire to relieve suffering, advance the triumph of science over disease, and wipe out the reproach of want of sympathy is apparent." These remarks were made fourteen years ago, and the spirit of progress then apparent was recognized as a continuing one in the following words:—"While the Commission continues its useful labours the improvement will be constant. Each year's progress increases the momentum, and every step in advance lessens the difficulty." It is only necessary to remark that the Commission still exists.

However, it is not my province to elate you with successes. You have not yet reached the zenith of progress; indeed, it appears to be the inevitable lot of a medical career that its followers are but students throughout, and that, just as the goal of their highest attainments is in sight, physical incapacity prevents its realization.

Few human beings, probably, who arrive at their fiftieth birthday, and are conscious of it, allow it to pass by without some reflection as to their past years. And it seems appropriate on this occasion that we should review our work of half a century, that we should consider our position and aims of the present, and that we should endeavour to look forward into a hopeful and progressive future.

Happily I am saved from a retrospect of forty years' work.

Our friend, Dr. Hack Tuke, in his Presidential Address ten years ago, gave us a full and most interesting account of the doings of this Association up to that time. To that period, therefore, I do not propose to direct your attention, except that I would recall to your memories the circumstances of your birth. You were born at Gloucester on the 27th of this very month, 1841, and christened "The Association of Medical Officers of Asylums and Hospitals for the Insane." The following extract from a circular letter conceived by Dr. Hitch gives reasons for its formation and the objects to which it aspired:—"It having long been felt desirable that the medical gentlemen connected with lunatic asylums should be better known to each other, should communicate more freely the results of their individual experience; should co-operate in collecting statistical information relating to insanity, and, above all, should assist each other in improving the treatment of the insane." These conditions appear to me to embrace every object that can be put forward as likely to contribute to successful results. No one will, I believe, question the fact that the work of our Association has been based upon these lines. Yet, I venture to assert that they are as pertinent to us of the present day as to our progenitors of fifty years ago. Your infancy and childhood, gentlemen, were as they should be—modest and retiring. Your voice was heard more loudly and your power extended when in 1853 the Journal of the Association appeared under the able editor Dr. J. C. Bucknill. It is only a just tribute to its editors, past and present, to acknowledge that its influence on the development of the Association has been great and beneficial, and has assisted largely in the attainment of our present status.

Within the last ten years unusual activity has been noticeable in our midst and great alarms have pervaded our ranks. The change in the government of our county asylums from local magistracy to County Councils created, for a time, considerable excitement. It was imagined that these latter bodies were coming into power to make sweeping economies; and a check upon the more liberal and enlightened treatment of insanity was anticipated. But what do we find? The very opposite, if I am not misinformed. Certainly in the majority of instances a liberal and progressive spirit pervades the minds of these august bodies, and all connected with insanity appear likely to benefit by the change. Danger signals were again hoisted on the advent of the new Lunacy Act. Private asylums were about to be demolished, stumbling blocks were

multiplied, and official life in an asylum was not to be worth living. This Act has been in force now upwards of twelve months, and it may be useful to notice briefly the impressions made during that period. But first I must remark that I consider it would be wise and judicious on the part of our law makers when framing, altering, or amending Acts relating to insanity, to take into their confidence, and consult with, a Committee of this Association. Our members include all those who, in this country, have made a special and life-long study of insanity, and this study is not alone a medical one—our efforts extend beyond the boundary of an asylum estate; we peruse the subject and inquire into its consequences not as affecting the individual only, but the nation at large. Our theme may be called insanity in its medical, social, and national aspects, its extent being boundless, its aims the cure and care of the insane, the prevention of insanity, and the mental health of the community. With such purpose and opinions, it is probable we should differ from the hard legal mind, and estimate more completely the beneficial effects on those for whom such laws are made.

The Lunacy Act of 1890 was doubtless framed with good intentions, but many of its clauses suggest aspersions, and imply suspicions which were not only uncalled for, but are most unjust. It limits the number of private asylums, and adds to the stringent conditions under which they previously existed; it thus discourages private, and encourages public enterprise in the treatment of disease. The liberty of the subject, the abuse of restraint, and other such sensational phrases may be considered its war cry. Its bark, however, was worse than its bite, and I think we shall find that "there is some good even in things evil." It appears to me that this Act has placed the proprietors of private asylums in the position they ever should have been, above suspicion; and here I must pause a moment to add my humble opinion as to the value, the worthiness, the uprightness and honesty of this large section of our Association, the private asylum physicians. We are in a position to appreciate and estimate their honesty of purpose and the good work they have accomplished. Why should these men be singled out for specially stringent laws any more than the many eminent and distinguished physicians and surgeons who are the proprietors of private hospitals? It's the old cry "black sheep," but we don't find these dark coloured animals so carefully catered for outside our speciality.

I cannot help thinking that some of the kindly and well

meant acts of asylum physicians have given rise to prejudices and reproaches. A case still before the public tends to support my views and is worth notice. As I read in a local newspaper, a lady, supposed to be a lunatic, was kidnapped by asylum attendants in the public thoroughfare, outside the Royal Courts of Justice, and taken to an asylum. This very naturally leads to misapprehension, and nothing I think is so likely to bring asylum work into disrepute. But at the same time that I recognize the kindly assistance to the friends of the lady, I observe the deleterious and prejudicial effects of the Act. We treat patients under a law which deprives them of liberty; in fact, makes them for the time being prisoners, and under such circumstances it must be most unwise, most injudicious, to send for our patients. The very essence of the physician's art is destroyed by it. How can any person look upon the doctor as a friend and protector when by *his* act they are placed in confinement? It is probable we may be accused of want of sympathy by refusing to render aid under difficult conditions. Our first duty is to the patient, and that clearly demands the reception of the case under the most favourable circumstances for treatment. We have also a duty to our profession, the honour and good name of which is dear to every one of us.

To return to the Act, the private patient is now placed on a nearer equality to the pauper, so far as orders for detention are concerned. This commends itself, and appears to have worked smoothly, although in some localities difficulties have arisen in carrying out necessary provisions. An attempt is being made by a Bill now before Parliament to amend the Lunacy Act, to lessen these difficulties.

Privileges and safeguards for our patients have been multiplied, and no one has found fault with them. A large amount of clerical work has been thrown upon medical officers of asylums generally, and numerous penalties attend its non-fulfilment. It would be interesting to know how many patients have been discharged from public and private asylums as a result of recertification or from inability to recertify. My estimate of the number would be very small. I do not look upon this increase of work as an unmixed evil. The official staff of asylums was but at its working complement, and as a result of additional labour we have had to multiply our workmen. This may enable us to carry on more scientific research than hitherto we have been able to. The question of mechanical restraint has again been brought to the fore,

because legal minds cannot comprehend the difference between the use of restraint as a treatment, and its abuse as a mode of punishment, or as a result of ignorance. I am by no means an advocate for mechanical restraint, but our whole system, gentlemen, is one of restraint, and I fail to see the difference between a lock and a strait jacket, except so far as mechanical skill and ingenuity are concerned. There is a curious anomaly in this as in former Lunacy Acts, that the medical superintendent of an asylum has no power of himself to discharge a patient on recovery.

The alterations as to the correspondence of patients should keep the Lord Chancellor supplied with insane literature for the remainder of his natural existence. For the first time the heads of our establishments are given the power to destroy letters unfit for publication, except in certain instances. Previously such letters had to be submitted to the committee. A hint has been taken from our Scotch brethren, and power is given for boarding out patients. This appears to be a very wise proceeding, as although the system is not applicable to large towns and densely-populated neighbourhoods, the boarding out of harmless chronic cases in country districts must be conducive to greater freedom and happiness for them, give an additional occupation and source of income to those taking charge of such cases, and at the same time it should be economical.

The increased rating of asylums has given rise to a large amount of correspondence and agitation, and appears a somewhat absurd measure, entailing as it does in many instances the transfer of large sums of money from one pocket to the other, and making the cost of asylums look greater. This however is a ratepayers' question, and must eventually right itself. The majority of testimony tends to show that the new Act has been worked smoothly and successfully, and has not given cause for anything of an alarming nature. We cannot complain that favour or affection has been shown in its distribution of work. The heads of the lunacy departments must have suffered as we have, if not to a greater extent. What must have been the condition of the Commissioners after perusing accounts of the mental and bodily state of about 80,000 patients in the space of one month?

I pass from a dry Act of Parliament to a subject which within the last four years has again been brought to the front, namely, the provision of special hospitals for the treatment of acute cases of insanity. The idea is by no means an original

one. So long since as 1865 Dr. John S. Butler, of Connecticut, recommended a similar mode of dealing with such cases in the following words:—"I stated to the Association (this was the Association of Medical Superintendents of Institutions for the Insane, founded in 1844, at Philadelphia) that the admission into the Retreat of a large number of incurable State patients had greatly embarrassed the remedial treatment of the recent and hopefully curable. I was led to suggest the consideration of some kind of distinct and efficient provision for these unfortunates, only to find the best effectual way of escaping from such possibly avoidable interference with hopefully curable treatment." Like the majority of those who attempt to make radical changes, his views were thwarted, and that by members of his own profession. Still, he then planted a seed which is germinating, and which must in the natural course of events grow and flourish. In 1887 I suggested this subject for the consideration of the Committee of this asylum, and I hope that when the time arrives for providing further asylum accommodation for this city, the advanced and liberal spirit which pervades our local ruling body will have its influence in attaining so desirable an object. Holding, as I do, the opinion that every asylum which admits 200 patients and upwards yearly should have its own special hospital for the treatment of these patients, I should welcome such a hospital with the greatest satisfaction, and this for various reasons. It would, I believe, be a first and great step towards the destruction of what I may term the legal treatment of this disease. It would ensure the separation of acute from chronic insanity, sustain and encourage the more rational treatment of insanity as a symptom of physical derangement; but above these a well-constituted hospital would be the means of promoting to a greater extent, and in a more elaborate manner than at present exists, a scientific and wider knowledge of the disease, and give an impetus to further progress. This acute hospital should, however, be *within a reasonable distance of its asylum*. Its boundaries should be distinct, *under the same management*, and having a larger staff, which should include consultants and an efficient proportion of trained nurses. Such a hospital should be administered on the most liberal principles, not as we see at the present time, in a competing spirit as to the smallest cost (a spirit much to be deprecated as injurious to the proper treatment of disease), but having a due regard to frugality in its truest and most economical aspect—the cure of the patient. At these hospitals patients should be encouraged to present themselves for

examination and advice without the present necessary order and certificate, so that mental and physical conditions may be observed and treated in their initial stage. Every such hospital should have its out-patient department; and all efforts made to increase the interest of the profession generally in this special work.

If I express opinions not generally accepted, I would say they have been forced upon me, not only from personal experience, but from the fact that special hospitals have been the great means of advancing knowledge and treatment of special diseases. Take, for instance, one of the more recent of these, gynæcology and abdominal surgery. No one a few years ago would have sanctioned explorations even such as are now made with perfect safety, and who shall say that brain surgery, still in its infancy, shall not arrive at a similar safe and satisfactory state of perfection?

Two very important steps have been taken by this Association in an educational point of view, namely, the granting of certificates after examination to medical men, and more recently to nurses. The first of these must lead to an extension of a knowledge of insanity outside our specialty. Its success is shown by the fact that at the present time upwards of 120 candidates have received certificates, and the incorporation with it of the Gaskell Prize encourages scientific research. The second step possesses probably still greater value and significance, inasmuch as it embraces the whole care and treatment of the insane. Every medical man will, I think, acknowledge that good nursing is his chief agent in the treatment of disease. Yet it almost looks as if we had been reticent in accepting this. Efforts have been made to educate nurses for this special work, but all apparently failed until Dr. Cowles, of the McLean Asylum, established a training school for nurses. This Association, as a body, has recognized the necessity for efficient nursing; but it cannot ensure it. Upon individual members, and especially upon the superintendents of asylums, depends the success or otherwise of the scheme you have adopted. If the heads of our institutions will take personal interest in this movement its success is certain. There should be no chance given to those who would change from asylum to asylum because there is training or because there is no training. All should be, alike, training everywhere. Difficulties and disappointments are to be expected, and must be encountered by a determined perseverance. The very nature of the disease we treat must entail many changes in our nursing staff,

and training alone will not prevent this. A proportion of our medical staff, as well as nursing, are unable to sustain the effects of prolonged association with the insane, and the wear and tear of asylum life: the amount of kindness and good temper, of tact and firmness required in dealing with insanity, is not at the command of every individual who seeks employment in an asylum, and probably takes a fancy to the work. The education of a person to look upon all cases of insanity, as human beings suffering from physical disease, as patients requiring the most kind and thoughtful treatment and care, is of itself a great undertaking, and appeals to our warmest sympathies. The effect to that praiseworthy band of workers, asylum nurses, must be beneficial. That they are at the present time striving to perform their difficult duties in a faithful manner is shown by the fact that the daily newspapers are not now teeming with sensational articles on accidents and cruelties in asylums. At the same time it is but reasonable to expect that their interest will be increased, and their difficulties lessened by some knowledge of the mental and physical conditions they are called upon to deal with, and by tuition in the best modes of executing their work. That our scheme for training is perfect no one will be bold enough to assert, but time and experience will enable us to suggest improvements. Egoism or petty jealousies should not prevent the adoption of other views than our own. It has given me sincere pleasure to receive from Dr. Clouston a copy of his syllabus of lectures on this subject, and I acknowledge its suggestive usefulness. A knowledge of the mode of proceeding in other asylums must lead to an approximation to uniformity. What the benefits of improved nursing will be to our patients has yet to be determined. In the meantime we may look forward hopefully to their side of the question.

This Association has now the responsibility of granting two certificates, and I think it would be wise and judicious to appoint a Standing Educational Committee, which should watch over these educational functions, and from time to time suggest methods for their improvement. Other reasons, to which I shall proceed, make such a committee still more desirable, if not a necessity. Nothing, to my mind, marks so distinctly the progress made in Psychological Medicine as the fact that the General Medical Council has, at last, included it in the list of compulsory subjects for education and examination. For the first time we are placed on an equality with other branches of our profession, and all medical men of the future

will be taught to recognize insanity in its earliest as well as its more advanced stages. The beneficial effects of this cannot be over-estimated. There is no doubt that many of the shortcomings attributed to alienists are due to the want of appreciation by others of the prodromes of insanity. Our material has too often passed into the chronic stage of disease before the chance is given us of attempting remedial agencies, and the general practitioner from his ignorance or imperfect knowledge of this disease is frequently the cause of this. We are all aware that teaching has been going on for some years, but in the majority of instances a knowledge of insanity has been an optional rather than a necessary item in the educational course. All may not expect to be teachers, but everyone who has made a study of psychology must feel an interest in the instruction of our students in all that appertains to the subject, and I venture to think that this presents a favourable opportunity for this Association to suggest some broad principles on which instruction should be based. I am not attempting to interfere with individual opinions, but I cannot help feeling that something approaching unanimity in teaching would be of the greatest advantage to students. I thoroughly believe in pointing out the views and opinions as expressed in the writings of men whose ability, experience, and scientific attainments are acknowledged. But take classification as an instance of the variety of views I allude to, the innumerable terms used to denote the different forms of insanity are, of themselves, sufficient to drive a student to distraction, and it is only by a long and continued study of, and association with, the various kinds that we ourselves are able to recognize them. It is clearly our duty to make the teaching of this special branch of the profession as thorough and complete as possible, and that with the smallest possible amount of labour to the student. The General Medical Council speaks forcibly and frequently upon the necessity for practical work and clinical instruction, and minimises the number of lectures. This expression of opinion is but the result of experience. Clinical instruction is the easiest mode alike of teaching and of learning, and if this be so on medical subjects generally how much more is it the case in mental diseases? Who, for example, can represent the mental and physical condition of an acutely suicidal melancholiac in words which will compare with the powerful and lasting impression made by a bedside observation and examination. The present system of teaching Psychological Medicine is clinical, the employment of resident clinical assistants is gradually

extending, and has been a source of much good and useful work. At the same time, we recognize the necessity for instruction in mental physiology no less than in pathology—a knowledge of the *mens sana in corpore sano*. The action of the General Medical Council will, I believe, mark an era in the progress of psychology, not only from the benefits which must arise from extended knowledge of the diseases giving rise to mental disturbances, but from the fact that it is likely to result in an increasing supply of ardent workers in the specialty, some of whom may possibly attempt to allay the thirst which is arising for more scientific knowledge in our department.

Your fiftieth birthday has been signalized by a report from a Committee appointed at the last annual meeting, expressing briefly the opinion of the Association upon the care and treatment of the insane. Having been unwillingly one of the drones on that Committee, I may be permitted to allude to one or two of the subjects it mentions. The report appears to me to be a fitting tribute to the good work that has been done in the past, and contains a hopeful scheme for future advancement and success. Its language is clear and concise, and its opinions are worthy the attention both of the public and professional mind. Clause 9 refers to a topic of very great importance, the want of institutions for a class of the insane above the grade of paupers. This is a requirement which has long been felt, and urgently demands a remedy. Existing hospitals which were founded and partly endowed for this class appear to be developing into large private asylums, into which few patients can obtain admittance under payment of less than three guineas per week. The new Lunacy Act encourages provision for such cases, either attached to or separated from existing pauper establishments; but so far as I can learn, no public body has yet considered the advisability of building for them. Of the admixture of private and pauper patients in one institution, I most strongly disapprove, as harmful to both classes, productive of discontent and jealousy, destroying the idea of privacy, and excluding the very object of a private asylum, the acquisition of equal or better society. Hospitals for patients who are able to pay sums varying from fifteen to thirty or forty shillings per week are public necessities, and should be readily obtained. Such institutions would soon become self-supporting, and by limiting the amount of payments would not interfere with private enterprise. It only needs the philanthropic resources of a Peabody, a Josiah Mason, or a Jaffray for its accomplishment, and these

resources must abound in this country. There is no more deserving class for such philanthropy, including as it does the well-to-do artisan, tradesman, the poor professional, and others—persons educated, able to sustain their respectability so long as health lasts, but when overtaken by disease forced to become paupers or to be placed on the same level. I believe the public do but need this great want to be pointed out to them in plain and forcible language to accomplish its remedy, and your Committee having briefly alluded to the want, it appears clear that this Association should enlarge upon the subject and state fully its opinions, if not take such steps as would be likely to lead to the establishing of some of these institutions, the government of which would naturally fall into the hands of public bodies.

Another subject upon which your Committee has plainly spoken is the size of asylums. For some years past it has been fashionable to increase the capacity of these institutions until they have attained unwieldy proportions, and at the present time asylums are being built for upwards of 2,000 patients. With due respect for the abilities of the heads of these establishments, and there is no doubt that their talents and energies are wonderfully displayed, I hold strong views that such institutions are cumbrous and embarrassing for good management, that they entail responsibilities too great for the shoulders of one head, and, further, that they tend to defeat the very object for which they were intended, the treatment of disease, or at any rate its best and most successful treatment. Their existence is but another argument in favour of hospitals for acute and recent cases. If their cost is looked upon as a reason for their creation, I fail to see that they are less expensive either in building or rate of maintenance. The question is an important one as affecting the true interests of the insane and of those who have charge of them. It is allied, too, with the burning question of the day—What is to become of our chronic insane?

While prisons and workhouses appear to be decreasing throughout the country, asylums are multiplying and magnifying. This is due, not to an increase of insanity itself as regards its proportion to the population, but to the accumulation of chronic cases. The boarding-out system, if fully adopted in England, will probably relieve the congested state of existing establishments. Still accumulation goes on, and it appears desirable that this Association should take the lead in this, as in all matters relating to insanity, and after careful

consideration suggest methods whereby it may be alleviated. The report of the Commissioners for 1889 shows an annual increase of about 1,700 insane persons in England and Wales, and an increased ratio of insane to 10,000 of the population of 10·5 during the last 40 years. At the same time we gather from this report that the increase in the number of admissions into asylums, etc., is but ·49 per 10,000 of the population during the last 20 years. Can this accumulation be diminished? Is it possible to do more than we are doing for the cure of insanity? Are all our old cases hopelessly incurable, or can we, by adopting new methods, hope to benefit some of them? These are questions which suggest themselves to all our minds, but which, perhaps, on account of the great difficulties surrounding them, we unconsciously avoid. Some may consider that these social questions are outside the jurisdiction of medical science, and that our duties and attention should be confined to the patients under our care. I submit that it is part of that duty. An experiment easy of attainment has already been suggested, namely, the interchange of patients. It appears feasible and reasonably hopeful of good that superintendents should select cases which have apparently passed into a chronic state who might possibly benefit by change to another asylum. Good results have occasionally been noticed in such cases when transferred from one institution to another on account of chargeability. Probably greater benefits would be effected by such interchange in cases in which improvement has gone on to a certain stage, and then ceased, before chronicity may be said to have set in. Change of air, of occupation, and surroundings, possibly of treatment, are acknowledged remedies, and the difference between two asylums in situation, architecture, furniture, and administration would accomplish for our pauper insane that which the wealthy can always obtain. Difficulties, of course, would appear, but I see none that are insurmountable.

Another wide and important subject which may be connected with the question of accumulation comes forcibly to mind, the Prevention of Insanity. A most useful and able work on this, from the pen of Dr. Hack Tuke, has been before the public and profession for some years. Full of excellent advice and suggestions the book does not, I fear, reach the large majority of those for whose benefit it was intended; and it seems desirable that the public, and especially the poorer portion, should be educated more in the elements

of mental as well as physical health, and not alone in the mode of maintaining mental health, but also in those earlier symptoms which are prognostic of unhealthy disturbances of the mind. Much has been said and written of late years on the necessity for early treatment, but the need for some knowledge on the part of the public as to the premonitory signs of mental diseases appears to have been lost sight of. As is frequently the case, the hurry and scurry after scientific investigation excludes the consideration of more practical and useful matters. The onset of insanity is frequently so slow and insidious that its detection becomes most difficult, but much may be accomplished by preventive measures, if these be plainly and forcibly directed. The medico-psychologist, unfortunately, is rarely consulted in such cases; his advice is generally sought when the period for prophylactic treatment has passed. How, then, can he render aid in this direction? Possibly by following the lines laid down in the first part of the report of the Committee already referred to, keeping the public mind continually fixed on the laws of mental health, by lectures, by instruction in psychological subjects in our schools, and by endeavouring to instil the general practitioner with a sense of the responsibility that devolves upon him.

In bringing before you the various subjects in this Address, I am conscious of the very imperfect manner in which my task has been performed. I have but briefly alluded to topics which appeared to contain material for useful discussion and lengthy debate, and in expressing my opinions I have endeavoured to point out defects and suggest remedies. Feebly as this has been done I have been sustained by the hope that some good, however small, may arise from it for our patients and our art, and that for my shortcomings I shall have your sympathy and forgiveness.

The Proposed Hospitals for the Treatment of the Insane. By
T. CLIFFORD ALLBUTT, M.D., F.R.S.

(Read at the Psychology Section of the B.M.A., Bournemouth, July, 1891.
See p. 524.)

My hearers will remember that in 1889 the London County Council, appalled by the multitudes of insane persons committed to its charge, formed a strong and compact Committee to inquire into the means of dealing with this *damnosa hæreditas*. The Chairman of this Committee was a medical man who possesses in exceptional measure the qualities needed

for such a post. A general inquiry into the means of treating insanity being, I presume, regarded as too large a commission, it was decided to concentrate the inquiry upon a proposal to build in London a hospital with a visiting staff for the study and treatment of insanity.

It is to be regretted, even at the cost of much more time and pains, that the whole question of the treatment of the insane, as it was indirectly raised, was not directly discussed, and that, indeed, this wider inquiry was positively obscured by the advocacy of a certain scheme—a scheme distrusted, I think, by the large majority of those best able to judge.

To my mind the inquiry would have been better had it fallen into these four chapters :

1. Are the present methods of treating the insane defective? If so, in what way?
2. Are such defects, if any, inherent or accidental?
3. Should separate hospitals, independent of asylums, be provided for recent and acute cases?
4. If so, should such hospitals be directed by a resident or by a visiting staff?

Now, time forbids me to discuss these questions severally and fully; I must content myself, therefore, with some general reflections. I suggest, however, that the discussion shall be guided more or less closely on these lines.

In respect of our present methods, he who sees even a relative and temporary perfection therein must be a sanguine person. One of the ablest superintendents of our day (Sir Jas. Crichton Browne) testified to the following effect:—"Of course, there are in some asylums at this time very able scientific medical men, and there is a little scientific work going on . . . but . . . a large proportion (of inmates) do not get medical treatment at all; it is not attempted. Then, personal influence, occupation, amusements, and the influence of surroundings ought to be carried out individually, but instead of being fine hand-painting it was slapdashery. The effects of the imperfect system are very beneficial, but the duties devolving on the medical superintendent are too numerous, and his financial or farming work is better appreciated by his Committee than his medical work. . . . It is not an uncommon thing for a young medical assistant, fresh from the schools, who had perhaps never seen a case of insanity in his life, to be put into one department and given entire charge of it."

Now, the West Riding Asylum had only about 1,200

patients, and it is hard to believe that the Council instituting with one hand this inquiry, was with the other consenting to enlarge Cane Hill to the enormous number of 2,000, creating another wilderness of lunatics which no man can know.

Authorities will not sit down beforehand and reckon what they have to do in this matter. When 2,000 insane persons are clamouring without, they rush to an architect and build a vast and costly cage for the whole multitude; they then go to sleep again until another army is at the doors; they are again awakened, and the same crude dispositions are effected at gigantic and irrecoverable cost. The Home Secretary may know even less of insanity than the local authorities, and in any case he is submitted to pressure of a political kind, which places him in a false position as a judge in a matter of science. Our descendants will sooner or later reverse this blind and inhuman policy; but blunders in stone are hard to rub out.

Huge asylums—that is, asylums containing more than 1,000 patients at most—are to be condemned, because in them personal character is lost, because the effect of barrack life is bad for the inmates, classification is very difficult, and the treatment by the superintendent must be indiscriminate. Let any sensitive nervous person try to conceive the lot of another, condemned (as at Banstead) to spend 10 years, 20 years, or a lifetime in the hurly-burly of a ward of 170 lunatics. All that a superintendent can do is done to mitigate the evil, but can we wonder at the piteous appeals for removal to any other place on earth! Wards even of 70 or 80 are far too large, and the number of 50 should never be exceeded. Unfortunately, as it would seem from the Report, some superintendents addressed to the Committee intemperate and even foolish letters in favour of the present system, but these, I must suppose, were not the abler or more thoughtful men. For from the Report itself we learn (p. 14) that 49 superintendents are dissatisfied with the present asylum, as against 17 who are satisfied, and 4 who are doubtful; and the Committee surely fell into grave error when it was decided to call none of the men actually engaged in the management of an asylum, none, for instance, such as Dr. Needham, Mr. Whitcombe, or Dr. Wigglesworth, who were at that time officers of this section. Nay, even such witnesses as Dr. Maudsley, Dr. Hack Tuke, or Dr. Savage, who are not concerned in the present asylum system, were uninvited. I do not forget that Dr. Batty Tuke and Sir James Crichton Browne were called, but the results of the work of the latter at Wakefield

tend to show that the defects of the asylum system are not inherent or insuperable. Although then Dr. Greene, in his able pamphlet read to the Hospital Association on Feb. 25th, 1891, speaks, as I venture to think, with an excess of complacency in favour of asylums as they now are, yet the majority of equally thoughtful superintendents are convinced that in this system there are very serious faults and shortcomings, and their evidence on these and their remedies would have been invaluable and led to a more fruitful result. I trust the discussion sure to follow may supplement this defect.

They have reason who assert that an excessive congregation of patients leads to bad classification, to a barrack life, to the loss of domestic virtues and serenity, to medical "impressionism" and to the laicization of the medical superintendents. Moreover, the aloofness of asylums from the course of general medicine leads to slowness and provincialism in theory and practice, to waste of opportunities for research and instruction, to neglect of incipient insanity outside their walls, and the denial to the general practitioner of a special knowledge of mental diseases.

The numbers of insane persons to be dealt with in populous counties are overwhelming; but it must be possible, without exceeding 1,000 as the outside number of patients in any one asylum, to house these numbers economically, and yet to have some regard to the natural and domestic affections, the homely circumstances, and the pleasures and the peace of those unhappy persons who are forcibly deprived of liberty, and are now too often submitted to sufferings and privations which at present we no more realize than three generations ago we realized that the lower animals have common sensations or the unprivileged classes of mankind any rights.

My own views are with those who think that this can be done by breaking up asylums more into sections. Suppose that around a central and dominant hospital we build minor houses or bungalows; some of these subordinate houses might surely be built very cheaply, if unadorned by architectural features or any ornament save verandahs and creeping plants. Others, for an intermediate or variable class of patients, would need some single rooms and so forth, and be rather more costly. By careful classification each house, under a kindly and refined head, might be a family, say, of 30 persons, and I would make changes easy from one house to another, and would encourage inter-domestic tea parties, games, and the like, which would cost practically nothing. Breakfast and tea

should be prepared in each house; dinner should be sent from a central kitchen. Perhaps we might also have a few cottages for pauper boarders not under certificates, and perhaps too an out-patient department.

Now a superintendent can know 1,000 cases pretty well if a large proportion of them are of a chronic character; his chief field would, of course, be the central hospital for the acuter or more dangerous cases and for those enfeebled by disease, which cases would be, in an especial sense, under his personal care.

Even in the larger asylums I think the lay avocations of the medical superintendent are a little exaggerated. Every busy man thinks how much more he could do under other circumstances, but it is not those superintendents who have most time on their hands who surprise us the most by their professional achievements. Moreover, a variety of work is good for all men, and especially for those who live with the insane. Many of us who have laboured far more heavily in ordinary practice have also taken a pride in our farms, our plantations, our dairies, our horse and stock breeding, and so forth, and found delightful recreation in them. A medical superintendent who is well fitted for his post has a quick eye for character and a faculty for organization. He should not be so foolish as to write 20 or 30 letters a day when a shorthand-writer at a tenth of his own salary can do them better. If he knows how to delegate work and knows how to select or to trust a good clerk, a good engineer, a good bailiff, and a good steward, his time should no more be dissipated in lay occupations than the time of a successful civil engineer for instance, who can, nevertheless, contribute largely to the applied science of his generation. But to get such men you must pay the price of them, and to expect to secure first-rate medical superintendents, men, that is, of great natural endowments and high education, for one quarter, or, at most, one-third, the remuneration such men can earn outside, must often end in disappointment. Some such men for some reasons will be found, but the band of students in each year who are conscious of power, will—and actually now do—pass by this gate and deviate into other paths. Again, the assistant staff is often numerically weak, and also, as Sir J. C. B. said, we drop too often from the medical superintendent to young and inexperienced subalterns at £100 or £120 a year. Every large asylum should have an assistant-superintendent, who should be a man of some standing and experience, and who should have a substantial salary, say not

less than £350 a year and board. That a pathologist also should be engaged in every large asylum is now conceded, but here again this difficult work should not be entrusted to a newly-fledged student, but, as at Rainhill, a commencing salary of £200 a year with board and lodging should be given in order to secure a man of attainments. We have now to consider how the influence of an asylum (which, as we are trying to conceive it, should be a local institute of mental disease) shall irradiate the profession at large, and be itself in its turn so stimulated and fed from without as never to rest upon its credit, harden with routine, or fail in the daily duty of bringing within itself the best knowledge, the best practice, and the best methods of research of its time. Some of us would rely on the drafting of students through asylums as clinical clerks, on the encouragement of post-graduate classes, on the influence of this Association and of the Medico-Psychological, on the development of the medical journals, possibly on the permission of a regulated measure of private practice to the staff, and so forth. But the London Committee and many of its witnesses report that this end can only be fully attained by placing the medical directors in the hands of a visiting staff. This is not a matter of inviting specialists to come in consultation upon cases which present special observations. This, I believe, is occasional in all asylums, though actually, perhaps, too little done. The contention is that most institutions for the insane must be content to be second best, but that in London there can be, and should be, one best and exemplary institution, and that this best can only be had by the control of a visiting staff. This method is to secure a more thorough investigation of diseases of the brain and to base upon that a more curative physic which shall influence the asylums by diffusion. The arguments in favour of this plan are contained in the report and in two clever articles by Dr. Batty Tuke, the one in the "Nineteenth Century," the other in the "Brit. Med. Journal" of May 30, 1891.

There is a confident, almost a magisterial air about these articles, even in their hardest sayings, which to a friendly critic like myself is buoyant and engaging, but which to a weary and disappointed searcher after truth will seem overweening. Still, even to me, there is something belated about the arguments, as of a writer who had spent his life in combating Scotch metaphysics, and had forgotten that he was addressing the countrymen of Spencer, Maudsley, and Hughlings Jackson; nay, as of one who, in combating the meta-

physics of his country, yet had failed to rid himself altogether of that national quality of thought. What are we to think of a scientific writer who says that we betray our transcendental habit of mind by the provisional use of old-fashioned terms,* and yet himself uses such a misleading scholastic expression as "predisposing causes;" who taunts us with the use of provisional names, such as melancholia and mania, because these main symptoms may interchange in the same case, which taunt, were it worth while, might be thrown back at the general physician who does not reject the name of chorea, though this symptom may be wholly or partly replaced by paralysis; who preaches vehemently to us the duty of regarding an insane person as one with a material disorder, and yet forgets in a large part of his essay that the ingoing influences which he calls "moral treatment," and stigmatizes as transcendental, modify the structure of the brain, upon which they play as much as, or more than, the medical treatment he is so anxious to extend—that, for example, a strain of music may have as material an effect upon the particles of the brain as that blue pill of which we hear so much. To complain, as nearly all these witnesses complain, that "the knowledge of cerebral disease is not commensurate with" that of spinal or abdominal disease may be good for us, but is unfair in so far as it ignores the fact that the advance of knowledge must necessarily be from the simpler to the more complex. A knowledge of cerebral disease must always, therefore, come long after a knowledge of the diseases of simpler organs; but to say that due diligence is denied to these inquiries is to ignore a measure of research in this field which has been enlarging more and more rapidly, say, from the time of Meynert's first work, and is best but not solely represented at this moment by the treatise of my late colleague, Bevan Lewis, himself the superintendent of a well-administered asylum of 1,200 patients (not including its out-patient department). The Wakefield Committee of Justices was a body of exceptional enlightenment, no doubt, and many committees are much harder to move; still, anyone who doubts the impulse and the facilities given in our asylums in recent years to the study of pathology is an inexperienced observer. As in the schools of general medicine, so in institutions for the insane. Some, like the school, say, of Professor Ringer, will lean rather towards empirical and deductive

* He reproaches us in the Report (p. 10) even for the use of the word lunacy. But I would point out that the attribution of power to the moon to influence the brain, though untrue, was a physical hypothesis legitimate in its kind.

therapeutics, and some, like the school, say, of Dr. Bristowe or Dr. Ferrier or Dr. Hughlings Jackson will lean rather towards pathology. Still we must not say with the pardonable exaggeration of Dr. Batty Tuke that nosology will be founded on pathological anatomy as "the highest scientific platform." For, unless we give a remote sense to the words, this is far too statical a view—the view of the deadhouse. Nosology will gradually form itself upon a natural and evolutionary basis, upon the natural affinities—both personal and hereditary in manifestation—of maladies and groups of maladies which may differ much in place and in anatomical resolution, but have a community of nature, as kindred plants and animals differ, but do not lose their community of nature when they develop under widely varying physical conditions. There is a large field, therefore, for clinical as well as for pathological research and classification. Now let us turn to therapeutics. Here the Report and Dr. B. Tuke never tire of repeating that their desire is to bring the insane more under "medical" and away from what they call "moral" treatment—that these are sick people, and must have "hospital" treatment. To this end it is said (and I must be forgiven if I cannot always distinguish between Dr. Tuke and other witnesses) that their asylum must be conducted on the lines of an ordinary hospital, and must be controlled by a visiting staff. But the evidence of the majority of the committee's witnesses seems to me to lack actuality, to lack contact with experience of the things discussed, to consist of precepts and aspirations as vague as they are respectable. And what says ultimately Dr. Gowers, a man who does not use "pious" words only, but who thinks questions out. He says (p. 28): "Specialism in insanity should be obtained entirely from the residents. After careful consideration I do not see any other way in which practical and effective co-operation can be obtained. No visiting physician should be a specialist in insanity." The Reporter adds that in this case there would be a senior resident, who "would necessarily require a salary equivalent to that which is now paid for superintendence in the smaller lunatic asylums; while the junior might be obtained at a lower rate of payment" (p. 28).

It is to be remembered, moreover, that a chief feature of the plan is that the visiting physicians shall be physicians to a general hospital (p. 26) and men of high standing, *i.e.*, they shall attend and teach, say, for two hours on three days a week, away from the new hospital, shall also lecture at a distant school of medicine, and shall enjoy the large private

practice which the public will claim from such men. It is difficult to treat such a scheme seriously. How would ophthalmology fare if the present staff were removed from Moorfields, and were replaced by, say, Mr. Thomas Smith, Mr. Bryant, and Mr. Christopher Heath, all still to have full work in their present hospitals and schools of medicine, while the "specialism" was provided by the residents. To state such a proposition is to proclaim its essential absurdity and its practical impossibility. It would be interesting to watch the rate at which a rising young house physician would poison the minds of his innocent and confiding consulting staff with the heresies of his specialty.

The fact is, gentlemen, this desire to reinstate treatment by medicine is a retrograde tendency. Modern therapeutics are marked not by a multiplication of medicines but by gradual restriction of their field. Sir James Crichton Browne suggests that a hospital adopting a more medicinal treatment of insanity may raise the percentage of cures by 10 per cent., and thus save the county of London £10,000 a year. But would it not be well first to ask the general physician why he so constantly fails to cure an insane patient before he goes to an asylum; why even those general physicians who have seen much of insanity are the first to impress upon people the futility of treatment outside an asylum and the need of early removal thither. Would it not be well also to ask the general physician by how much per cent. he has raised by medicines the rate of cure, say, of locomotor ataxy, of paralysis agitans, of spastic paraplegia, of bulbar diseases, of anterior poliomyelitis, of ordinary myelitis, of multiple sclerosis, or indeed of any nervous diseases whatever? for I dare not exclude even epilepsy, having the fear of Dr. Batty Tuke before my eyes who will tell me that the treatment of epilepsy is merely symptomatic. If we turn to those nervous diseases which tend to recovery, does the general physician still pretend that by arsenic or any other medicine he substantially shortens the course of, say, alcoholic palsy or chorea, or have Dr. Batty Tuke and Mr. Carter laid aside "moral" treatment for hysteria and hypochondriasis, and gone back to the medicinal? Putting aside a few adjuvants such as iron and cod liver oil, which are rather foods, and in any case do not touch the nature of the nervous disorders I have named (I omit syphilis, which is not a disease of nervous elements), do we not all know well enough that the hundreds and thousands of prescriptions given daily

for organic nervous diseases in the towns and cities of Great Britain are but amulets whose combinations of arsenic, zinc, belladonna, ergot, nitrate of silver, strychnia, physostigma, and so forth, are as useful as crab's eyes and pounded newts, and really come after all under the head of "hygienic uses of the imagination?" We may improve our hypnotics but we administer them less and less every day, and are we to return to the antimony and opium pills—effective enough in their way—formerly used in asylums by the gross? No, gentlemen, the more we know of insanity, the less medicine do we give.* Even if we assume that the vapours of a torpid liver are of the same nature as insanity, would we not gladly leave his blue pill to the Reporter if he will give us early rising, regulated diet, and horse exercise in its place? What has become of all the boasted medicines for phthisis since the "moral" treatment of fresh air, out-door life, exercise, and good food was fully recognized? And who would send those dear to him for more medical treatment at Brompton?

Many of the insane suffer from disorders of other organs, be they of stomach, uterus, liver, skin, or what not; but, as Dr. Tuke himself shows, many of these disorders are secondary to that of the brain, others are incidental, and in a very few the insanity may be dependent upon eccentric disease outside the brain. The more, however, one sees and knows of insanity, the more remarkable is the common independence of this class of diseases of eccentric or general disorders of the body. Medical superintendents are not infallible, and they are overwhelmed by the number of their patients; no doubt, therefore, they make mistakes, and send sometimes patients to entertainments who need peace and leave others in apathy who need diversion; but, at any rate, these physicians can teach the medical profession that with advancing knowledge the place for drugs, invaluable as they often are at critical moments, in the general treatment of disease, grows less and less, and that the best practitioner is he who has learnt the natural history of disease and who knows best how to prevent it, or, failing this, how best to cure his patients by placing them under the most favourable external conditions of light, air, food, temperature, exercise, rest, protection, control, sympathy, fellow-

* The results steadily shown for some years past by Dr. Needham at Barnwood seem to indicate that the physician of the insane is in no degree behind the general physician in his therapeutic successes, to say the least of it. I wonder how far Dr. Needham attributes his success to medical prescriptions?

ship, amusements, occupation, and so forth, which the report despises as "moral" treatment, and which certainly could not be regulated by visiting physicians. Yet are we not agreed that in our consulting-rooms, in our general hospitals, and especially in the out-patient departments most of our prescriptions are but "moral" treatment without the merit of sincerity?

*The Desirableness of Throwing Open our Asylums for the Post-Graduate Study of Insanity.** By FRANCIS H. WALMSLEY, M.D., Assistant Medical Officer, Leavesden Asylum.

A distinguished historian well said "Before you attempt to write on any subject, be quite certain that you can say something fresh about it."

The Medico-Psychological Association, in the very practical Report,† just issued, on the Care and Treatment of the Insane, places on record its deliberate opinion "That every public asylum should be available for scientific research."

This plain fact, plainly stated, is worth a world of talk, and though it sweeps away whatever of freshness might have attached to my proposition, nevertheless it materially lightens, not only my task, but also the demand on your patience and forbearance; this expression of opinion, coming from the Medico-Psychological Association at this moment, while it has, for obvious reasons, necessitated an entire recasting of my paper, affords justification—if any were needed—of my action in presenting to you, and through you to the profession at large, this pressing question, in some such form as the title of my paper indicates, and also furnishes evidence that the time had come for the consideration and formulation of some scheme, which, if carried into effect, would render available to the whole body of the profession, the rich and valuable stores of information which our asylums contain.

Only by full and friendly discussion of all possible means of improvement can there be choice of the best. The remarks which I venture to obtrude upon you shall be brief and divested of all superfluous detail.

* Read at Bournemouth, July, 1891, in conjunction with Dr. T. Clifford Allbutt's paper, "The Proposed Hospitals for the Treatment of the Insane."

† See "Occasional Notes of the Quarter."

The existing asylum system has been lately subjected to numerous adverse criticisms; whether these criticisms be merited or unmerited, I shall not, as Dr. Johnson says, assume the province of determining. "Do not trouble yourself too much about the light on your statue," said Michel Angelo to the young sculptor, "the light of the public square will test its value."

In pursuing our inquiries, it is important that we exclude, so far as possible, whatever emotions the facts are calculated to excite, and attend solely to the interpretation of the facts.

It will, I take it, be generally conceded that one of the disadvantages—and one very far reaching in its influence and effects—against which asylum physicians have to contend, arises from the fact that so many of our asylums are located—doubtless for good reasons—away from the centres of industrial and intellectual activity. There may be some kinds of work of the best quality done in solitude, but most of the world's labour is performed by men and women who stand side by side, and whose efforts afford strong and equitable incentive each to each. Men cannot be isolated. We all of us, as a rule, want to be continually braced up to a high standard for our work. Emerson says:—"The common experience is that the man fits himself as well as he can to the customary details of that work or trade he falls into, and tends it as a dog turns a spit. Then he is a part of the machine he moves. The man is lost. Until he can manage to *communicate* himself to others, so that he may justify his work to their eyes, he does not yet find his vocation. Whatever he knows and thinks, whatever in his apprehension is worth doing, that let him *communicate*, or men will never know and honour him aright."

A distinguished member of our specialty has given utterance to the profound observation, "The constant association with dementals alone tends to lower the mental tone of the staffs of asylums by the well-known law of the action of mind on mind." At the risk of being considered hypercritical one might remark, in passing, that here, in the first place, the premises are inaccurate, and in the second, if accurate, we are treated to the simple affirmation of a conclusion which does not follow from the premises; in logic the fallacy known as "*Non causa pro causa*," or the inferring of a connection of cause and effect where there is

only a mere sequence, as in the celebrated instance of the rustic who made Tenterden steeple the cause of Goodwin Sands. However this may be, the lesson it would teach us is valuable, especially so, coming from one of ourselves. Doubtless man must be taken in relation to his environment, in conjunction with all the surrounding circumstances of time, place, and condition. We are all more or less, as Shakespeare's fine line renders it —

Subdued to what we work in, like the dyer's hand,

hence the importance of keeping alive the susceptibility to all the influences which overpower the accidents of a local and special culture, thereby saving ourselves becoming the slaves of the exterior circumstances in which we live.

How profoundly the general practitioner is interested in the question of insanity is shown by an enumeration of the duties which may at any moment devolve upon him, duties of a highly responsible nature, and of great importance to society.

He is concerned with the granting of lunacy certificates depriving a fellow-citizen of personal freedom and of liberty to manage his affairs. These certificates may become at a future time a subject of close and hostile criticism in our courts of law. He will be asked:—Was this man when he made his will in full possession of his faculties? Is this man who squanders his property fit to manage himself and his affairs? Had this man, when he committed this atrocious crime, the ability not only of perceiving the difference between right and wrong—the legal test—but was he capable of choosing between right and wrong—the medical test? He will be consulted on the delicate question of the marriage of those of near kin. There will come under his observation those difficult cases fluctuating between sanity and insanity, and again those pathetic, and often tragic, cases where the individual is harassed by a sense of insufficiency and of inadequacy to the demands of duty; where the patient, though not at this moment positively insane, is what is very nearly the same thing—*unsane*, a nature out of joint, poisoned and racked with pains. Only by prompt recognition and management of such cases is the impending calamity averted and the individual restored to his family and to society.

On all these points his advice will be sought and his

evidence required, and he will be expected to assign satisfactory reasons for his opinion, and will in all probability be met with the inquiry:—Have you observed and studied cases of mental disorder in the wards of a lunatic asylum?

How keen an interest the ratepayer feels in this question is said in saying that our existing asylum system with its 87,000 inmates is maintained at an annual expenditure of upwards of two millions. Lord Rosebery, when laying the coping stone of another Metropolitan asylum, said:—“Lunatics in London are increasing at the rate of 400 a year, thus every five years we shall require to erect a new asylum at the cost of half a million. You have to view this enormous expenditure as one for which I can give no promise of its diminution; it must increase sensibly until some remedy is found which shall strike at the root of insanity itself!”

The community generally is displaying a deeper interest and concern in the welfare of its several organizations, asks that they shall be maintained in a state of active efficiency, and desires to make sure that the work done by them is the best that can be commanded at the time.

The movements lately initiated by the governing bodies of our Poor Law Institutions—organizations allied to our own—are very significant of an altered state of public opinion.

The Metropolitan Asylums Board is affording opportunities to students and qualified medical men to avail themselves, for the purposes of study and scientific research, of the vast resources contained in the infectious hospitals and in the asylums under their control.

The Paddington Board of Guardians have invited physicians from the general hospitals to lecture in their infirmary in connection with the London post-graduate course of medicine.

Dr. Bridges, of the Local Government Board, in giving evidence before the “Hospital Inquiry Committee,” advocates the linking of the poor law infirmaries with the general hospitals.

Were the medical staff of each one of our asylums actively engaged in conducting post-graduate courses of mental medicine, facilities for the study and observation of insanity would be increased, and a better knowledge of the subject diffused throughout the profession at large. Some such

scheme universally adopted would cause our asylums to approximate more and more in character to the hospital type, and would benefit not only the general practitioner, but also the asylum physician, by bringing him more within the sphere of emulation with his confrères outside; he would have to provide all the newest and best knowledge of the time, and convey it in the most useful form; this alone would impart a healthy stimulus to work. He would meet with those engaged in different branches of practice, who view the subject from a different standpoint; practical men would be brought together and would impart all that was singular and of value in their experience.

Locke quaintly says:—"We are all short-sighted, and very often see but one side of a matter, our views are not extended to all that has a connection with it. From this defect I think no man is free; we see but in part and we know but in part, and therefore it is no wonder we conclude not right from our partial views. This might instruct the proudest esteemer of his own parts, how useful it is to talk and consult with others, even such as come short of him, in capacity, quickness, and penetration, for since no one sees all and we generally have different prospects of the same thing according to our different, as I may say, positions to it, it is not incongruous to think, nor beneath any man to try, whether another may not have notions of things which have escaped him, and which his reason would make use of if they came into his mind."

The *Times* says:—"The public seeks in vain for any manifest indication that the speciality which professes the treatment of insanity has kept abreast in the onward march of medical science. Asylum medical officers are, as a rule, too much occupied by duties which might be performed by stewards or clerks to have proper leisure for the scientific study of the patients placed under their care." So often has this been repeated that if we did not know the contrary to be the case by sure warrant we might easily have concluded—so fallible is our reason—that this was the truth of the matter; the necessity for a statement so condemnatory is to be deeply regretted, if justified by the facts; that it has not, at least, a universal application, one has but to call the roll of the distinguished men who have filled the presidential chair of the Medico-Psychological Association, men who have done much to aid the efficient treatment of the insane; again, of those men—their names are known to

all of us—who, while engaged in the arduous work of administration, have yet found time to produce the masterly works we possess on mental disease; men of the highest literary and scientific attainments—men who save and serve their order.

The *British Medical Journal* says:—"Doubtless asylum physicians are expected to do too many things, but we believe the old maxim of further employing the most busy of men holds good with them, as such men always find time for more work."

Thus then there appears to be general agreement that the time has come for urging asylum authorities earnestly to consider the propriety of rendering available to the whole body of the profession the rich and valuable stores of information which our asylums contain; such a course must necessarily lead to an interchange of views between the profession at large and the permanent staffs of our asylums, which manifestly must result in benefit to both, in good to the patients and in profit to the whole community.

The Influence of Surroundings on the Production of Insanity.
By GEO. H. SAVAGE, M.D. (Lond.), F.R.C.P.*

The object of this paper is two-fold. First, it is a protest against the widely-spread notion that nearly all insanity is due to direct neurotic heredity; secondly, I wish to point out my belief that as much insanity depends upon surrounding conditions, so the general treatment by conditions rather than by drugs is the more reasonable and more efficacious.

Perhaps the title of the paper is not wide enough, but as it is linked with that of Dr. Wallace on heredity and its influence in the production of insanity, the two papers may be looked upon as mutually complementary.

I shall endeavour to make it clear that insanity may, and frequently does, arise in families in which no neurotic weakness can be detected, and that certain members of otherwise healthy families become insane as a result of the condition in which they live.

We have heard so long and so eloquently of the tyranny of the organization that it appears to me that the time has come

* Paper read at the Psychology Section, British Medical Association Meeting, held at Bournemouth, August, 1891.

when some protest should be raised against this gospel of hopeless pessimism.

We are what we are in mind and in body to a great extent as organic results of our forefathers, but that we are no longer naked savages is some evidence that progress and development in the individual and the race may take place as the result of changing surroundings.

Favourable conditions both as to food and as to mental culture will lead to progressive improvement, if the laws of nature are observed, while unfavourable conditions will lead to degeneration.

Truly the acorn always gives rise to the oak, but the acorn grown in a flower-pot will only reach a certain size; and the acorn growing in a dense forest may fail in its struggle to push its way skywards to light and freedom. Yet each of these acorns, if their surroundings be changed, may adapt themselves to fresh conditions and grow from pigmies to be the giants of the forest.

Conditions, we shall find, influence the healthy and the unhealthy, and no one can deny that in the mere growth of the organism the surroundings play a very important part.

No general or specialist physician can fail to be deeply impressed by the evidences of direct inheritance.

No habit of mind or body seems to be too small to be transmitted from parent to offspring, but granting this it does not follow that we must be and remain the slaves of every organic tyranny. Forces in nature may be modified in many ways. They may be directed into various channels, they may be concentrated or diffused, and so a force which may be under some conditions injurious and destructive, may, under others, be the useful minister to man's slightest desire. I believe the same is true of inherited qualities. Conditions of life may lead to destructive disease or harmonious health.

In practice almost daily one meets with good examples of the influence of surroundings in the production of insanity, and none of my hearers will deny that the character of the insanity greatly depends on education and conditions of life; yet many are inclined to doubt the potency of these in producing insanity *de novo*. Yet asylum statistics, however carefully collected, only show a small minority of the patients to belong to neurotic stock, though in these statistics the family history is made to embrace collateral as well as direct branches. I do not wish to discount the value of such tables, but I would warn others, and accept the warning myself, that the mind having once acquired

a bias is very ready to accept as evidence all which agrees with this, and to reject what may be in opposition to the favourite idea. The mind absorbs the similar and rejects the dissimilar. The idea that lunatics are born, not made, is a dominate idea, and has to be firmly faced.

Heredity is an important factor, but we must remember that even in families in which neuroses abound the probabilities are that the majority of the members escape, and in the individuals who suffer clear evidence is to be found that other conditions played an important part in the production of the real disorder.

Heredity produces some insanity, but I am very much inclined to think that a highly neurotic parentage produces either mental defect, such as idiocy, or else special and peculiar forms of muscular, sensory, or mental (and moral) disorder which differ, both in their character and in the course they run, from the mental disorders which more commonly arise from other causes than heredity. The persons suffering from hereditary neuroses form very good examples, to my thinking, of the disorder of function which may lead to disease of the organ. In these patients mistaken sensory impressions give rise to delusions, and these to special forms of insanity.

I fear in this paper I shall not have time to discuss fully the question of disorder producing disease. As Sutton says, "Failure of function leads to organic destruction. It used to be thought that structure made function, but it is the reverse." We must seek not to be bound by the physical any more than by the metaphysical. (Much insanity depends on the artificial relationship of society.) Insanity cannot be treated as if it were a constant quantity. In some cases it is the result of disease of the nervous system, in others of disorder of nervous functions, and in others it is more legal or social than medical, depending on the inability of the individual to fit into his conventional surroundings. The whole question may be but one of defective accommodation. The man may be perfect as far as the reception, co-ordination, recollection, and organization of nervous impressions are concerned, yet he may be alien. The most powerful microscope ceases to be of service as long as it is out of focus, though its parts are sound and in normal relationship one with another.

It is important at once to recognize that some of the forms of insanity depending on brain disease seem to be closely connected with environment. General paralysis of the insane is a disease which increases directly with the increasing complexity of social life. This is not the place to consider the causation

of general paralysis; but it is necessary to accept it as a fact that brain degeneration follows special vital conditions. Insanity, as I have already said, is a relative term after all. What is abnormal in one state of society may be quite sane in another, and what are reasonable acts at one age of the same individual may be symptoms of insanity at another.

Education infers the influence of conditions.—The whole scheme of society and of education takes it for granted that conditions will modify the body and the mind, and if we admit this, and also admit that the question of sanity and insanity is one depending on artificial laws, then we must be prepared to admit that some insanity depends on environing conditions. Habits of body and modes of mind may by frequent repetition be established organically, even though in direct opposition to what might be at first considered to be the laws of the organism. This is true of morbid and of healthy habits.

I do not accept fully the doctrine of the criminal anthropologists. I believe some criminals are *made* by their surroundings as surely as I do that others are begotten. Every one of us knows of something in his mind or in his habits which has been acquired by the circumstances of his life. A man's school, his college, and his profession modify his normal type of mind, and may also lead to disorder. The organized faith of the honest believer is real, though incomprehensible to the scientific agnostic, and has grown with his growth and his surroundings.

Mental disorder may show itself in overgrowth of any normal faculty. With muscles there may be hypertrophy from excessive use, just as there may be wasting from pressure or overstrain, and along the sensory or the mental side we may have similar examples of overgrowth or of wasting.

Some will say, "Yes, but such mental disorder occurs only in the neurotic." My reply is that I cannot accept this either as proved or as probable.

Insanity, I maintain, is thus to a great extent a social as well as a medical question, and education and surroundings may not only colour but produce it.

One of the greatest difficulties which meets us is that cases of so-called insanity exhibit, more or less definitely, certain symptoms, occurring in, more or less, definite order, and it is hard to believe that such a correlation can exist except as a result of certain definite changes occurring in the material basis of mind. But after all we recognize that mind is built up along certain lines, and as a consequence will have a tendency in dis-

order to break down similarly. There is a cleavage of mind as of crystals, and the building up by education will determine to some degree at least the nature of the cleavage.

One difficulty in considering this subject is to limit the term "influence of surroundings," for one might fairly consider the effects of other bodily disorders on the mind, but this would lead too far. I shall content myself by taking a very few from many, which may serve as examples of the proposition I am upholding.

I shall now give examples of the influence of education and surroundings on the colouring or modifying the insane symptoms.

Surrounding conditions may lead to hallucinations.—The mother who has watched her dying child, and has anticipated its every cry, after its death fancies she still hears the cry of distress, and may in the end believe that her child is not dead.

The wife who has nursed her paralyzed husband for years may have similar fancies, growing into the belief that her husband has been buried alive.

The escaped prisoner or the detective may through expectancy develop other hallucinations, just as the nervous person may develop a ghost out of a shadow, but for the production of real insanity, not only false sensory impressions are needed, but these must be recurring or constant and must be allowed to organize. The way in which widows develop such ideas is of interest.

In youth, during development, there are specially dangerous conditions. Conceit and the desire to appear well before others in many cases leads to a self-conscious state of mind, which is very commonly exaggerated, and may pass straight into insanity; this may and often is associated with some notion which is not unnatural that the person is attractive to someone of the other sex, this preconceived idea is supported by the most trivial occurrences establishing the delusion that there is mutual affection. Similar delusions occur with women of middle age who have lived celibate and unhealthily subjective lives. Solitude in prisoners leads to the growth of hallucinations of the senses, and these hallucinations soon give rise to delusions. There is special danger to the only sons of widows. Such are often nervously spoilt by their surroundings.

Similar conditions are met with in young people who, either for the sake of study or from some other cause, such as the pursuit of a religious life, live solitary lives. Self-culture has very serious dangers from this cause.

The indulgence of secret vices of one kind and another, but especially sexual vices, seems to impress the mind with the idea that the persons indulging are despicable, and from this that they are noticed and watched or remarked upon by others. Once let this idea spring up, and the surroundings of the life will give food enough for it to grow beyond all reasonable limits.

Solitude, unoccupation, and absence from home of the husband not unnaturally may lead to ideas of neglect, which grow into insane jealousy. Persons following callings in which great caution is needed, such as detectives, may develop an exaggerated suspicion and have delusions of persecution. *Real anxiety* may grow just as real cause for suspicion may till it has an insane aspect.

Widowhood has many dangers from the mental side, and I believe that conditions have a very great deal to answer for in the suspicion and dreads of this condition. They believe that people talk against them and accuse them of sexual impropriety. Again, it is not unnatural that widows unused to the conduct of business should get into states of anxiety as to their future and slowly get the notion that they are ruined. Another set of conditions frequently giving rise to mental disorder is that associated with the giving up a fixed occupation, or changing the conditions of life suddenly.

I see every year cases of busy men of the restless type who, having made a fortune, or having sold their business to advantage, retire only to find themselves miserable. Such men not uncommonly develop melancholia, with ideas of ruin and the like, or they may become hypochondriacal, with notions that they are going to be paralyzed or to die; women who have nursed invalids for a long time often after the death of such persons become miserable, unoccupied, and sleepless; they may slowly develop ideas that they neglected their patients, or that they even accelerated their death.

The profession has some influence on the insanity, and may in some instances cause it. Celibate clergy do not suffer from general paralysis of the insane; dwellers in the country suffer much less from this disease than do city livers.

Medical men have a tendency to break down along the hypochondriacal lines, but enough has been said to show that the line of nervous breakdown may follow directly the lines of construction, and that the forces used for building may when turned wrong tend to destroy.

There is a tyranny of the surroundings as well as a tyranny

of the organization. Much insanity depends on the artificial relationships of society. There is mental disorder apart from nervous disease; disorder of function may lead to disease of tissue; education infers the influence of conditions; habits are often the outcome of surroundings; habits of mind like muscular tricks may outgrow health and (sane) limits; if we do not admit the influence of surroundings our methods of cure are limited.

If insanity is always the definite result of primary changes in the nervous tissues, and if these changes are the common result of hereditary nervous irritability, then we are very helpless as physicians. We know that in an asylum the insanity depending on real disease of brain is very unfavourable in its type. The time may come when medication will alleviate symptoms, but I fear will do little more for such cases. If much insanity depends on disorder rather than on disease, then we may take it that our present method of treatment in asylums is satisfactory, and that restful, pleasant surroundings are more necessary than "medicine out of a bottle."!

After-Care of Male Patients Discharged from Asylums. By
H. RAYNER, M.D.*

The after-care of the male insane, to which I venture to draw your attention, with a view to discussion, is so closely allied to the objects of this Association that I trust its consideration may be not only of interest, but even of some practical usefulness. Although at present lying beyond the limits of our sphere of action, the time may arrive when our resources shall have so far developed that the annexation of this adjacent province may be both practicable and desirable.

To some of our friends an explanation of the reasons for the limitation of this Association to the after-care of women may seem necessary, and the consideration of the needs of the men will, I think, justify the priority which has been given to the women.

The necessities of the men, in most respects identical with those of the women, differ, we shall find, in one or two special points, demanding serious attention and consideration.

The first fact that strikes one in the comparison of the needs of the two sexes is the much smaller *number* of the males

* Paper read before the After-Care Association, June, 1891.

discharged as *recovered* from asylums. In 1889 there were only 2,104 males discharged recovered from the county and borough asylums as contrasted with 2,753 females, the numbers standing roughly in the proportion of three men to four women.

The admissions to these asylums were 5,933 males and 6,559 females, or in the proportion of twelve men to thirteen women, so that the recovery rate calculated on the admissions was as 35 in men to 41·8 per cent. in women.

This difference in recovery rate is largely accounted for, as most of us know, by the form of brain disease (general paralysis) to which the male insane are specially liable.

The previous attacks of mental disorder in the *male* admissions, compared to the recoveries, are as 1,693 to 2,104, or, roughly, in the proportion of seventeen to twenty-one, the men comparing from this point of view unfavourably with the females, in whom the corresponding figures are 1,953 previous attacks to 2,753 recoveries, or as nineteen to twenty-seven.

The previous attacks here alluded to do not necessarily imply attacks treated in asylums, but probably include many treated in workhouses or elsewhere.

This more frequent history of previous attacks in the males is due, I believe, almost entirely to the excess of alcoholic cases, many such persons being discharged from asylums repeatedly. Excluding these I believe the proportion of relapses would be larger among women, whose needs on this ground justify the priority of attention they have received.

Passing to the practical consideration of the subject, we find the recovered cases divided into two classes, those who have homes to go to, and those whose only resource in default of special assistance is the workhouse.

Fortunately in Middlesex and some other counties there exist charitable funds, the Queen Adelaide fund and others, which liberally assist most of those who are deserving of help.

In regard to the application of these funds I must confess that when acting as an asylum superintendent I have often wished that I could have had the aid of such an Association as this. I am assured that the usefulness of some of the grants to the patients would have been greatly enhanced thereby.

Not unfrequently the patient, strange to the world from which he has been isolated for months or years, fails to obtain the full advantages of his money where left to himself, and in

other cases is deprived of it by unscrupulous relatives or friends.

These funds, however, are generally most useful, and in a large proportion of cases avoid the necessity of returning the patient to the workhouse, which is undoubtedly the most unfavourable method of launching a convalescent into the world.

This workhouse discharge is undesirable in several ways; by the respectable the indignity is severely felt, and this feeling of degradation is not conducive to their mental health—indeed it has even produced relapses. To others who are less susceptible on this score, the return to or the new experience of workhouse pauper life is certainly not advantageous.

Workhouses have greatly improved of late years, and I do not wish in any respect to disparage them, but the association with their inmates does not tend to the improvement of the self-respect or self-control of the convalescent.

I do not fully endorse the mother who excused the comparative deficiencies of one of her two daughters by saying that she had not, like the other, had the advantage of having been in the asylum, but I do think that some of our asylum patients are benefited morally and socially as well as mentally, and that workhouse associations rapidly destroy this benefit.

Fortunately, however, the number so discharged is very small when we eliminate those who are chronic inmates of workhouses from old age, etc., and the large proportion of the intemperate class to whom the Adelaide and other funds do not extend assistance. These intemperate cases, however, do require serious consideration; at present they are "pariahs" whom the asylum charitable funds will not aid, and whom we cannot.

Males have the disadvantage of suffering much more largely from the result of intemperance than women; of the admissions we have been considering, intemperance in alcohol was ascribed as a cause, wholly or in part, in 20 per cent. of the men and in only 7 per cent. of the women. The male recoveries, as I have already pointed out, include a large number of these intemperate cases, who relapse again and again, figuring in asylum statistics as having had four, five, or even ten or twelve attacks ere death or premanent mental disorder terminates their alcoholic career.

The assistance of this class seems to me to be one of the great needs of the time; at present they are practically without efficient help, drifting from asylum, workhouse, and prison

to their final and inevitable destruction. The amount of desultory ineffective help which they receive in their chequered career if systematically applied would probably redeem a considerable proportion of them; as it is they are the despair of the asylum physician, who is compelled by law to discharge again and again an individual who is incompetent to control himself, and who is not only destroying himself, but often the insanelly predisposed family which is left as a future burthen to the country.

Some few of these are men of considerable and even great ability, whose habits have been developed by unfavourable circumstances and who suffer many martyrdoms in their struggles at self-control and their bitter repining in their earlier stages at the loss of it. One such case specially rankles in my memory, that of a civil servant, who, in a hot climate, had suddenly thrown on him duties of a most extensive and responsible character. These he discharged for a time with brilliant success by the aid of stimulants, at last breaking down utterly and becoming an inmate of a pauper asylum. He was a man of brilliant intellect and keen sensitiveness, and his feelings of degradation after his relapses were of the most acute kind. He exhausted the patience and means of his friends to help him, and gradually sank lower and lower.

The majority are of course of a lower type, who are simply weak, some of whom in their earlier stages would possibly be arrested by sufficient detention in a proper institution.

Others are of a dangerous type, who, when maddened by drink, in their relapses commit even murderous violence. Fortunately these are less numerous here than in Paris, where such cases, due especially to the use of absinthe, vermouth, and other toxic drinks are so numerous, that a special institution is being demanded for their detention and treatment.

It is not legal, and not desirable, that these drunkards should be detained for the prolonged period necessary for their cure in asylums, nor would it be just that they should be committed to prison, but assuredly there should be established houses of detention for inebriates to which such cases could be sent by legal authority when sufficiently recovered from their acute mental disorder.

This Association would do good work in promoting legislation to this end, by its influence and by the testimony it can accumulate on the female side of the question.

Various circumstances influencing the tendency to relapse in those not discharged to workhouses differently affect the two sexes. The most important of these is the condition as to

marriage, and in this the men have a distinct advantage. The man returns home, and is often able to rest, or to obtain light work for a time, whilst to the woman the return home commonly means the resumption at once of the full household work, which had been perhaps the original cause of her breakdown, and this under disadvantages enhanced by her absence from home. This is the almost inevitable and invariable difficulty for women; for men the difficulty lies in the exceptional circumstances of want of work, poverty or an ill-conducted home, and to these women are equally exposed.

Temperate, well-conducted men are commonly helped by the asylum charitable funds, or by the fact of their having been home on probation, to obtain a start in clothing and even tools, the most frequent want being employment, or where the bodily health is not fully restored, a further change and rest beyond that afforded by their homes. This, of course, demands only similar provision to that which this Association makes for women.

Of the *unmarried* who possess homes, the men have again great advantages over the women.

The women being for the most part employed in domestic positions people are very chary in admitting those who have been mentally afflicted, and who may have exhibited dangerous tendencies, into such close associations with themselves and their families. With young men this does not apply in most cases, and work can usually be found without drawback of this kind.

The occupations, however, which patients have followed have at times conduced to their mental disorder, and a continuance in the same work may induce a relapse.

Many such occupations could be named, but those involving irregular habits of sleeping, confinement in impure air, especially with want of sunlight, and exposure to toxic influences, such as lead, are most important. As examples, I can recall cases of night-watchmen in whom a change of occupation probably avoided relapse, and cases of scullery-boys working in cellars under large hotels or restaurants, by gas-light, in whom relapse might have been avoided by a change of work to more healthy conditions, and many more might be quoted.

It is often difficult to convince the individual of the harm resulting from his occupation, or if he is aware of it to induce him to give up accustomed, perhaps well paid and steady, work for that which is new and probably less assured or remunerative, nor should such a change be lightly made.

This provision of new occupation would constitute a considerable part of the work of an association for males, and would require the co-operation of the asylum medical officers in indicating when such changes were necessary.

In still other cases the homes are undesirable, from the characters of the family or from the associations or associates to which the patient would return. Numerous examples of this kind might be quoted.

The return to a home ruled by a drunken parent is obviously undesirable, and often the parents are themselves eccentric or peculiar, exercising a prejudicial influence on the patient; in other instances there are incompatibilities of temper from the same cause.

The patients have sometimes committed acts in the commencement of their insanity which have drawn the attention of the neighbourhood to them, so rendering their future residence there uncomfortable.

In others, companionships outside of the home circle have been formed which have led to irregular habits, from which they can only break free by removal from these causes of temptation.

In all these circumstances the duty of the Society would consist in finding work, and, if possible, improved influences in other localities.

These are the principal lines on which assistance to the male convalescents would be needed, and in the short time at my disposal I am only able to mention them, trusting that in the discussion by those present acquainted with the subject various examples will be adduced more forcibly illustrating them than I could do without an unwarrantable monopoly of the time and attention you have so kindly given me.

Protection of Medical Men by the English Lunacy Law. By
A. WOOD RENTON, Esq., Barrister-at-Law.

Section 330 of the Lunacy Act, 1890, re-enacting section 12 of the Lunacy Acts Amendment Act, 1889, provides as follows:—

(1). "A person who before the passing of this Act* has signed, or carried out, or done any act with a view to sign or carry out, an order purporting to be a reception order, or a

* The Act, save as otherwise expressly therein provided, came into operation on 1st May, 1890. (Sec. 3.)

medical certificate that a person is of unsound mind, and a person who, after the passing of this Act, presents a petition for any such order, or signs, or carries out, or does any act with a view to sign or carry out, an order purporting to be a report or certificate under this Act, or does anything in pursuance of this Act, shall not be liable to any civil or criminal proceedings whether on the ground of want of jurisdiction or on any other ground, if such person has acted in good faith and with reasonable care.

(2). "If any proceedings are taken against any person for signing or carrying out, or doing any act with a view to sign or carry out, any such order, report, or certificate, or presenting any such petition as in the preceding subsection mentioned, or doing anything in pursuance of this Act, such proceedings may, upon summary application to the High Court or a judge thereof be stayed upon such terms as to costs and otherwise as the court or judge may think fit, if the court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care."

My object in the following pages is to consider on general principles and without reference to *nisi prius* decisions how far this section protects the medical profession in its relation to the English Lunacy Law, and in what manner this protection is to be invoked.

I.

It will be observed that subsection (1) is partly retrospective and partly prospective in its operation. It extends to (a) any person who *before* the passing of the Act, *i.e.*, before 1st May, 1890, has signed or carried out, or done any act with a view to sign or carry out, *an order purporting to be a reception order or a medical certificate that a person is of unsound mind*, and (b) any person who *after* the passing of the Act presents a *petition* for a reception order, or signs, or carries out, or does any act with a view to sign or carry out, *an order purporting to be a reception order, or any report or certificate purporting to be a report or certificate under the Act, or does anything in pursuance of the Act.*

In its *retrospective* operation, the subsection protects a medical man who has carried out or done any act with a view to carry out an order purporting to be a reception order.*

* "Reception order" means an order or authority made or given before or after the commencement of the Act for the reception of a lunatic, whether a pauper or not, in an institution for lunatics or as a single patient and includes an urgency order. (Sec. 341.)

A few hypothetical cases will illustrate the scope of this clause.

(a) A, the superintendent or manager of an institution for lunatics, being a medical practitioner, receives B into his asylum, or sends C, one of his subordinates, to bring him there, under a reception order. A is within the subsection. (β) A is not a medical practitioner, C is. Under the circumstances set forth in the previous illustration, C is within the subsection as well as A.* (γ). A or C employs mechanical restraint for the purpose of B's detention with safety to himself or to the other patients, or for the purpose of his surgical or medical treatment. As a reception order impliedly authorizes detention, and as detention must mean both safe detention and detention under treatment, it might be argued that this is an act "done with a view to carry out" the reception order.

Again, the signing or carrying out or doing any act with a view to sign or carry out a medical certificate that a person is of unsound mind is within the retrospective part of the subsection.

Illustration.—A, a medical practitioner acting in good faith and with reasonable care, examines an alleged lunatic *with a view* to certify as to his mental condition for the purposes of a reception order, but on such examination *does not certify* that the alleged lunatic is of unsound mind. A is protected by the subsection.

The *prospective* sweep of the subsection is very wide. It extends to petitions, reception orders, medical certificates, all the reports and certificates prescribed by the statute or the rules, and generally to everything *done in pursuance of the Act*.

In order to obtain the protection conferred by subsection 2, a medical man has to satisfy the court that *there is no reasonable ground for alleging against him a want of good faith or reasonable care*. If he succeeds in doing this, the court may stay any civil or criminal proceedings taken against him upon such terms as to costs or otherwise as may seem just. The meaning of the clause in italics is deserving of the most careful consideration. It has not yet (so far as I am aware) been judicially interpreted, and therefore the following propositions are submitted with some diffidence.

In determining whether or not a medical man has acted in

* In the present paper, the protection of *medical men* alone will be considered.

good faith and with reasonable care, the court will have regard, not to the facts which were before him when he acted, but to all the circumstances brought forward by the medical man and by his opponent for judicial consideration under sec. 330, subs. 2.

It will not, I think, be sufficient for the applicant to say—“Never mind the issue of events. Never mind the plaintiff's counter-statements. Look simply to the facts which were *before me* when I signed this certificate. My conduct was *bonâ fide* and reasonable, having regard to the information which was then within my reach.” He must be able to go further. He must be able to say—“Take all the circumstances disclosed by myself and my opponent. They show that I acted in good faith and with reasonable care.”

This view of the law is supported by the words of the subsection. The court or a judge must be satisfied that there is no reasonable ground for alleging want of good faith or reasonable care. It is further supported by the object of the subsection, which was to protect persons putting the Act in force from proceedings shown on preliminary inquiry to be vexatious or unfounded, and it derives not unimportant corroboration from the judicial interpretation of an analogous clause in the Patents Act of 1883. In an action for the infringement of a patent the plaintiff is required to deliver with his statement of claim particulars of the breaches of which he complains; the defendant is required to deliver particulars of the objections on which he means to rely, and it is provided that “on taxation of costs regard shall be had to the particulars delivered by the plaintiff and by the defendant, and they respectively shall not be allowed any costs in respect of any particulars delivered by them unless the same is certified by the court or a judge to have been proven, or to have been *reasonable and proper*, without regard to the general costs of the case.”* Now, the construction of the words “reasonable and proper” was considered by Mr. Justice Stirling in the case of *The Germ Milling Co. v. Robinson*. (1886, 3 *Patent Office Reports*, 254.) “I must be satisfied,” said his lordship (p. 260), “having regard to what knowledge I have acquired in the conduct of the case, that the particulars . . . are reasonable and proper. I conceive it is no part of my duty either to put myself back into the position in which the advisers (of the parties) were when they framed these particulars, or, on the other hand, to carry myself forward by having additional

* Sec. 29, subs. 6.

evidence brought before me. . . . The tree must lie where it falls, for better or for worse." Now, observe, this is the construction put upon the word *reasonable* in the case of a statutory provision *limiting the rights of parties*. *A fortiori* will this construction be adopted in the case of a statutory provision which *greatly enlarges the rights* of one of the parties to an action? An alleged lunatic frequently sues the medical man whose certificate brought about his confinement, not so much to get damages as to establish his sanity in the eyes of the world. It seems unlikely that the court will deprive him of this right unless reasonably satisfied that his action is vexatious or, at least, unfounded.

The words "want of good faith" have no technical legal signification, but are to be taken in their ordinary acceptation, and mean simply want of honesty in belief, purpose, or conduct. The old fallacy that asserted the existence of a distinction between *legal* and *moral* fraud has now been swept out of the region even of forensic argument,* and a strong reaction against metaphysical subtleties has set in. "Fraud, in my opinion," said Mr. Justice Wills, in *ex parte Watson* (21 Q. B. D., 301), "is a term that should be reserved for something dishonest and morally wrong; and much mischief is, I think, done, as well as much pain inflicted, by its use where 'illegality' and 'illegal' are the really appropriate expressions." In *re Avery* (36 Ch. D., 307) Mr. Justice Stirling and the Court of Appeal used language equally emphatic. The special point on which the decision turned was the meaning of that clause in the Patents Act, 1883, which provides for the revocation of letters patent granted "in *fraud* of the rights" of the petitioner. "I have not," said Mr. Justice Stirling, "to deal with a statute nearly 300 years old, like the *Statute of Monopolies* of James I., nor with one in which there is any context to fix the sense in which the word ('fraud') is used. It would be wrong in judgment to construe such a word in an Act passed little more than three years ago" (the date of this decision is 1887), "and in the absence of a context imperatively demanding such a construction otherwise than in accordance with the ordinary meaning of the English language, and consequently as involving dishonesty or grave moral culpability on the part of the person obtaining the patent." The last indications that we shall give of the direction in which this current of judicial opinion is running are from the bankruptcy law and the Bills of

* Cf. *Derry v. Peek*, 1889, 14 App. Cas., 337. *Glasier v. Rolls*, 42 Ch. D., 436. *Angus v. Clifford*, 1891, 2 Ch., 449.

Exchange Act. Section 48, subs. 2, of the Bankruptcy Act, 1883, preserves from avoidance for preference the rights of any person making title in *good faith* . . . through or under a creditor of the bankrupt. This subsection means that a person taking a preference from a bankrupt *must not be conscious himself* of an intention to favour one creditor above another (*Butcher v. Stead*, L.R. v, H.L. 849). Under the Bills of Exchange Act, 1882 (sec. 90), "a thing is to be deemed to be done in good faith where it is, in fact, done *honestly*, whether it is done negligently or not." "This provision," said Mr. Justice Denman, in *Tatam v. Hasler* (23 Q. B. D.. 345), "is obviously founded on the distinction pointed out in *Jones v. Gordon* (2 App. Cas., 616) by Lord Blackburn between the case of a person who was honestly blundering and careless and the case of a person who has acted not honestly, that is, not necessarily with the intention to defraud, but not with an honest belief that the transaction was a valid one. . . . Lord Blackburn there . . . says, 'If the facts and circumstances are such that the jury, or whoever has to try the case, came to the conclusion that he was not honestly blundering and careless, but that he must have had a suspicion that there was something wrong, and that he refrained from asking questions because he thought in his own mind, "I suspect there is something wrong, and if I ask questions and make inquiry, it will be no longer my suspecting it, but my knowing it," I think that is dishonesty.' That," added Mr. Justice Denman, "is the dishonesty to which the Act refers where the word *honestly* is used."

The argument from analogy, herein before set forth, is, in my opinion, a strong one. It seems unlikely that the judicial interpretation of sec. 330 of the Lunacy Act, 1890, will give rise to a new and counter current of authority, and it will in all probability be sufficient for a medical man to show that he has acted *honestly in fact*.

The words "reasonable care" mean such care as it was reasonable to expect that a medical man of ordinary skill would have taken under the special circumstances of each case.

This proposition rests on the well-known doctrine of "the external standard," which is as old as Justinian. "The standards of the law," says the younger Holmes ("Lectures on the Common Law," p. 108), in a passage which every student of jurisprudence should learn by heart, "are standards of general application. The law takes no account of the infinite varieties of temperament, intellect and education, which make

the internal character of a given act so different in different men. It does not attempt to see men as God sees them, for more than one sufficient reason. In the first place, the impossibility of nicely measuring a man's powers and limitations is far clearer than that of ascertaining his knowledge of law, which has been thought to account for what is called the presumption that every man knows the law. But a more satisfactory explanation is that when men live in society a certain average of conduct, a sacrifice of individual peculiarities going beyond a certain point, is necessary to the general welfare. If, for instance, a man is born hasty and awkward, is always having accidents and hurting himself or his neighbours—no doubt his congenital defects* will be allowed for in the courts of heaven—but his slips are no less troublesome to his neighbours than if they sprang from guilty neglect. His neighbours accordingly require him at his proper peril to come up to *their* standard, and the courts which they establish decline to take his *personal equation* into account."

In determining whether or not a medical man has acted with reasonable care, the court will not take his "personal equation" into consideration. It will not allow him to say: "My temperament is impulsive; my powers of diagnosis are not great; my judgment is not sound. I acted with all the care that it is *reasonable to expect from me.*" It will require him to show that he acted with the care which an average member of his profession might reasonably have been expected to exhibit under the same set of circumstances. Nothing less than this will be sufficient; nothing more is necessary.

The words "reasonable care" have not yet, apparently, been judicially defined. But here again the argument from analogy comes to our aid, and I think that it is conclusive in favour of the proposition above stated. I will give a few examples.

(a). "*Reasonable and probable cause.*" for detaining a ship (39 and 40 Vic., c. 80, sec. 10). The proper question to be left to the jury is whether the facts in connection with the ship, which would have been apparent to a *person of ordinary skill*, who had had, and had used, all means of examining and inquiring about her, would, in the opinion of the jury, have given *such person* reasonable and probable cause to suspect the safety of the ship . . . and so to detain her for survey (*Thompson v. Farrer*, 9 Q. B. D., 372).

(b). "*Reasonable expectation.*" (Bankruptcy Act, 1883, s. 28, sub. s. 3). A person who begins business without capital and

* Of course these words mean defects falling short of insanity.

with a mortgage on all his assets and afterwards becomes bankrupt has contracted his debts without *reasonable* or probable ground of expectation of being able to pay them (*Ex parte White*, 14 Q. B. D., 600).

(c). What is known among patent lawyers as *the ordinary workman test* is the best illustration that I can give of the application of the doctrine of the external standard.

An inventor receives from the Crown a limited monopoly, the object of and the consideration for which are that he should make a full disclosure of "the nature of his invention" and the means whereby it is to be performed. The document in which this disclosure is made is the complete specification, and the courts of law have to determine no question with greater frequency than whether the disclosure contained in the complete specification is sufficient. In answering this question what is called "the ordinary workman test" is applied. That test is as follows:—Will the directions in the specification enable the processes described therein to be successfully followed out without the exercise of further inquiry, experiment, or invention by any careful workman having a competent degree of knowledge upon the subject matter to which the patent relates? The person on whose ability to understand a specification its sufficiency depends is neither, on the one hand, simply an un-instructed member of the general public, nor, on the other hand, an eminent specialist or scientific workman, but the workman of ordinary skill and information on the subject.*

Mutatis mutandis, the last illustration is strictly relevant to the matter in question. The point on which a medical practitioner, seeking the protection of sec. 330 of the Act of 1890, must satisfy the court is that he exhibited the care, the knowledge, and the skill, not of "a member of the general public" on the one hand, nor yet of "an eminent specialist" on the other hand, but of an ordinary professional man *undertaking the act which is the subject of judicial inquiry*. It should be noted that if a medical practitioner, having no theoretical or practical grasp of the pathology of mind, takes upon himself to sign a certificate of insanity, he *may* be held legally bound to exhibit the care, not of the ordinary general practitioner, but of the ordinary alienist.

(To be concluded.)

* Cf. the language of Jessel M. R. in *Plimpton v. Malcolmson*, 1875, L.R., 4 Ch. D., at p. 568.

Cancer in its Relations to Insanity. By HERBERT SNOW,
M.D. Lond., etc., Surgeon to the Cancer Hospital.*

The influence of mental distress in generating cancer of the breasts and uterus of women has long been notorious. The testimony of Dr. Walshe ("On Cancer," 1846, p. 155), and of Sir James Paget ("Surgical Pathology," 3rd edition, p. 800) is sufficiently emphatic; and in my own writings I have had occasion to lay great stress upon the significance of such conditions as antecedents to malignant disease of almost every pathological variety. Among Cancer Hospital in-patients, of both sexes, symptoms of mental unsoundness are far from infrequent. It occurred to me, therefore, that an inquiry as to the actual prevalence of cancerous maladies among the insane might prove of some value, especially as such developments are becoming so increasingly frequent among us, and as anything bearing upon their peculiarities of selection or of distribution cannot well be devoid of interest to the pathological inquirer. I accordingly instituted on my own account a miniature "collective investigation," the net results of which I now venture to lay before you, with the expression of my great indebtedness to those medical gentlemen practising in this particular field who have so kindly assisted me by courteous, and often very full, replies to my questions.

Mr. J. Peeke Richards, of Hanwell, has been at the pains to draw up for me a most elaborate table of the deaths from cancerous neoplasms on the *female* side of that institution during the 23 years period 1867-1890. The total of patients under treatment was 4,407; among these 1,612 deaths took place, and 87 of the latter were due to cancer. The proportion of deaths from this source to the aggregate from all causes thus amounted to 5.39 per cent. In five of the 87 cancer cases the mental disease was *secondary* to the malignant.

The following were the localities attacked:—

Uterus	...	...	...	...	20
Stomach, pylorus and body...	...	...	...	...	16
" cardiac end	...	...	...	...	2
Liver	...	...	...	...	12
Breast...	...	...	...	...	9
Ovary	...	...	...	...	5
Face (epithelioma)	...	...	...	...	4

* Paper read at the Psychology Section of the British Medical Association held at Bournemouth, July, 1891.

Mediastinal glands	4
Kidney	4
Pancreas	3
Rectum	3
Cæcum	1
Esophagus	1
Brain	1
Iliac Fossa (sarcoma)	2

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On the *male* side, Dr. Alexander states that during the 20 years period 1869-89, 1,379 deaths took place among 4,279 inmates; of these 28 were attributable to cancer. In eight, this preceded the mental unsoundness. The following were the sites :

Organ affected.	Cancer prior to mental disorder.	Cancer subsequent to mental disorder.
Stomach	1	6
Liver	1	5
Lips and orbit	1	2
Lungs	1	2
Brain	1	1
Bladder	0	1
Large intestine	0	1
Anterior mediastinum	0	1
Knee-joint	0	1
Kidney	3	0
	<hr/> 8	<hr/> 20

According to the same authority, the annual mortality in *both* sexes in the 20 years period, 1869-89, was as follows :—

Year.	Men.	Women.	Total.	Year.	Men.	Women.	Total.
1870	0	3	3	1880	0	4	4
1871	1	1	2	1881	0	3	3
1872	0	1	1	1882	1	2	3
1873	2	3	5	1883	0	5	5
1874	2	2	4	1884	0	0	0
1875	0	5	5	1885	1	4	5
1876	1	5	6	1886	1	4	5
1877	1	0	1	1887	3	0	3
1878	1	7	8	1888	1	4	5
1879	2	3	5	1889	3	5	8

At the Surrey County Asylum, according to Mr. J. E. Barton, cancerous disease is rare. Since the opening of that

institution in July, 1867, 6,945 patients have been admitted, of whom 30 died from this cause. The mental unsoundness appears to have been secondary to the cancer in three instances; all three persons were melancholics.

The forms of insanity here concerned were:

	Males.	Females.	Total.
Chronic mania ...	5	9	14
Melancholia ...	3	0	3
Secondary dementia ..	1	11	12
Imbecility ...	1	0	1
	<u>10</u>	<u>20</u>	<u>30</u>

At the Three Counties Asylum, Hitchin, 33 patients (males 14, females 19) have died from cancer in the past 31 years. The aggregate mortality from all causes was 2,386 (males 1,252, females 1,134); 5,336 individuals (males 2,594, females 2,742) had been under treatment. Mr. E. Swain has very kindly furnished me with the following table of annual cancer mortality:—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1860	0	0	0	1876	1	0	1
1861	0	0	0	1877	1	0	1
1862	0	0	0	1878	1	1	2
1863	0	1	1	1879	0	1	1
1864	0	0	0	1880	0	2	2
1865	0	0	0	1881	0	2	2
1866	1	1	2	1882	0	3	3
1867	0	0	0	1883	0	0	0
1868	0	0	0	1884	2	0	2
1869	0	2	2	1885	2	1	3
1870	0	1	1	1886	0	0	0
1871	0	0	0	1887	1	0	1
1872	0	0	0	1888	2	0	2
1873	0	0	0	1889	2	1	3
1874	0	0	0	1890	1	1	2
1875	0	2	2				

Of the 14 men, seven died from cancer of the stomach or œsophagus; four ditto of the brain, jaw, liver, omentum; mesentery, rectum, one respectively; the site in one case was not recorded.

Of the 19 women, five died from uterine cancer, three from that of the breast; the ovaries were the site attacked in one instance, the liver in two, the rectum in two, the other intestines in two, the stomach in one; in three cases the locality was not stated.

I was unable to ascertain whether in any of these the malignant was the primary lesion.

At the Berry Wood Asylum, Dr. Richard Greene states that during the ten years ending in December, 1889, 656 persons died; only 10 of these from cancer.

At Moultsford, Dr. Harrington Douty returns 16 deaths from malignant disease, out of 435 from all causes, in 1880-90, a ratio of 3·7 per cent.

Year.	Deaths from Cancer.	Total Deaths.	Year.	Deaths from Cancer.	Total Deaths.
1881	1	40	1887	1	63
1882	0	55	1888	4	41
1883	1	52	1889	3	28
1884	1	52	1890	1	40
1885	3	36		—	—
1886	1	28		16	435

Dr. G. H. Savage states: "In reply to your questions I can only say that the general experience of alienist physicians, which is certainly mine, is that cancer is very rare in asylums. I do not think I saw six cases all the 17 years I was in Bethlem; two of stomach, two of breast (one of these also ovarian), one of brain, and one epithelial. This is from memory."

Dr. Thomson, of the Norfolk County Asylum, says: "Out of the thousand post-mortems I have made or assisted at I don't think I have found six malignant tumours." Mr. Moody, of Cane Hill Asylum, Purley, says: "As far as my experience goes cancer is a very rare disease in asylums." Mr. Stirling Christie, of the Stafford Asylum: "We get in very few patients who are subjects of cancer; when we do it is usually uterine." Dr. Harris, of Hillesdon, has known only a small number of cancer cases. Among some negative replies, Dr. Saunders, of the asylum at Haywards Heath, and Dr. Ernest W. White, of the City of London Asylum, at Dartford, consider on the other hand that cancer is not infrequent among the insane.

Dr. Langdon Down makes the important observation: "It has been frequently a matter of comment that I have never seen a congenital idiot or imbecile suffering from malignant disease."

Dr. Henry Forbes Winslow has favoured me with the following very suggestive remarks, which appear well worthy of the attention of neurological specialists: "I feel assured that the two diseases (cancer and insanity) have a close relationship to one another. You frequently find that cancerous disease

manifests itself in families in which insanity is rife. I call to mind now a family in which three brothers died of carcinoma of the stomach and intestines. One brother is now insane, and has been under certificate, and numerous other members of the family have been undoubtedly of unsound mind—epileptic or eccentric. . . . I think it is not an uncommon thing to find that some members of a family suffer from cancerous growths, while others are more or less mentally affected.” In answer to a further inquiry, Dr. H. Winslow says: “I have a strong opinion on the point” (*i.e.*, proclivities to cancer in neurotic families), “and I think the case which I cited to you points in a marked manner in that direction. . . . The case which I mentioned to you of the three brothers was not in any way connected with habits of intemperance; they were all exceptionally temperate and steady gentlemen.” Sir J. Crichton Browne expresses his “very strong conviction of the nervous element in cancer-*etiology*,” without, however, specifying any details.

Neither the reports of the Lunacy Commissioners, nor the late Dr. Thirnam’s valuable “Statistics of Insanity” contain any information upon the subject of this paper. The tables I have quoted show a substantial minority of cases in which mental unsoundness was secondary to malignant disease, and I conceive that in future official publications, statistics (especially when authenticated by an autopsy) would be most valuable on these two points—(a) the mortality from cancer among lunatics, and (b) the occurrence of insanity as a consequence of cancer.

In his article (of which he has kindly shown me the proof) on “Cancer on the Brain” for the “Dictionary of Psychological Medicine,” Dr. Hack Tuke refers to several cases of insanity associated with, and evidently caused by a malignant tumour-formation in the brain. The growth was sometimes primary, with a tumour of the middle lobe, secondary to pyloric carcinoma, the patient suffered from melancholia. Actual deposits of cancer in the brain or its vicinity do not fall within the scope of my paper. I imagine, however, that such cases as the above must be rare. In all the autopsies I can remember on cancer patients, in which a secondary cerebral tumour was found, the symptoms had been of a paralytic or comatose character.

In my own experience patients with malignant deposit (primary or secondary) in the cervical lymph-glands very commonly display considerable mental derangement several weeks, and even months, before death. This usually assumes

the form of dementia; a fortunate circumstance, as the sufferers are usually males. The mental condition is accounted for, I apprehend, by the very considerable interference with nerves and vessels, which the presence of these masses necessarily involves. Such cases, I apprehend, will rarely figure in asylums. Next in frequency as to secondary association with mental unsoundness rank cases of *uterine carcinoma*; as with any exhausting disease there may be merely dementia; but not seldom the patients are troublesome and as violent as their condition will allow. Here I imagine that the impairment of the renal functions, which is a common local consequence of the malignant deposits, plays a considerable part in the cerebral result. I have not often seen mammary carcinoma associated with insanity; a case, however, is referred to in the *Lancet* of March 14th, 1891, wherein the woman was acutely maniacal, and after death the marrow of various distant bones was found to be pervaded by the malignant cells. Lately a particularly robust-looking woman, aged 59, the wife of a publican, developed acute mania immediately after excision of the affected organ, and had to be removed to an asylum. I could ascertain nothing of a neurotic character in her family history, probably the anæsthetic had some share in effecting the mind-derangement.

The conclusions I beg to submit to the section are:—

I. *Cancerous disease among the insane is rare.*—Among individuals with congenital mental deficiency it seems to be almost wanting.*

II. *Cancer is not increasing in frequency among the insane.*—This fact is of no slight importance in connection with the view of cancer as specially a disease of civilization largely caused by depressive mental emotion; and with the explanation of its greater prevalence in recent years on the ground of the increasing wear-and-tear which nineteenth century life involves. With the tables here published may be contrasted the steadily progressive increase in the cancer mortality of each successive year, and in the ratio to 1,000,000 persons living, of those who have annually succumbed to this cause, shown by the Registrar-General's returns since 1864.

III. *Cancer not uncommonly precedes and causes mental derangement without cerebral tumour formation.*—It should rank among the recognized causes of insanity.

* This immunity can only in a small measure be accounted for by the absence of exposure to alcoholic temptation, to accidents, etc., in asylum inmates.

CLINICAL NOTES AND CASES.

Cases of Epilepsy treated by Hydrate of Amylene. By EDWIN L. DUNN, B.A., M.B., Assist. Med. Off., W. R. Asylum, Wakefield.

Dr. P. Naecke in the "Allgem. Zeitschrift für Psychiatrie" publishes some chronic cases of epilepsy successfully treated by hydrate of amylen. I purpose here to record the results of the use of the drug in 14 cases of epilepsy at the West Riding Asylum, Wakefield.

As regards the mental condition of the patients placed under this treatment, all were chronic cases of epilepsy, suffering from a greater or less degree of secondary dementia. They were all in good general health, and, with two exceptions, had all been previously treated for a considerable period by bromide of potassium in doses of from 20 to 30 grains three times daily. The treatment by amylen hydrate was continued for twelve weeks; doses of half a drachm of the liquid were given three times daily for the first four weeks, and for the remaining eight weeks a similar dose was given four times a day. Appended is a table showing the number of fits for three months under the bromide treatment, and also for the twelve weeks under the treatment by hydrate of amylen:—

Number of fits during three months, treatment by Bromide of Potash.		Number of fits during twelve weeks, treatment by Amylene Hydrate.	
	Number.	Number.	Notes.
E. N.	237	304	
J. E. S.	238	302	
M.	65	52	
W.	59	34	
J. H. L.	33	22	
J. W. T.	30	37	
B.	31	32	
J. M.	26	26	
W. W.	23	44	Died in status, 12th week.
C. S.	23	17	
J. T.	19	17	
T. H. S.	—	—	Died in status, 1st week.
Number of fits during three months, not under treatment.			
J. C.	137	88	
H. B.	35	33	

It will be seen from the foregoing table that of the twelve cases previously under treatment by bromide of potash, in two (and these the most severe) the number of fits was increased by one-fourth; in one case the increase was slight; in four the number of fits was diminished, and in three the number was practically the same under either treatment. Two cases were lost in the *status*, one in the first week of the treatment by hydrate of amylene, the other in the twelfth. Of the two cases not previously treated, in one the treatment by amylene diminished the number of fits by more than a third; in the other the drug was apparently without effect. The former of these two cases presented some points of interest which will be alluded to afterwards.

As regards the special features presented by the patients under this treatment, for the first four weeks or so there was considerable mental improvement, probably in most cases due to the cessation of the administration of the bromide. At the same time during this period the number of the fits was small. After the first month, however, there was a marked tendency to run into the *status epilepticus*, and prolonged bouts of fits were common—thus in the case of J. E. S., after a total of six fits during the first four weeks, there appears in the three following 54, 149, and 70. During these three weeks the administration of chloral was frequently needed in order to avoid the *status*, and for a similar reason during the last two weeks of the treatment full doses of chloral had to be given several times in the cases of E. N. and H. B. Three cases during the sixth week of this treatment lapsed into a perfectly comatose condition, with subnormal temperatures and slow, heavy respiration. One of these cases, the patient J. C., presented the following features:—

This patient was a very demented and stuporose epileptic; he was wet and dirty, and usually had from one to five fits daily. He was not under treatment by bromide, probably owing to his mental and physical condition. His fits were sometimes ordinary general convulsions, but these at other times were replaced by pure acts of automatism, *i.e.*, he would utter a cry and run rapidly two or three times round the ward or airing court, and if restrained during this period would struggle violently. On placing this patient under treatment by amylene hydrate, for the first five weeks a marked improvement was observed. The "running" fits ceased entirely, the fits characterized by general convulsions became rare, and the patient became clean in his habits, washed and dressed himself, and was able to enter into a limited conversa-

tion. All this he was previously quite incapable of. At the end of the fifth week, however, the patient, after having several fits, had an attack of epileptic excitement, lasting for two days, and accompanied by acute aural and visual hallucinations, the exact nature of which could not be made out, but which were evidently terrifying to the patient. This period of furor could only be checked by chloral in full doses. When the excitement abated the patient fell into a comatose condition, with a temperature ranging from 95.8° to 96.8° , and with a feeble but not rapid pulse, and with slow, heavy respiration. This condition lasted for some days, during which the patient was perfectly senseless; he slept heavily in a chair all day, and if roused up he would reel about for a few steps, and would then sink heavily on to the nearest bench. His medicine was then stopped for a week, by which time he had regained his normal state.

As to the general features of the mental condition of the patients under this treatment, prolonged periods of epileptic excitement were common, and in the more severe and demented cases these appeared almost to alternate with periods of a stuporose nature, somewhat similar to the above, but not so marked in degree. In no case, ultimately, was the mental condition of any patient improved. Regarding the bodily health of these patients there was no marked change to be observed in body-weight, appetite and digestion, nor in the amount of urine excreted, nor of urea secreted. The pulse and respiration, except during periods of stupor or excitement, were normal.

To sum up: under amylene hydrate treatment beneficial results seemed at first apparent in all cases, and perhaps did exist throughout in some of the less severe cases. In the graver it ultimately proved to be useless. It had no effect on epileptic excitement, as on several occasions in this condition as many as two extra doses of the drug were given within a period of three hours without any effect, and it is at the same time possible that the slighter cases would have done equally well without any treatment at all. Thus, as far as personal experience goes, there appears to be no advantage to be derived from replacing the ordinary bromide treatment by this drug. In addition, its expense, which is great, is no slight drawback.

A Case of Pachymeningitis Hæmorrhagica Interna following Sunstroke. By EDMUND B. WHITCOMBE, M.R.C.S., Windsor Green Asylum, Birmingham.*

J.B.C., admitted November 25th, 1865. Aged 32. Single.—His mental derangement appears to date from a sunstroke which he had five months before in Florence, and he was in consequence detained at the Royal Asylum in that city. No mental defect had been noticed previous to this, nor was there any family history of insanity; he is said to have been steady in his habits.

On his admission he was in a state of great excitement, continually gesticulating, stamping his feet forcibly on the ground and swearing at the demoniacal beings which, he declared, swarmed in great numbers around him; he could not enter into rational conversation, was full of delusions, declaring that he was the heir to the Crown of Italy, the son of the Queen of England, and the owner of millions; his hands and tongue showed slight tremor, and speech was embarrassed. Pupils equal.

During the remaining 26 years of his life, he never ceased to entertain a multitude of varied delusions and hallucinations, sometimes exalted and pleasurable—chiefly of wealth and attainments; at other times depressing and annoying in nature, generally relating to the host of invisible demons which pestered him.

His temper was subject to phases of obstinate silence and tranquillity, alternating with outbursts of intense excitement and activity; sometimes paroxysms of ungovernable fury, in which he would pace the airing-court for hours, swearing in the obscenest of languages, rolling on the ground in the blindness of his passion, savagely attacking the attendants and medical officers, and on one occasion fracturing the arm of a patient. He destroyed everything he could lay his hands on, including his own clothing; he paid no attention to his person, and his habits were repulsive in the extreme.

Except for some trivial disorders, his health was very good until the last few months of his life. He never suffered from fits of any kind; latterly the tremor of hands and tongue increased in intensity, and he became emaciated and enfeebled. He finally succumbed to progressive cardiac mischief, having both aortic and mitral bruits.

Post-Mortem Notes.

Skull very hard and thick; dura mater presented a distended and bulging appearance, and was found to be intimately adherent to a thick, false membrane covering the whole surface of both hemispheres. This membrane was tough and leathery in con-

* Paper read at the Annual Meeting of the Association, held at Birmingham, July 23, 1891. The preparation of the membranes was exhibited at the same time.

sistence, and contained large patches of calcification; the under surface of a yellowish-white colour, glistening in appearance and adherent to the pia. The membrane thinned gradually as it approached the base and towards the occipital convolutions, where it was represented by a punctate rusty discoloration of the inner layer of dura.

The convolutions were found flattened, and there was firm adhesion between the hemispheres and in the main fissures; the convolutions were obscured by marked thickening of the pia, which was not adherent to the subjacent gyri.

Cerebro-spinal fluid greatly in excess, and ventricles much enlarged. Grey matter showed little atrophic change. Brain substance firm. No granulations found.

Weights—R. Hemisphere	...	...	...	21 oz.
L. „	...	...	...	20 oz.
Cerebellum	...	...	...	7 oz.

Microscopic examination of the membrane revealed an outer dense stratum of fibrous tissue in longitudinally coursing fasciculi, between which were interspersed quantities of hæmatoidin crystals, fatty globules, and a mass of fine granular amorphous detritus; an inner layer of a few delicate laminæ of nucleated tissue, in which were numerous blood-vessels, separated from each other by lacunæ, containing hæmatoidin crystals.

OCCASIONAL NOTES OF THE QUARTER.

The Jubilee of the Association.

Fifty years ago the Association commenced with the promise of forty-four members. At the present time the number is just about ten-fold. A circular was sent to eighty-three medical men connected with asylums, and thirty-six did not respond to the proposal, while three declined. Among those who agreed to become members occur the well-known names of Sir A. Morison, Dr. Prichard, Dr. Conolly, Mr. Gaskell, Dr. Monro, Dr. Stewart, Dr. W. A. F. Browne, Dr. Hitch, Dr. Hutcheson, Dr. Shute, Dr. Davey, Dr. de Vitré, Dr. Charlesworth, Dr. Begley, Dr. Sutherland, Dr. Poole, Dr. Kirkman, Dr. Corsellis, Dr. Thurnam, Dr. (afterwards Sir Charles) Hastings, Dr. Mackintosh, and Dr. McKinnon.

The following were the medical men who met together at the Gloucester Lunatic Asylum, July 27th, 1841, to consider the replies which had been received to the circular issued on the 19th of June, and who then and there resolved—"That an Association be formed of the Medical Officers attached to Hospitals for the Insane, whose object shall be the Improve-

ment in the Management of such Institutions and the Treatment of the Insane, and the acquirement of a more extensive and more correct knowledge of Insanity."—Dr. Shute, Gloucester Asylum (in the chair); Mr. Gaskell, Lancaster Asylum; Dr. Hitch, Gloucester Asylum; Mr. Powell, Nottingham Asylum; Dr. Thurnam, York Retreat; Mr. Wintle, Oxford Asylum.

York, Lancaster, Gloucester, and Nottingham, but not London, were, it will be seen, the localities which distinguished themselves on this occasion.

The next meeting of the members of the Association, and regarded as the first annual gathering, was held on Nov. 4, 1841, at the Nottingham Asylum, Dr. Blake in the chair.

No annual meeting has been held at Birmingham till this year.

We only express the unanimous feeling of those who were present at the recent meeting in this city, that the commemoration of the institution of the Medico-Psychological Association (originally entitled Association of Medical Officers of Hospitals for the Insane) was a great success, and would certainly have fulfilled the hopes and intentions of the men who decided to establish it. There was a large attendance, and a reference to the report of its proceedings in "Notes and News" will show that there was no lack of interest in the discussions which took place. The Association was ably represented and presided over by Mr. Whitcombe, whose conduct in the presidential chair contributed largely to the satisfactory transaction of the work performed at the meeting, and whose Address was fully appreciated by the assembly. Marked by warm and thoroughly humane feeling for the insane, it did not end in mere sentiment, but was practical in its aim, definite in its proposals, and specially appropriate to the suggestions and schemes which in recent times have emanated from men within and without the pale of our Association. The observations which were offered to the meeting were all the better for raising points upon which considerable difference of opinion exists among mental physicians. No one, however, can complain of the tone in which the President enunciated his personal views.

The Cathcart Case.

This is probably one of the most prolonged and costly cases of inquiry into the state of mind of a patient which has ever been held, and the result is another example of the uncertainty as to the result of such an inquiry.

The facts of the case, as disclosed by evidence given at the inquiry, are as follows :—A lady, approaching the age of fifty, four years ago married her cousin, who was a good many years her junior. The lady had a large fortune and her husband had expectations. There is reason to believe that there was some real affection on both sides as the foundation of the marriage. There was a history of insanity in an uncle of Mrs. Cathcart. Almost directly after marriage the wife began, without cause, to suspect her husband. She accused him of having given her syphilis, and also accused her own mother, among others, of having given her drugs to prevent her from having children. Steadily ideas of poisoning and of persecution developed, till she lived in a perpetual state of anxiety and excitement. She distrusted everyone, and accused her own trustees of having altered her marriage settlement. She began to suspect that political influence was used against her, and she wrote to secretaries of political clubs letters expressing her feelings about these plots; she wrote to the Home Secretary and to others. She believed, too, that the influence of the Court and the army were secured by her husband against her.

In this frame of mind she seems to have fallen under the influence of those who either believed her accusations to be true or else preyed upon her. She changed her legal advisers constantly, and, believing they were not to be trusted, she appeared on her own behalf and was involved in various legal actions. The judge, at least, considered that she was not fit to conduct these affairs.

On one occasion she was forcibly seized by her husband and detained on one of her estates, and, doubtless, this seizure had some weight with the jury. All endeavours to restrain her failing, Mr. Cathcart appears to have determined to make use of an urgency order and certificate, and Mrs. Cathcart was forcibly seized as she left the Law Courts and removed to a private asylum, where the ordinary certificates were provided. She was visited by her lawyer, or rather lawyers, and by medical men sent by them and by her own friends, yet only one could be induced to give evidence in her favour.

So much for the circumstances of the case, and now for the inquiry. Sir Charles Russell, Q.C., Mr. T. Bucknill, Q.C., and Mr. Costelloe appeared for Mrs. Cathcart, while Sir Henry James, Q.C., and Mr. Inderwick, Q.C., appeared for the petitioner. Most tedious and prolonged were the legal proceedings, but witness after witness gave evidence as to delusions of persecu-

tion which directly influenced the conduct of Mrs. Cathcart, and even her counsel was obliged to admit the existence of these delusions. On behalf of the petitioner, a local medical man was called to disprove the statement that Mrs. Cathcart had syphilis. Dr. Savage and Dr. Blandford were subjected to severe cross-examination, the tone of which was distinctly discourteous. Sir Charles Russell, in his examination of Dr. Savage, compared the mental state of Mrs. Cathcart with that of Rousseau, and asked if he considered the poet to be insane. Witness said he did, but declined to say whether he would have sent him to an asylum or not. Much was made of the fact that persons may have delusions and yet need not be treated as legally of unsound mind.

Dr. Blandford was also cross-examined on a recent inquiry, in which the jury granted liberty to a patient whom he regarded as suffering from delusional insanity. Dr. Playfair, who was requested to visit Mrs. Cathcart on behalf of her mother, gave evidence of her being insane.

Nothing very novel occurred in the medical evidence, there being a simple, straightforward statement of careful examinations of the patient and the discovery of all the ordinary symptoms of insanity of persecution. Though several eminent alienist physicians were present during part of the trial, only one, Dr. Claye Shaw, was called, who gave evidence to the effect that he failed to detect any delusions, and that Mrs. Cathcart was capable of managing herself and her affairs. We cannot help thinking that the lady must have been very carefully coached, for even her counsel admitted the delusions.

After very forcible addresses by counsel and an examination of the lady by Master Bulwer and the jury, a verdict in her favour was given by a large majority. As the *Saturday Review* says, "Mrs. Cathcart is certainly a rather lucky woman, though no fault need be found with the verdict. We wish we could say as much of the conduct of Mrs. Cathcart's counsel."

There are several important points to be noticed. First of all the jury were influenced to a great extent, we believe, by the social rather than by the medical evidence; they were influenced by the young and not wealthy man marrying a wealthy woman of mature years; with his attempts to seize her, and by the final seizure and removal to an asylum; they were also, doubtless, moved by the clear and business-like way in which she conducted herself, and the way in which she bore her examination. They decided on what they are pleased, doubtless, to call common sense.

It seems to be a pity that such a waste of time and money should take place in these cases, but, at the same time, we are inclined to believe that it is better that, from time to time, important questions of this kind should be fully discussed, for, we believe, there is a very widespread feeling produced by this inquiry, that the process should be modified in some way. We always recognize that there are certain cases in the borderland which, though they may be insane, do not necessarily require asylum treatment, and the verdict of a jury has to be accepted as a solution of the question under consideration.

It is rather a serious matter that a patient, with a litigious turn of mind, should be once more free to pursue her course, and we fear that no amount of legal advice will induce her to forget the past, and endeavour, by rest and quiet, to restore her faith and confidence in her nearest relations and the public in general.

The Duncan Case.

The trial of Duncan for a homicidal assault upon his wife on May 12th, 1891, offers several points of considerable interest. It is necessary, first of all, to give a brief history of his antecedents. Early in 1854, when a lad of 15, he had two falls on his head, the first of which was severe. It occurred at school while wrestling with another boy. They fell on a stone step or flag in front of the school, Duncan coming down on his head in violent contact with the stone, and the other boy upon him. He was taken to a surgeon. He was stunned, suffered from headache for some weeks, and was at home for about two months. It was not long before a marked change in his character was observed. From being a most considerate and thoughtful boy, he became indifferent and careless, although he did well in his studies. His feelings towards his father, of whom he had always been fond, altered. He said it made him nervous to sit in the same room with him. He became unsettled in all his actions, shut himself up from society, and avoided speaking to people whom he met in the street. He had terrible fits of depression, and he suffered much from insomnia. However, he went to Lehigh University, but in the course of some months suddenly returned home. Indeed, his instability of character had become such that he made plans one day only to break them the next. In 1886 he went to Baltimore to prepare for the Johns Hopkins University. It was not long before he escaped and wrote a letter to his mother in

the wildest excitement. At the above-mentioned University he failed to pass the examination in mathematics, and again went off without letting anyone know where he had gone. Fear was felt that in one of his fits of despondency he had committed suicide. As a matter of fact he did contemplate it. He however went to England. He shortly, however, recrossed the Atlantic and resumed his studies. He wrote to his mother after making the attempt, that it was useless, for "he could not comprehend what he was studying." His brother, a professor in Johns Hopkins University, wrote home that it was absolutely necessary for him to suspend all mental work or the consequence would be serious. In the following summer (1887) he was in the country, constantly changing his plans and labouring under alternate attacks of depression and excitement. It is impossible to give the number of instances in which sudden changes occurred. He began to study medicine, but soon threw it up. In 1888 his brother got him a post in an electrical company, but he immediately returned to Baltimore in great excitement. It was at this time that he consented to see Dr. Kempster, who had accidentally met him some time before, and had been struck with his strange aspect. Dr. Kempster's first impression was confirmed, and he warned the parents as to the necessity of placing him under care. He refused to stay with Dr. Kempster, as his friends wished him to do. Not long afterwards we find him in California, where he had been sent by his brother. After running away and returning he ultimately left California in the spring of 1890. About this period he had visual hallucinations. He continued to suffer from insomnia. He sailed to Europe in the autumn of 1890. In December of that year he wrote home that he had proposed to Miss Jaderholm, a Fin at Abo, and asked his parents' consent, which was given. They were married in February, 1891, although he had written to his mother that the engagement was broken off. Why he did so is not clear, but disregard for truth was one of his characteristics after the above-noted change in moral character came over him.

The scene now changes, and he visits Wales with his wife, the attraction being that his mother was of Welsh descent, and he thought that it would be interesting to trace her pedigree, and to become possessed of certain domains and a castle. They arrived at Dolwyddelen in the month of April. Early in May he decided to go to Liverpool for some days in order to buy clothes and other articles. It seems that he arranged with the landlord at the hotel to retain the rooms for him. The evil fate

which had followed him for some years pursued him still. Again and again he changed his plans. He informed Mrs. Duncan that he was going to Liverpool on the 8th or 9th of May. He took a railway ticket for that city, an act which naturally suggested, when the tragedy of the 12th of that month took place, that he had intended to escape to Liverpool and thence to America. Dr. Cox,* who examined the prisoner for the Crown, satisfied himself that this was not the explanation of his conduct, but that his sudden changes of plan at this time were only other instances of the extraordinary vacillation and indecision which had so long marked his conduct. His wife, since her recovery from the terrible assault made upon her, states that she had been alarmed by his strange restlessness, but did not like to ask him what was preying on his mind. The important point is this: That Duncan, who, as we have seen, had auditory hallucinations years before, was now continually haunted by a voice, which said "It must be done; it must be done." It seemed to him that it meant that he was to destroy himself and his wife. For this end he hired a boat at Llandudno, but was out a very short time, and was unable to bring his mind to the point of upsetting it; in fact, a continual struggle was going on between the influence exerted by the voice and the repugnance to injure his wife, whom he loved, and who, he emphatically stated, had done nothing to annoy him. He and his wife then went to Pont-y-Pant; thence they walked on the Bettys-y-Coed road, and having reached the top of the hill remained there for awhile, Mrs. Duncan sitting down on a stone. He walked about restlessly, the voice with redoubled force urging him with the same words as before. "I struggled against it," he informed Dr. Hack Tuke, "till the last minute. I was, and am, very fond of my wife. It was against my feelings. At the last moment I tried to save her from it. I felt restless and excited, and hardly knew what I was going to do. I was powerless to resist the voice, but I tried to do so. It was separate from myself in a certain way." He at last seized a large stone, and dealt a heavy blow on the head of his wife, which fractured the skull and rendered her unconscious. She has stated since her recovery that her mind is a blank since the time she sat down, and that she has no remembrance of the assault. Duncan's subsequent conduct, pretending at first that his wife had fallen from a height and so injured her head, very naturally induces the layman to regard the assault as the act of a sane man; but those who are

* Medical Superintendent of the North Wales Asylum, Denbigh.

familiar with the insane well know that they frequently resort to concealment and deception. Certain it is that Duncan was unable to keep the secret long, and he confessed to a doctor that the act was his own. Then comes a strange statement that he had committed it in consequence of monetary difficulties. The words themselves are too important to be omitted: "I did it myself with the stone you have seen. God forgive me! I did not know what I was doing. Three months ago, when I was married, I was worth 50,000 dollars, but now I have lost it all, and I saw nothing but poverty for myself and my wife." His brother, Professor Duncan, stated that this was altogether a delusion, and that he knew, or might have known, quite well that he would not have wanted for money. Again, a remarkable letter was written by the prisoner to this brother, in which he asked for money to be sent to him, assigning as a reason that a gentleman who was travelling with him had fallen off a rock and had his skull fractured. He added that the surgeon questioned him as to the accident, and that he had given somewhat confused answers, and that the doctor thought it impossible that the wounds could have been caused by the fall. Hence, if he died, he (the writer) would be in trouble. He wanted the money for a lawyer. This letter must be read with the remembrance that Duncan had never informed his family that he had married. Hence it was almost impossible for him to write otherwise than he did at that moment.

A confused mind, possessed by a delusional interpretation of an auditory hallucination, is very likely to give rise to apparently inexplicable contradictions in the explanations offered for the extraordinary character of the act committed. In the present instance, it cannot be too clearly understood—and we speak from personal knowledge—that the story about his money and any real difficulty in his circumstances were absolutely groundless. What he said, therefore, was either a delusion springing from his mental depression or an instance of that disregard for truth which, since his change of character, had so much distressed his family.

An extremely important feature of the trial was the admirable summing up of the judge (Lawrence). He, fortunately and justly, did not content himself with the insufficient test of responsibility, namely, the knowledge of right and wrong, but he added as an alternative one, Was the prisoner unable to control his actions in consequence of disordered mind? There can be no doubt that had he laid down the law

in the rigid manner which most judges consider themselves bound to adopt, it would have been exceedingly difficult for the jury to have found Duncan irresponsible when he committed the assault. Unquestionably he knew the difference between right and wrong, and knew that murder was a crime punishable by law. From a medical point of view it may well be argued that so far as he felt himself unable any longer to continue the struggle, he could not consider that an act, committed against his will, was wrong in him at that time. But while this position may be taken, it is hardly to be supposed that a judge would so interpret the legal test, or that a jury would easily follow this mode of reasoning.

That justice has been done, no mental expert is likely to call in question. This, however, is not due to the satisfactory state of the law, but in spite of it; it is really due to a judge having the good sense to charge the jury in accordance with mental science; in fact, on lines other than those of law.

We cannot leave our commentary on the trial without expressing satisfaction at the thorough and impartial manner in which Dr. Cox performed his examination of the prisoner. He considered it his duty to obtain information from all sources within his reach, and drew up an exhaustive and conclusive report. Dr. Kempster's evidence, referring as it did to Duncan's mental condition long prior to his attack upon his wife, was of a most valuable character.

Care and Treatment of the Insane.

The following is the Report of a Committee appointed by the Medico-Psychological Association of Great Britain and Ireland at the Annual Meeting in 1890, to formulate propositions as to the Care and Treatment of the Insane. This Report was adopted at the Annual Meeting in 1891.

Members of the Committee.—DR. YELLOWLEES, *President*, and DRs. CLOUSTON, LEY, T. W. McDOWALL, NEEDHAM, HAYES NEWINGTON, ROGERS, SAVAGE, HACK TUKE, URQUHART, WHITCOMBE, ERNEST WHITE.

The fundamental resolution passed on the founding of the MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND in 1841 was "That an Association be formed of the Medical Officers attached to Hospitals for the Insane,

whose object shall be improvement in the management of such Institutions and the treatment of the Insane; and the acquirement of a more extensive and more correct knowledge of Insanity."

In pursuance of these objects the MEDICO-PSYCHOLOGICAL ASSOCIATION considers it right to formulate and make public its deliberate opinion on the following most important subjects:—

It is of opinion that—

REGARDING INSANITY GENERALLY.

1. Insanity is a symptom of a physical disorder and results from derangement, primary or secondary, of the nerve centres.
2. This disorder may originate in mental or in physical causes, or in both combined, but is most frequently due to inherited instability, undue worry in daily life, hurtful excesses, and disease in the brain or other organs disturbing it.
3. Marriage into a family mentally unstable is a great risk, and the marriage of two persons from such families is much to be deprecated, since it tends to induce insanity in the offspring.
4. Insanity can be lessened by the avoidance of unwise marriages, by careful obedience to physiological laws, by moderation in all things, by judicious training and education, both mental and physical, in youth, by adopting such conditions of life and occupations as counteract morbid tendencies, and by the preservation of a calm and equal mind amid the cares and perplexities of life.
5. When the mental disturbance is such as to render home-treatment inadvisable, but yet not such as to demand certification, every facility should be afforded to the patient for placing himself voluntarily under asylum treatment; and the consent of the proper authorities should be obtained after, and not before, admission.
6. It is proper and necessary from both the scientific and economical points of view that provision for the early treatment as out-patients of persons threatened with insanity, or a recurrence of in-

sanity, should be provided for by all Committees managing County and Borough Asylums; and for this purpose the services of the medical staff of such asylums should be made available to the public, under such regulations as may seem to be most convenient to the circumstances of each asylum. Further, it is very desirable that in all hospitals and infirmaries to which a medical school is attached with a lectureship on mental diseases, the physician or surgeon holding the appointment should also be attached to the medical staff of the hospital.

7. While an asylum exists primarily for the benefit of patients resident therein, it should also subserve the public good; and, therefore, every Asylum Superintendent should be allowed, as a general rule, to meet General Practitioners in consultation in mental cases, and, to prevent any possible abuse, each consultation should be reported to the Committee of Management, if the Committee so desire.
8. Every public asylum should be available for scientific research and clinical teaching of insanity to students of medicine, and to qualified practitioners.
9. There is a most necessitous class of the insane, who are not paupers and whose means cannot procure for them in asylums the comfort and the care to which they were accustomed in health. It is therefore matter for deep regret and public concern that so little of our wealth is given to aid this class; and that the existing institutions, which were mostly founded for such cases, are thus limited in their charitable sphere of action.

REGARDING PATIENTS IN ASYLUMS.

10. Every patient should be medically examined on admission in the most careful and complete manner, and the results, both negative and positive, should be accurately recorded.
11. The rectification of bodily disorders, even of those which may seem trivial, is most important; and much more so when such disorders have relation, as they so often have, to the mental disturbance. All the resources of medical and surgical skill and experience should be devoted to this end; no form of

treatment which affords hope of success should be left untried. When the condition is obscure, or the proper treatment doubtful, the Superintendent should have power to call in consultants.

12. It is essential in every case to secure and maintain the highest possible standard of bodily health both by medical treatment and by healthful conditions of daily life, as regards air, food, baths, clothing, occupation, and recreation.
13. In cases where the nerve-centres are primarily affected, a healthy condition of all the vital processes is of the greatest importance, as tending to lessen functional disturbance and to retard the progress of organic change.
14. The treatment of brain disorder demands caution as well as skill; a mere repression of symptoms does not prove the wisdom of the treatment. It is often better to guide the superfluous energy into harmless or useful channels, than to administer drugs which shall arrest it for a time by merely stupefying the patient.
15. Concurrent moral or non-medicinal treatment of insanity, or to speak more correctly, the treatment of insanity from the mental side, is of paramount importance. It is essential to convey to the patient a sense of kindly sympathy, help, and guidance, with, behind this, a suggestion of order and discipline, the more potent because less prominent and quite impersonal.
16. An essential part of the mental treatment is to distract the mind from insane ideas and to suggest new and healthy thought by means of suitable employment and recreation. Employment should be prescribed and watched by the physician as carefully as any medicine, it should be applied like medicine to the needs of each individual case, and it should be varied according to the condition of the patient and his previous history. Amusement and recreation come next in value, they should be used on the same principles as employment, and they are most useful when the patients take an active part in them, and are not merely spectators. Intellectual recreation in books, magazines, and newspapers is very important to many patients.

Everything which tends to assimilate asylum to ordinary home life, and which can lessen the inevitable differences between them, is of the first importance. The whole surroundings and conditions of life in asylums should be as home-like and as little irksome as possible; and every patient should have the utmost amount of personal liberty consistent with safety and the proper treatment of his disease.

17. The application of these general principles must of course vary according to differences in the patients, the locality, and the individuality of the Superintendent.

REGARDING SPECIAL CLASSES OF PATIENTS.

18. Too strict classification of patients is to be deprecated. It is not desirable that a ward should contain patients of only one type.
19. As a rule *Recent Cases* should, unless obviously incurable, be received in a special ward or block, or building, where the number and experience of the attendants would secure the needful care and the special observation of symptoms, and where the character of the other residents would afford the needful example of order, industry, cheerfulness and obedience. It is essential for proper treatment to acquire as early as possible an exact knowledge of the patient's condition and symptoms, and it is very important that the patient's first impressions of the Asylum should be favourable to his recovery. A Hospital should not be placed in such a position as to deprive patients of outdoor exercise and occupation, which are essential as a means of cure in the case of recent as well as other forms of insanity.
20. It is not desirable to associate too many *Suicidal Cases* with each other during the day, if this can be avoided. The great protection against suicide is the presence of an attendant, but he must rouse, occupy, and interest the patient, not merely watch him. By night such cases should be under the observation of a special attendant.
21. Concerning *Dangerous and Destructive Cases*, abundant exercise or occupation in the open air, an ample staff of attendants, attractive surroundings and the

wise use of baths and of calmative medicines suffice for the care and treatment of many cases of this class without any need for restraint or seclusion. The admission into County and Borough Asylums of prisoners who have become insane, is much deprecated, since their influence is subversive of morality and discipline.

22. In exceptional cases seclusion and restraint are needful and beneficial. They should then be used without hesitation, but only as a means of treatment and by medical order, and their use should be recorded with punctilious care.
23. The recovery of *Convalescent Patients* should be tested by greater freedom and increased privileges, by parole, by removal to branch institutions or other suitable private houses, by temporary leave of absence, or by probationary discharge.
24. Although the whole Asylum is a Hospital, a special *Infirmary ward* or block is essential. It should receive cases of advanced brain disease and recent cases requiring bodily nursing as well as cases of ordinary illness. This ward or block should be fully equipped, like an ordinary infirmary, with every appliance for the mitigation and cure of disease.
25. It is advisable to pass all the attendants through a course of service in this ward or block that they may more fully realize that insanity in all its stages is the manifestation and result of disease.

REGARDING ADMINISTRATION, STAFF, ETC., OF ASYLUMS.

26. The proportion of Medical Officers needful depends largely on the class of patients.
27. In a County Asylum receiving only recent cases there should be an Assistant Medical Officer for about every 60 yearly admissions. In a County Asylum receiving only chronic cases there should be an Assistant Medical Officer for about every 400 in residence. In an asylum receiving both recent and chronic cases one Assistant Medical Officer to every 100 yearly admissions might suffice.
28. No public asylum should be without an Assistant Medical Officer, and the Superintendent and Medical Officers should not be so tied by routine ward-work as to have no time for unexpected visits, for special

attention to new cases, for taking an active interest in the amusements of the patients, and for the cultivation of personal influence and friendliness with all. Resident Clinical Assistants acting under the Medical Officers are a very valuable addition to the medical staff of an asylum, and the appointment of such officers forms an important means of extending the knowledge of insanity in the profession. Pathological work is a most important part of the duty of the medical staff, and, while all should share in such work, one member of the staff in large asylums should be specially devoted to it. The results should be carefully recorded.

29. An asylum and everything about it exist for and concern the welfare of the patients, and should be made subservient to that end. Everything, therefore, should be under the control of the Medical Superintendent. In administrative and non-medical affairs his position should be purely that of a director, with responsible lay officers under him. Such duties may thus be made a relaxation instead of a burden.
30. The selection and training of attendants demand the utmost care, and every asylum should have arrangements for instructing them in their difficult and trying duties as recommended by the Association at the Annual Meeting of 1890. The wisest plan of treatment is in vain unless it can be carried out by a competent nursing staff.
31. The services of attendants should be acknowledged not only by good wages and comfortable quarters, but for the better discharge of duty they should be frequently relieved from its burden.
32. The best size for an asylum depends on the class of patients and on the construction of the asylum buildings. A County Asylum, which receives only recent cases, and passes them on when they become probably incurable should not have more than 200 to 300 patients; an asylum which has both recent and chronic cases should not have more than 600 or 700; while an asylum for chronic cases might easily supply proper care and treatment for 1,000 patients or more.

PART II.—REVIEWS.

Forty-fifth Report of the Commissioners in Lunacy. June, 1891.

The forty-fifth Report of the Commissioners in Lunacy gives an interesting account of official lunacy matters during the year 1890.

On the 1st January of that year there were under official cognizance in England and Wales 86,067 persons of unsound mind, who had increased on the 1st of January last to 86,795. These patients were distributed as shown in table on p. 574.

This increase of 728 patients, of whom 105 were of the private and 623 of the pauper class, was greatly below the average of previous years, and at first sight it might have been assumed that this fact indicated a falling-off in the number of cases of occurring insanity.

Unfortunately this seems to be by no means the case, but only to prove how unreliable bare statistics are in the absence of careful investigation.

If we refer to Table III. in the Report before us we find that the percentage of admissions to population has made a sudden bound upwards, and that, whereas in the previous year it was not greater than in 1881, in the year 1890 it exceeded that of any year since 1869. Meanwhile the proportion of reported insane persons to population has not increased, but slightly diminished. It is, therefore, probable that the increased number of admissions has been somehow due to the operation of the new Lunacy Act rather than to any actual increase of occurring insanity.

This is rendered the more probable by the facts that a revision of classification under that Act has caused an apparent reduction of 867 in the number of the insane in workhouses, and that the increase in the asylum pauper admissions (deducting transfers) over those of 1889 was 1,153, or an excess of 858 over the increase of 1889.

The remarks and explanations of the Commissioners upon these points are interesting, and may well be given here in full :

“ The large reduction of 867 in the number of the insane in workhouses on the 1st of January last, as compared with the 1st of January, 1890, is a feature in this year's statistics which calls for special notice.

It may, we think, be in some measure accounted for by the revision in the classification of these workhouse inmates due to the operation of the Lunacy Act, 1890.

Where Maintained on 1st January, 1891.	PRIVATE.			PAUPER.			CRIMINAL.			TOTAL.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
	In County and Borough Asylums	424	553	977	23,928	29,463	53,391	68	15	83	24,420	30,031	54,451
In Registered Hospitals	1,785	1,661	3,446	147	94	241	1	...	1	1,833	1,755	3,588
In Licensed Houses :-												
Metropolitan	825	819	1,644	337	547	884	...	...	...	1,162	1,266	2,428
Provincial	600	815	1,415	268	307	565	3	...	3	861	1,122	1,983
In Naval and Military Hospitals, and Royal India Asylum	262	16	278	...	...	...	...	...	...	262	16	278
In Criminal Lunatic Asylum (Broadmoor) ... ..	...	...	...	...	...	...	474	150	624	474	150	624
In Workhouses :-												
Ordinary Workhouses ... ..	...	...	...	4,865	6,384	11,259	...	...	...	4,865	6,384	11,259
Metropolitan District Asylums ... ..	...	...	...	2,684	3,047	5,731	...	...	...	2,684	3,047	5,731
Private Single Patients	182	258	440	...	...	...	...	...	...	182	258	440
Out-door Paupers ... ..	...	...	...	2,319	3,494	5,813	...	...	...	2,319	3,494	5,813
Total	4,078	4,122	8,200	34,538	43,346	77,884	546	165	711	36,168	47,633	86,795

In many instances, persons suffering from mild forms of senile dementia, or from slight weakness of mind associated with epilepsy, and who had previously been classed as of unsound mind, were, last year, removed from the list, though often continuing to receive the same extra supervision in special wards; and we have seldom had to find fault with such an altered classification and arrangement, as long as the liberty of the individuals was not unduly interfered with.

The necessity, under the present Lunacy Act, of procuring, for every person admitted and detained in workhouses after the 1st of May, 1890, a magistrate's order supported by two certificates, one by the medical officer of the workhouse, the other by an independent medical man, has, by the extra trouble and expense involved, probably restricted to some extent the registration of new cases; and we have not infrequently after our visits to workhouses to report non-compliance with the law in this respect.

In connection, however, with this reduction in the insane registered in workhouses on the 1st January last, we have to mention the important fact that the reduction above referred to has been accompanied, during the year 1890, by a large augmentation of the usual annual increase of pauper admissions into asylums.

In the year 1889 the increase in the asylum pauper admissions (deducting "transfers") over those of 1888 was 295, whilst in 1890 the increase in these admissions over those of 1889 was 1,153, an excess of 858.

In some workhouses the pressure for accommodation for the ordinary sick, coupled probably with the temptation of the Parliamentary grant of 4s. per head per week received for every patient maintained in an asylum, appears from time to time to have induced the guardians to acquire the requisite room, by sending some of the imbecile residents to an asylum rather than by building additional infirmary accommodation at the workhouse. This course has always been deprecated by us as calculated to cast an unnecessary financial burden upon County Councils and their asylum committees, but it cannot be prevented if the persons to be removed are certified to be of unsound mind, and if the other usual legal formalities are complied with."

The results of treatment during the year 1890 were not quite so satisfactory as usual.

The recovery rate was 38·59 per cent. on the admissions, against 38·81 for 1889, and 39·57 for the last ten years.

The death-rate was 10·33 per cent. on the daily average numbers resident as compared with 9·81 for 1889, and 9·73 for the last ten years.

The recoveries and deaths in the several classes of asylum and in private care, excluding idiot asylums, in the year under review, and in the last decennial period, have been as follows:—

YEAR.	County and Borough Asylums.			Registered Hospitals (excluding Idiot Establishments).			Metropolitan Licensed Houses (excluding Idiot Establishments).			Provincial Licensed Houses (excluding Idiot Establishments).		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1880	34-03	42-88	38-68	41-03	49-09	45-64	30-83	34-77	33-16	33-63	41-78	38-20
10 years	35-31	43-94	39-75	39-69	52-07	45-61	29-74	40-28	38-30	30-63	40-73	36-43
1880	13-65	8-76	10-61	8-82	5-46	6-91	15-66	11-72	13-46	12-03	5-63	8-61
10 years	13-11	8-21	9-97	9-00	4-63	6-66	13-85	8-97	11-24	10-13	7-21	8-46
RECOVERIES.												
DEATHS.												

YEAR.	Naval and Military Hospitals, and Royal India Asylum.			Criminal Asylum (Broadmoor).			Private Single Patients.			TOTAL (excluding Idiot Establishments).		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1890	47-93	...	47-93	13-95	28-57	17-54	12-50	22-73	19-12	34-77	43-08	38-59
10 years	57-87	...	57-87	9-26	19-84	11-91	11-90	16-38	14-39	35-24	43-69	39-57
1890	6-72	21-05	7-75	5-29	1-99	4-49	7-65	6-92	7-22	13-40	8-93	10-33
10 years	6-03	4-18	5-91	3-65	2-27	3-20	6-03	5-91	5-96	11-76	8-02	9-73

KEOOVERIES

DEATHS

There is still no table in this Report showing the causes of death, but it appears that fourteen were from suicide in asylums and four from suffocation during epileptic fits. In the Report the number of suicides is given as 18, but in four of them the act was committed either before admission or after discharge on leave, and they cannot, therefore, be properly regarded as having occurred in asylums. The number, although, of course, far too large, is extremely small when it is remembered that the percentage of persons who are admitted into asylums with a suicidal disposition is very considerable, and that the modern system of treatment, which adds so greatly to the comfort and happiness of the patients, necessarily exposes them to the dangers which attend upon increased liberty and a less irksome surveillance.

In 76.6 per cent. of the deaths post-mortem examinations were made.

The average weekly cost of maintaining the patients in County and Borough Asylums during the year ended 31st March, 1891, was as follows:—

	s.	d.
In County Asylums.....	8	7½
In Borough Asylums.....	10	1½
In both taken together.....	8	10½

The following are the details of the average weekly cost:—

	County Asylums.		Borough Asylums.	
	s.	d.	s.	d.
Provisions (including malt liquor in ordinary diet)	3	6½	3	7½
Clothing	0	7½	0	9½
Salaries and wages	2	4	2	8½
Necessaries (e.g., fuel, light, washing, etc.)	1	0½	1	4½
Surgery and dispensary	0	0½	0	0½
Wines, spirits, porter	0	0½	0	0½
Charged to Maintenance Account:				
Furniture and bedding	0	4½	0	5½
Garden and farm	0	0½	0	7½
Miscellaneous	0	4½	0	7
	8	10½	10	4½
Less monies received for articles, goods, and produce sold (exclusive of those consumed in the Asylum)	0	3½	0	3
Total average weekly cost per head	8	7½	10	1½

The Commissioners report favourably of the condition and management of the various classes of asylums, and they make

the following very pertinent public declaration on the great question of pensions, which we gladly reproduce :—

“The question of granting superannuation allowances to asylum officials has recently, we believe, engaged the attention of Visiting Committees and County Councils, and our opinion upon it has more than once been sought. We have expressed ourselves in a sense favourable to the granting of such allowances; and we think it may be useful that we should in this Report give a wider publicity to that opinion, with some of our reasons for entertaining it.

The Lunatic Asylums Act, 1853, Section 57, and the Lunacy Acts Amendment Act, 1862, enabled Committees of Visitors of Asylums to grant superannuation allowances to officers and servants disabled by sickness, age, or infirmity, or who had attained the age of 50, and had served at least 15 years. The grant, however, required to be confirmed by the Justices in Quarter or General Sessions. The power was permissive, and its exercise wholly within the discretion of the Committee, but presumably it was intended by the Legislature to be exercised as the rule, not exceptionally. The Lunacy Act, 1890 (which repealed the above Acts), by Section 280 re-enacted the power in question, but, as a consequence of the change in local government, transferred the confirmation of the allowance to the County Council.

It is obviously of the first importance to the welfare of the insane to attract well qualified persons to the service of the asylums, and to retain them therein when, by the experience they have gained, their service has become valuable. This can only be done by offering adequate remuneration; economy must, no doubt, be kept in view, but efficiency must not be sacrificed to it.

The question then arises as to the best form of remuneration. If it is by salary or wages only, without prospect of pension, salaries and wages must be on a higher scale, and it may be doubtful if any actual money saving will be effected; but if it should, it will be at the risk of inefficient service due to the retention of office when the power to discharge its duties has become impaired.

This, in our opinion, is not an imaginary risk; and, however desirable reasonable length of service may be, a mode of remuneration which renders the service liable to such a contingency is not satisfactory.

Fair salaries or wages, with the prospect of liberal pensions after disablement or reasonable length of service, offer, we think, the most influential inducements to really suitable persons to enter asylum service, and to remain in it as a permanent occupation.

With regard to the medical staff, it may be observed that the speciality offers no great prizes, while it demands for the satisfactory discharge of the duties and responsibilities it entails very considerable ability, great power of organization and administration, and varied knowledge. The work of a medical superintendent of an asylum is anxious, harassing, and not unattended by personal risk. His responsibility is unceasing, and few men can venture, without danger to health, to extend their tenure of the office beyond moderate limits. The work of the lower officials, who are much in contact with the insane, is also wearing, and not free from danger; while it calls for the exercise of qualities of intelligence, tact, and patience, which are by no means too common. No one who has spent the best years of his life in an asylum is likely, after retirement, to succeed in any other occupation; and if he has no pension to look forward to his outlook for the future will be a gloomy one, for experience, we think, shows that provision for old age would not often be made out of an income which, at the best, would be but moderate.

The system of moderate salaries with superannuation has had a fair trial in the past, and, we consider, with satisfactory results, and we would most strongly deprecate any departure from it in the future."

The whole Report affords continued assurance that there is no falling off in the efficiency and energy with which the duties of the Lunacy Board are discharged. They must have been severely taxed by the operation of the new Lunacy Act, which, however, receives no more than a passing reference.

A Plea for the Scientific Study of Insanity. By J. BATTY TUKE, M.D., F.R.C.P.Ed. Edinburgh: Young, J. Pentland. 1891.

The question the author endeavours to answer is, Does the study of insanity occupy that position in the realm of medicine which it ought to occupy? A very pertinent inquiry. There is no such thing as standing still, and it is well to have any unwarranted self-satisfaction in our state of health shaken from time to time, so as to consider whether it is as good as it ought to be. In the present instance it is highly probable that benefit will arise from an honest searching of heart as to whether the special branch of medicine, known as Medical Psychology, is being cultivated as fully as it ought to be, and on the lines which modern science justly demands that it should be studied. To assert that all is done that can be done—that mental physicians, whether in or out of asylums, are

working as ardently and systematically as the public have a right to expect—would be a contention as boastful as it would be untrue. Asylum superintendents must bestir themselves, and work even harder than they have, as a class, hitherto done, if they would advance our knowledge clinically and pathologically to the extent which the materials at their command enable them to do. If this can only be done by increasing the strength of the medical staff, then every effort should be made to obtain such increase. Dr. Batty Tuke severely criticizes the *Nomenclature of Diseases*, drawn up by the Royal College of Physicians in 1871, and is not by any means satisfied with that issued ten years later, which is characterized as “a somewhat confused system, based partly on ætiology, partly on psychology, and partly on clinical consideration,” the result being only fairly good. No thanks, however, can be accorded to English alienists, but only to Schröder van der Kolk, Morel, of Rouen, and “certain members of the Scottish School.” The writer’s strictures on the questions set by the Medico-Psychological Association, whether in London, Edinburgh, or Dublin, for the “Certificate of Efficiency in Psychological Medicine,” are rather severe, on the ground that they do not enter upon the healthy anatomy and physiology of the brain and cord. It is to be assumed, however, that, as those who present themselves for examination are qualified medical men, they will be already instructed in this department, whereas it is more germane to the object and scope of the Association to test the knowledge of candidates in morbid histology. No doubt primary importance is attached to clinical knowledge in the pass examination, and we think this is the right course to pursue.

While, as we have already said, we think that it is an advantage to have the question asked and seriously considered, whether there are no grounds for dissatisfaction with the present level to which medical psychologists have attained—and we tender our thanks to the writer for having raised this question—we must join issue with him when he makes the following bold assertion that in the study of insanity “anatomy, physiology, and pathology have been almost, if not entirely, ignored; and psychology has afforded, in association with clinical impressions, the institutes of so-called psychiatric medicine.” This appears to us to be quite untrue as a representation of the lines upon which mental disorders are followed and have been studied for a very considerable period. From this and other statements we should conclude that the writer of the essay before us is the first to put in “A

Plea for the Scientific Study of Insanity." It can hardly be expected that those medical psychologists who have, in this country and abroad, assiduously worked in this very direction can do otherwise than resent such an assumption. It would be invidious to mention the names which at once spring to our lips, of physicians, dead and living, who have toiled in this department for many years.

We prefer the writer of this pamphlet in his teaching rather than in his critical character. As a pathologist we gladly render him his just meed of praise; but, as a critic, we confess we do not think he shines. He is "magisterial," as Dr. Clifford Allbutt remarked in his paper read at the Psychology Section of the British Medical Association this year. He is somewhat aggressive, and, in the heat of his attack, he is apt to ignore the work which has been done by those who have borne the burden and heat of the day. We yield to none in our admiration of the excellent work which has been done by Dr. Bevan Lewis, but we much doubt whether this pathologist will read, without surprise and regret, the statement that to him belongs the high honour of first directing attention to the absolute necessity of the study of the minute anatomy of the brain. Other passages of a similar character occur, and are open to adverse criticism.

To conclude, while we would do all in our power to encourage the scientific study of insanity, we object to the title of this essay, inasmuch as it assumes that it has been reserved for the writer to be the first to put in "a plea" for this study. It would have been about as fitting to have adopted as a title for a new book "*A Plea for the Humane Treatment of the Insane.*" Is it not a little late in the century to write as if there were something novel in either of these ideas?

A Short Dictionary of Medical Terms. J. and A. Churchill, London. 1891.

Large dictionaries do not render it unnecessary to have a small one which can be carried in the pocket. This short dictionary of some of the most important medical terms meets this want. The quantities of the syllables and the accents are given. It is an abridgement of Mayne's Vocabulary. We can recommend it as thoroughly answering the purpose for which it is designed.

Les Neurasthénies Psychiques (Obsessions émotives ou conscientes). Par le Dr. EMMANUEL RÉGIS. Bordeaux: G. Gounoilhou. 1891.

This treatise will appear as a chapter in the forthcoming new edition of the "Manuel Pratique de Médecine Mentale," by M. E. Régis, who has already contributed to the literature of Obsessions or imperative ideas and impulses. It must be understood that it is not merely neurasthenia in the sense already familiar of which the author treats, but the special group of symptoms which constitute cerebral neurasthenias. Heredity is the essential cause of neurasthenia. As to nomenclature, cerebral or psychical neurasthenias have received various names from those who have described them. Thus we have insanity with consciousness of the mental peculiarities, emotional insanity, quasi-delusions, imperative ideas (*Zwangsvorstellungen*), paranoia rudimentaire, anxious obsessions, morbid fears, and so forth. M. Falret has summarized the conditions necessary to constitute this disorder in the following terms: They are all accompanied by the patient's consciousness of his condition. They are always hereditary. They are essentially remittent, periodical, and intermittent. They do not remain isolated in the mind as in monomania, but extend to a wider sphere of the intellectual and moral life, and are always accompanied by anguish and anxiety, an internal struggle, hesitation in thought and in act, and by symptoms of a more or less pronounced nervous and emotional nature. Hallucinations are never present. The symptoms retain the same psychical character during the individual's whole life, in spite of frequent, and often prolonged, alternations of paroxysm and remission, and do not pass into other forms of insanity. They never terminate in dementia. In some rare cases they may be associated with persecution-mania or anxious melancholia at a later period of the disorder, but even then their primitive characteristics are preserved. M. Régis has given a list of obsessions under which patients labour, and there is, in fact, scarcely any limit to the number that may be enumerated, *e.g.*, there is the dread of certain objects, and the coming into contact with them. We do not propose, however, to enter more fully upon the analysis of this production. Our object will have been obtained by drawing attention to M. Régis's writings, which always repay perusal.

Hygiène des Gens Nerveux. Par le Dr. F. LEVILLAIN. Paris: Alcan. 1891.

Dr. Levillain, who is a former pupil of Féré and Charcot—two names which sufficiently indicate his general standpoint—has performed the task set before him in a competent and business-like fashion. The first fifty pages of the book are devoted to a description of the structure and functions of the nervous system, including an account (somewhat important from the point of view adopted) of the effects of stimulation of the various senses on muscular action, as measured by the dynamometer. The second part deals with nervous disorders, such as neurasthenia and hysteria, and with neuropathic conditions generally; it is the most unsatisfactory part of the book; to treat of pathological conditions seems of doubtful advantage, in a work intended for the guidance of “nervous” persons, and to be in any way helpful or instructive to a lay reader, the pathological exposition needs much more space than is here given to it. The third part is concerned with the chief causes of nervous diseases; it is a sensible discussion of intellectual over-pressure, moral over-pressure, the general stimulants of the nervous system, over-stimulation of the senses, town-life, heredity, and contagion in nervous disorder. The fourth part deals with the hygiene of the nervous functions at the different periods of life, and in women, and also with the hygiene of dwelling, clothing, bathing, food, and exercise; the fifth and last part, with various methods of treatment, such as hydrotherapeutics, electrotherapeutics, suggestion, mineral waters and watering-places, etc.

Dr. Levillain's suggestions are for the most part sensible enough, though sometimes rather fine-spun. It is difficult, however, to avoid a doubt sometimes as to the necessity, or sometimes desirability, of the advice he offers, as for example in the following passage: “The neuropathic must temper to their eyes the fatiguing sight of varied and many-coloured objects, to their ears loud and repeated sounds, too penetrating perfumes to their sense of smell, too highly spiced dishes to their sense of taste, too irritating impressions to their skins. For this reason they must not be allowed to gaze at bright lights, especially the electric light and the colours red, orange, and yellow, which are the most exciting; multiplicity of objects must give place to shaded sun-light, to green and blue colours, and to simplicity, if not to monotony, of other

visual impressions." But Dr. Levillain is careful to point out that he is not writing for healthy persons; and if any further defence is needed he would probably reply with the words of Charcot's favourite maxim, with which he concludes his book, that the first duty of every physician who occupies himself with nervous diseases is to do no harm—*primo non nocere*—and that personal hygiene can never do harm.

The Insanity of Genius. By J. F. NISBET. London: Ward and Downey. 1891.

Mr. Nisbet wishes "to place upon a solid basis of fact the long-suspected relationship of genius and insanity." He tells us that the new light which he thinks he is able to throw on this subject comes firstly from modern researches concerning the localization of cerebral functions, and secondly from "the established kinship of an extensive group of brain and nervous disorders, of which insanity or paralysis is the more obvious expression, and gout, consumption, malformations, etc., the more obscure." He considers that these are the two lines of research which lead to the belief that "genius and insanity are, in reality, but different phases of a morbid susceptibility of, or want of balance in, the cerebro-spinal system." Of the physiological line of investigation, although it is insisted on in the title-page, there is not much in Mr. Nisbet's book. Of pathology, on the other hand, there is much; Mr. Nisbet is able to manipulate large pathological generalizations with enviable facility and assurance. He presents us with a characteristic example in a prominent position at the end of his preface. Napoleon I.'s uncle and grand-uncle suffered from gout; Napoleon himself died of cancer of the stomach, "a near relation of gout;" Jerome died of "a kindred affection"—pneumonia; and in Jerome's son pneumonia "was metamorphosed into diabetes with paralysis." All these disorders are manifestations, according to Mr. Nisbet's somewhat metaphysical pathology, of the gouty diathesis, and gout he considers to be very closely related to genius. Throughout the volume Mr. Nisbet shows a remarkably keen eye for morbid symptoms in connection with genius. He thus unhesitatingly reveals the neurotic strain in Cowper's heredity: "Cowper's father and uncle could both write verses—an ominous gift!—while his mother died at the age of thirty-four, so that there was probably a condi-

tion of nervous unsoundness in both parents." Southey's father was passionately fond of field sports; on this Mr. Nisbet solemnly observes: "Extraordinary physical energy is often found in connection with nerve disorder, the result of an excessive stimulation of the motor centres of the brain." Cromwell died of ague, a malady "obviously of nervous character." The onset of Scott's infantile paralysis is thus quaintly described: "At the age of eighteen months he felt a sudden loss of power in his right leg." Flaubert became epileptic at the age of twenty-eight; Maxime du Camp, who knew him intimately, remarks that his intellect never developed after that age. Mr. Nisbet observes:—"Readers of these pages will hardly be of this opinion. Without his malady and its clarifying effect upon the brain, Flaubert would probably have been an *avocat* at Rouen." Of Alfred de Musset he remarks: "His mother's family appears to have been characterized by nervous instability, his maternal grandfather having a prodigious memory." It is sufficiently clear that Mr. Nisbet's views on morbid psychology are of a somewhat eccentric character.

If we overlook these peculiarities, which do much to prejudice a scientific reader against the book, we shall find much in it that is of interest to the student of genius. Mr. Nisbet appears to have gone through a vast number of biographies, noting the abnormalities of men of genius and of their relations, and the enormous mass of interesting facts thus accumulated can be used by those who do not always accept the explanations here set forth. The main idea running throughout the book—the frequency of a neurotic element in genius—is far from novel, and no doubt sound, although Mr. Nisbet tries very hard to drive it to death. He seems to show also a remarkable frequency of gout among men of genius and of a ne'er-do-well among their near relatives. He also points out the great frequency with which one or other parent of a man of genius is described as a person of "strong character;" this is noteworthy, and does not seem to have been previously observed. An interesting speculation is brought forward as to the cause of Shakespeare's death, which Mr. Nisbet is inclined to attribute, with considerable plausibility, to a paralytic seizure rather than to typhoid fever, as has previously been supposed. The book is intended for the "general" rather than for the scientific reader, and is written in a clear and fluent style. There is a full and useful index.

Neale's Medical Digest. Third edition, 1840-1890. London :
Ledger, Smith and Co.

This is an age of works of reference, and in view of the encyclopædic dimensions of the records of scientific labour in every department of knowledge, such works have become absolute necessities. Amongst them Dr. Neale's Medical Digest has earned for itself an excellent name. After first receiving the imprimatur of the New Sydenham Society, it subsequently launched forth on its own account, and the present volume belongs to the third edition. Dr. Neale's work is a digest of a certain number of periodicals which are enumerated in the preface. They include the valuable "British and Foreign Medico-Chirurgical Review" from 1848-78. It need hardly be said that a faithful index to any one periodical during a period of fifty years would prove most valuable, even outside its own limit, for, as Dr. Neale says, it is most striking to note "the uniformity with which suggestions for any new treatment, etc., run through all the periodicals." On this account an index to one series becomes, to some extent, an index to another contemporary series. Dr. Neale's index takes in, however, not one periodical, but eleven, of which the "Lancet" has the longest record, viz., from 1837-1890, and the wide area thus covered makes the work of the greatest value as a record of English medical journalism. The use of the large type central numbers is likely at first sight to cause the reader to imagine that the whole subject referred to is concluded in a given section thus numbered. This is not so, and we cannot help thinking that the labour of renumbering from a printed copy would not prove so very arduous—certainly not to one who has carried through the rest of this prodigious piece of work. Not that there is much real difficulty in finding what one is seeking, and we can confidently recommend the Digest as most serviceable to the profession. The author has earned the hearty thanks of all workers in Medicine.

La Neurasthénie, Maladie de Beard. Par le Dr. FERNAND
LEVILLAIN. Paris: A. Malvine. 1891.

Prof. Charcot prefaces this work of an old pupil of his, and in so doing he draws attention to one or two points of interest. 1st. That the subjects of neurasthenia are by no means confined to the upper classes, enervated by over-civilization, but are to be counted on a large scale amongst the work-a-day

classes. 2nd. That neurasthenia may claim a definite place among diseases, since it maintains its identity under varying circumstances of origin. Thus the neurasthenia to which a labouring man has succumbed is essentially the same as that to which the intellectually overworked scholar or the harassed politician falls a victim. 3rd. That neurasthenia, though not uncommonly associated with hysteria, is essentially distinct from it. The two may intermingle and present a complex of symptoms to which the term hystero-neurasthenia may be applied, but they do not blend—they do not produce a hybrid.

Dr. Levillain begins his treatise with the history of the disease; this is easily traversed. He next proceeds to define the disease, and here makes a distinction between the common form of neurasthenia and another form which he names neurasthenia with heredity. The two forms differ, so he asserts, in their evolution, progress, and response to treatment. We subsequently find (pp. 191, 192 *et seq.*) this subject developed, and learn that neurasthenia with heredity shows three principal varieties:—1st. A neurasthenia acquired in the ordinary way, but upon which are grafted certain nervous symptoms of hereditary type, *e.g.*, mental states of anxiety amounting even to various forms of *phobia* (agoraphobia, anthropophobia, etc.), suicidal mania, hypochondriasis. In this variety the neurasthenia is complicated by these hereditary manifestations. 2nd. Hysterical symptoms associate themselves with the nervous exhaustion, and the case is described as hystero-neurasthenia. 3rd. Neurasthenia of classic type may develop in subjects whose parents are or were distinctly neurasthenic or hysterical, and the usual determining causes of the nervous exhaustion may not have been present. This form appears in general much earlier than the simple acquired form. We feel rather sceptical of the clinical value of this classification into hereditary and non-hereditary forms, the more so that heredity is admitted by Dr. Levillain to play an important part in predisposing to the development of the simple acquired form.

In the chapter on etiology we note among the predisposing causes of neurasthenia the abuse of alcohol, tobacco, tea, coffee. Clearly this must be so, for a nervous system which is constantly being subjected to an abnormal stimulus is draining its exchequer. Krishaber attributes to the widespread abuse of tea and coffee a very considerable part in the production of a form of nervous exhaustion named by him "*névropathie cérébro-cardiaque.*"

What, then, is neurasthenia? It is nervous exhaustion.

And its exciting and predisposing causes? All forms of hyper-excitation of the body; all forms of strain. The exciting causes may be sudden or gradual in their production of the disease. Every climate manifests the disease, but it is where life works at high pressure, in the centres of civilization (!) that it flourishes. The period of life when it is most prone to show itself is the period of strain, 25-50, but the so-called hereditary forms may appear much earlier, 15-20.

In the chapter on pathogenesis there are some interesting museum specimens of pathology which Dr. Levillain draws our attention to, and then kindly replaces on the shelf. There may they rest.

On what grounds does neurasthenia claim to be a definite disease? On the ground of certain essential symptoms which mark the disease. These essential symptoms, Dr. Levillain says, we owe to Charcot, who may be said to be the godfather of neurasthenia, Beard being the veritable parent. These essential symptoms constitute the stigmata of the disease. They are as follows:—Headache (of a special kind), digestive troubles, incapacity for work, loss or diminution of sexual desire, muscular lassitude marked by easily-induced fatigue and painful stiffness, spinal pain, insomnia, and hypochondriacal views of life. Other symptoms may appear, but are not constant, *e.g.*, vertigo, attacks of cardialgia simulating angina pectoris, palpitations, feelings of faintness, irritable pulse. The special senses, sight, and hearing may also be hyper-excitabile.

The special character of the head pain is that it suggests weight or constriction; the back of the head and the vertex, and sometimes the whole of the cranium experiences this discomfort. Charcot described this form of headache, which is neither a migraine nor a neuralgia, nor, indeed, an acute pain of any kind, by the felicitous expression, the neurasthenic helmet. The occiput and the parietal regions are frequently alone referred to as the sites of pressure, but the frontal region may be the part most affected. In some cases the pressure is hemicranial.

Very important is the insomnia, or troubled sleep, of neurasthenia, since the symptom is an early one, and since it aggravates the nervous exhaustion. The rhachialgia is accompanied by hyperæsthesia to touch, and pressure along the spine. The pain is in general at its worst on the neck and sacrum; sometimes it is the coccyx that is most complained of.

Dyspeptic troubles are sometimes so prominent that the

patient is assured that the alimentary tract is the primary seat of mischief, but this is not so. It is the neurasthenia which leads, and the stomach trouble which follows suit. The form of dyspepsia is the flatulent or atonic form.

Among the mental phenomena there are, the incapacity for work, and a difficulty in finding the correct words, or an actual substitution of the wrong ones. Beard employs the terms neurasthenic dyslalia and heterophemia to describe this condition. The memory is bad, the character undecided, and the patient sees every transaction through dark glasses.

We must, however, finish this notice, and, we regret it, without touching upon the treatment of neurasthenia, which includes a long list of means, *e.g.*, psychic suggestion, hydrotherapy, climate, massage, electricity static and dynamic, the method of Weir-Mitchell and of Playfair, and lastly drugs. For these methods the reader must consult the original work, which we have much pleasure in commending. Some writers on medicine are fond of ridiculing the so-called change of type of disease, but what of this neurasthenia which of late years has become so prominent amongst us!

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Retrospect.*

Asylum Reports for 1890.

Aberdeen.—Important structural improvements are contemplated. These are intended to remove the following defects: The inadequate character of the accommodation for the sick, the want of a suitable dining-hall and amusement-room, the unsuitability of the stores and of the administrative building, and the deficient day-room and bath-room accommodation.

Dr. Reid reports that although no immediate death resulted from influenza, it had a most deteriorating effect on the aged and feeble, and in many cases was the beginning of the fatal end. He also points out that:—

One of the greatest needs in the asylum is a hospital block, so that physical and mental cases requiring special supervision would be concentrated together, thereby affording greater facilities for the treatment of the cases, and necessitating less watchfulness and anxiety in the management.

Barnwood House.—Further improvements have been carried out or are in contemplation. It is proposed to extend the buildings occupied by the more excitable male patients, doubling the super-

ficial area. A detached sanatorium is in process of erection. It will accommodate eight persons. The farm has been increased by the purchase of 24 acres. The charitable work of the hospital has been largely extended to that class of patients who, in the opinion of the Committee, are most capable of appreciating its benefits.

Concerning the new Lunacy Act, Dr. Needham says:—

As the new Lunacy Act has now been in force for eight months, it may perhaps be desirable that I should record my experience of its working. In many places this seems to have been attended by unusual friction, even for a new Act of Parliament, chiefly in consequence of the too limited number of magistrates who were specially selected to form the judicial authority. In this county there has been no such difficulty, owing to the wise action of the executive in including all magistrates in such judicial authority. The necessary orders have, therefore, been usually obtained without serious trouble and loss of time, and there has been practically no uncertainty as to jurisdiction.

But while admitting this, I am bound to say that although the Act generally may have satisfied a sentimental outcry for a change in the law of lunacy, it has, in my opinion, made no addition to the security of the subject, as it has certainly contributed nothing towards the well-being of the patient.

If, as is no doubt the case, the consolidation of the Acts has been a real help to those upon whom devolves the duty of carrying them into effect, this most recent addition to them has introduced a complicated machinery, whose sole result would seem to have been to add largely to vexatious and unprofitable work, without producing any corresponding advantage to anyone.

Fortunately, there are many weak places in the Act, or it would, I believe, have been quite unworkable in practice. The unjust suspicions implied in some of its provisions, the want of appreciation of peculiarities of the insane condition, and the practical assumption that this legislation is not to secure the proper treatment of a disease, but the fair trial of persons accused of crimes, are, I think, all of them, unfortunate concomitants of the Act. Moreover, the statements, reports, and returns demanded by it are irritatingly and unnecessarily complicated in their forms and requirements.

Under the old law it was possible for the officials of an asylum to be on the best terms with the majority of the patients, who were willing to regard them as persons who were discharging an unpleasant duty in as friendly a manner as possible. Under the new law, strictly carried out, the patients must be angelic indeed if they can see in those who have the charge of them other than opponents of all their best interests.

The Act, however, has been passed, and we have endeavoured, and shall endeavour, to give it a fair trial by honestly carrying out its provisions, but I venture to hope that if, after further and reasonable experience, it is proved to be defective in essential particulars, Parliament will consent at least to consider the opinions of those who have had the fullest experience of its working, and to remedy its most obvious defects.

Bedford, Hertford, and Huntingdon (1889).—Mr. Swain reports that:—

Certain female patients have been assisted after leaving the asylum by the After-Care Association, and situations obtained for them. This admirable Association is well worthy the consideration of the charitable, as it finds homes for females who may be discharged from asylums, and who have no friends to whom they can go, and after a time finds suitable employment for them. It has been of the greatest benefit to two or three of my patients.

Bethlem Hospital.—Dr. Percy Smith devotes a considerable

portion of his report to a criticism of the new Lunacy Act. We are already familiar with his views, and cordially agree with them.

On another subject he remarks :—

The Medico-Psychological Association has framed a scheme for the more thorough instruction and subsequent examination of attendants with a view to their certification. This will, no doubt, be of great benefit to attendants, and, therefore, to patients; but it must be remembered that the practical work of taking care of patients and treating them with the necessary combination of tact and firmness, is not to be learnt from books or lectures, but needs years of life in intimate association with the insane, and, moreover, there are some attendants whom no amount of teaching will endow with the necessary qualities.

Birmingham, Winson Green.—In his report Dr. Whitcombe speaks well of the new Act. He says :—

The year will be conspicuous as having witnessed the introduction of a new Lunacy Act, which throughout bears evidence of a desire to protect the liberty of the subject, as well as to ensure the welfare of the inmates of asylums. Although this Act adds considerably to the duties and responsibilities of asylum officials, I have found, so far as it has been carried out, that it works smoothly and satisfactorily.

It must be remembered that the patients in this asylum, with a slight exception, are of the pauper class, and that therefore the new and vexatious magisterial rules as to private patients scarcely touch Dr. Whitcombe. Were he the superintendent of a registered hospital, or in private practice, his blessing on the Act would soon be changed to cursing.

Concerning the training of attendants, Dr. Whitcombe says :—

All nurses and attendants are now expected to go through a course of special training to fit them for nursing and caring for the insane, and also to render them capable as general nurses. The necessary instruction for these purposes continues to be given, and it is satisfactory to report that thirteen nurses and six attendants passed the examination for first aid of the St. John Ambulance Association.

A decided advance in the treatment of the patients has been obtained by the conversion of one ward on each side of the house into hospital and reception wards. This has enabled us to send every patient to bed on admission, to ensure more individual attention, and to carry out medical treatment in a more thorough manner. I am satisfied (so far as a six months' trial can warrant it) with the results of this treatment, which has proved advantageous alike to patients and doctors, and has added very considerably to the interest and sympathy of the nurses.

A second assistant medical officer is to be appointed. It is quite evident that his services are required when it is observed that during last year 381 patients were admitted, 240 were discharged, and 102 died.

Birmingham, Rubery Hill.—Dr. A. C. Suffern is now the medical superintendent. A new block for nurses is being erected.

Bristol.—Dr. Benham has begun his work as superintendent under unusual difficulties. Extensive structural alterations are in progress, and a strike among the attendants necessitated a new staff.

The Commissioners recommend the appointment of a second assistant medical officer. They say:—

Looking to the requirements of the Lunacy Act of 1890, and the expectation of the public that at asylums scientific inquiry into the causes of insanity and its proper remedies should be pursued, we must insist that the medical staff here is numerically insufficient, and we must urge the committee to take this matter into early consideration.

His many friends must deplore that Dr. Thompson has been obliged to resign his appointment. His Committee highly esteemed him, and have pensioned him liberally.

Carmarthen.—Concerning nursing in asylums Dr. Hearder says:—

The amount of physical disease in those under treatment demands a much larger amount of care and tact in management than would a similar number in a general hospital. In the one the patients are rational, reasonable, anxious to recover their health, willing to assist in their own treatment, and thus make the nursing as light and easy as possible; in hospitals for the insane, on the other hand, the patients are in only too many cases wishful to die, have perverted and unnatural habits, resist all treatment, refuse food, and are unceasing in their endeavours to injure themselves and, often, their nurses also. The smallest act of neglect or forgetfulness, which elsewhere would be unnoticeable, in an asylum may lead instantaneously to a tragedy.

Cheshire, Parkside (1889).—It has been determined to add to the accommodation by building for 100 female patients, at an estimated cost of £6,000. The dead-house and post-mortem room are to be improved at a cost not exceeding £320.

The following is an extract from Dr. Sheldon's report:—

Withal, it needs to be constantly reiterated that the noblest functions of an asylum for the insane are active and not passive; it is well to provide retreats for those who have no place in the sane world, and further than this, unfortunately, the popular idea does not extend; but far better is that ministry which leads to restoration and seeks for means of prevention; and until it is candidly acknowledged that an asylum should have higher functions than that of restraint, attempts to solve the problem of the ever-increasing thousands of the chronic insane are futile. It is a grave fact that during the ten years 1879-88 the number of those under detention in English and Welsh asylums increased by 11,000, for whose accommodation immense sums have been and are being spent. So serious is the prospect that to many minds the conviction is being brought that, admirable as they may be from the architectural, æsthetic, and sanitary points of view, our asylums do not fulfil their complete purpose, that they have capacities for usefulness which need to be developed; there is a growing feeling that, in addition to being what it now in the main is—a receptacle for the insane—each public asylum should constitute a centre of active research on the part of an efficient staff, possessed of time and the means afforded by modern science, to ensure continued and accurate observations of the symptoms of mental disease during life and the appearances after death, and in a position to apply and watch devised methods of treatment; moreover, that in the interests of the public health, facilities should be afforded for the training in our asylums of the rising generation of medical men who will afterwards meet with insanity in its earliest and most curable stage.

Cheshire, Parkside (1890).—Dr. Sheldon reports that the new mortuary and post-mortem room have been in use for several months, and are now, what they were not formerly, a creditable

portion of the asylum buildings. In course of time he hopes to secure a modestly equipped pathological laboratory and a colleague competent to conduct it.

Cork.—The feature in this report is the entry by the new inspectors of asylums. We are glad to find that they relieve Dr. Oscar Woods of the blame and responsibility for the condition of affairs; in spite of this, however, the report is sufficient to upset any superintendent. Everything appears to be wrong; this comes as a revelation to the Board, which has been led by the former inspectors to regard all the departments as being in excellent order.

Several conclusions may be drawn from this report. One is that Dr. Woods has a very onerous and troublesome task before him before he succeeds in reorganizing this asylum and removing the many admitted structural and administrative defects. Another is that a new system of asylum inspection has been inaugurated by the present inspectors, not a moment before it was needed. We can only express a hope that the necessity for improvement in Irish asylums may not be so painfully obvious as at Cork, and that the inspectors may be able to point out necessary changes without causing so much official and personal suffering as has occurred in this case.

We are exceedingly pleased to find that the inspectors point out the primary cause of what they condemn.

We cannot express too strongly the necessity for greater liberality required in these very necessary reforms, as we think that of late undue economy has been exercised in the management of the institution.

Cumberland and Westmoreland (1889).—Concerning the success attending asylum treatment, Dr. Campbell writes:—

There is at present rather a tendency to run down the treatment of the sick in asylums. I am quite sure that the attention, the feeding, and the nursing which the sick insane receive in many of the English asylums I know, will bear comparison with what the patients receive in the county hospitals. Many who write articles with seeming authority about the seeming deficiency in efforts to promote recoveries in asylums seem barely to know what in reality is being done in this direction, and some of them almost assume that all the cases sent to an asylum are curable. During the past 17 years the recovery rate at Garlands has averaged 45·3 per cent. calculated on the admissions. The admissions for this period include 20 patients who have been boarded out from this and then taken back, and 30 boarders from Northumberland, all chronic cases. If a careful analysis were made showing the number of admissions of patients in the state of gradual death from old age, of imbeciles who were retained at home or at workhouses till they became unmanageable, of epileptics who had long taken fits but latterly had become violent or demented, and of the congenitally deficient, who always were different from other members of the family, and who, as they grew up or became older, became uncontrollable and developed habits of vice which called such attention to them that they were consigned to what is now really the ultimate destination of all who are specially troublesome to their relatives and neighbours, and who cannot be otherwise dealt with. If this class I allude to were eliminated, the recovery rate here of those in whom recovery was possible when they came under treatment would be found very high indeed.

It would have been instructive to have stated the number of relapses before completing this paragraph.

Cumberland and Westmoreland (1890).—In his report Dr. Campbell touches on a variety of interesting subjects, but we limit ourselves to the following extract as dealing with one not frequently discussed from an asylum point of view.

It was expected by many that the action of the Education Act would be markedly felt as a beneficial agent in diminishing insanity. I question whether as hitherto applied it has not had the contrary effect, and I am sure one of its results is now being felt in the uselessness of domestic workers among the patients in asylums.

Is it for the benefit of the country that merely brain education should be looked after and made compulsory by the State? Should not at the very least some physical standard be conjoined, with a given amount of information, before advance from one standard to another is permitted? It should be part of the schoolmaster's duty to see that an individual, who will be of use to the State, leaves on completion of his school education, not an individual with one portion developed at the expense of the whole man.

In the early days of this asylum the patients were most excellent workers; the females were exceptionally good knitters, washers, and domestic servants; the whole of the sewing and knitting was done by hand, and not only could stockings be made in abundance for use here, but another asylum which was being opened was supplied from this. The men were experts at farm work, flail thrashing and cutting with scythes, though some of both sexes were not adepts at writing, and their letters to relatives were few, while inquiries about them were also only at considerable intervals. At present the correspondence carried on by the patients is very great, and the letters inquiring about them have increased tremendously; but even with the introduction of several sewing machines and a knitting machine, it is difficult to keep the work of making and repairing clothes up to what it used to be; while with the washing and domestic work generally similar difficulty is experienced. Flail thrashing has become a thing of the past, and we have had to buy a thrashing machine. Nowadays postal clerks, factory hands, shop girls, and dressmakers have more time even than they used to have at their disposal. Household work is looked down on. It will soon be a matter of the greatest difficulty to procure efficient domestic servants, and working men will be quite unable to secure wives who can cook and keep their houses comfortably and economically unless some premium is put on the acquirement of ordinary domestic household duties in youth.

Denbigh.—The visitors have at length decided to enlarge this asylum. The total cost is roughly estimated at £25,000, but this sum includes the cost of additional land. The Commissioners suggested the erection of another asylum for the convenience of some of the unions. The Visitors have decided to enlarge the present one, a decision to be regretted under the circumstances.

Dr. Cox reports an epidemic of pneumonia, and another of influenza, both severe and very fatal.

Derby.—It is satisfactory to find that the necessity for making suitable provision for young idiots is receiving the attention of the Visitors. It would appear from a report to the County Council that there are 17 such cases in the various workhouses in the county and in the asylum, and probably others are provided for at home. The counties of Leicester and Notts are disposed to con-

sider any plan that might be put before them as to making joint provision for the care of such cases.

It would appear that several structural alterations and additions are much required; they are urged upon the notice of the visitors by the Commissioners, but there is no indication that they are to be carried out at an early date, if at all.

Concerning the supervision of suicidal cases the Commissioners make a valuable suggestion. They say :—

There are seven of each sex said to be actively suicidal, but the attendants on each side have caution cards for a far larger number, such cards state that the patient is never to be lost sight of, and to be followed to the w.c. In some wards it is impossible that these instructions can be carried out, and the attendants therefore do not, as they told us, strictly adhere to their orders. The medical officers should withdraw these caution cards when they think the patient is no longer actively suicidal, otherwise there is great danger that they may be considered a mere form.

As there is only one service on Sundays, the assistant medical officer, assisted by his friends, gives "pleasant Sunday afternoons" once a month. These are really musical entertainments, and seem to be very popular.

With the sanction of the Committee the position of the attendants of both sexes has been improved with regard to uniform and leave. Each nurse will now have annually two dresses of thick blue serge of good quality (instead of thin black Russell cord) along with hospital pattern caps, and each male attendant annually a pair of corduroy trousers and a jacket for morning wear and rough work.

Each attendant has now leave for a whole day, from 6 a.m. to 9.30 p.m., every alternate week, instead of a half-day as formerly, with the usual half-day from 2 p.m. every other week, besides leave out after duty hours every other evening, from 8 to 9.30 p.m.

Dorset.—Concerning special hospital wards in asylums Dr. Macdonald writes :—

Just as there are infirmary wards for the treatment of the physically sick and the infirm, so should there be specially equipped hospital wards for the treatment of all cases of acute mental disease. Such wards should be small, possessing every requisite necessary to ensure the constant and individual treatment of the patients. From time to time the somewhat monotonous life of asylum officers is excited by startling statements and proposals respecting the hospital treatment of insanity. We are told how much more would be accomplished were special hospitals erected, and the patients treated, not by experienced asylum officers, but by a staff of mixed specialists. There is a firmly rooted suspicion that this Utopian view of the treatment of mental disease is an integral part of the faddist's creed. While recognizing the advantages of better and improved methods and means of treating acute cases of insanity, it is not thought that such hospitals would serve the purpose in any more efficient manner than specially constructed wards in connection with existing asylums. When the additions to this asylum are completed, and the proposed alterations in the present building carried out, such wards as here proposed will be found, and we trust will meet every requirement, and be turned to good account. The construction and maintenance of special hospitals would of necessity entail an enormous expenditure, and whatever development the future may witness, the present tendency is to mould existing asylums to serve all purposes.

Earlewood.—The following paragraph is from Dr. Jones's report :—

The cause or causes of imbecility remain as before, one of the unexplained mysteries of Nature. To us as medical men, if not to the public also, it is a matter of the greatest concern, and it affords a vast field for research and theory. It has frequently been stated that the eldest child is more often imbecile than others in a family, and considering the influence of maternal impressions and the exalted emotional life of a young mother under new circumstances, such might almost have been expected. It would also be expected that boys should be affected in a larger relative proportion than girls, but neither is the case. In sixty-four cases admitted, twelve were eldest children with an equal percentage in both sexes, ten were second children, twelve were third, and ten fourths in a family, and then in a gradually diminishing proportion until a rise takes place after the eighth in large families. Careful inquiries are always made as to the nature of the birth, labour, etc.; but none of these inquiries elicit facts of causation, whereas the mental condition of the mother during pregnancy—*anxiety, fright, affliction, etc.*—are made to account for twenty out of sixty-four cases, or about one-third of all the admissions. Consumption in the family is not so frequent as in the statistics of the Royal Albert Asylum, Lancaster, the geographical distribution of the disease being more marked in the northern counties. Marriages of consanguinity appear to have little to do with imbecility unless there be hereditary taint in the stock. Convulsions in infancy, as a factor, must not be overlooked.

It cannot be too plainly stated that imbecility appears not to be due to any one single or definite cause, but to a multiplicity of causes acting together. Where hereditary taint exists, the unfavourable conditions may be brought about by anything which may interfere with the due growth and development of the offspring, having its existence either before or after birth.

Edinburgh Royal Asylum.—Among the many indications of sustained effort and marked progress which as usual characterize the annual history of this asylum, we can direct attention to only some of them.

There is now a resident pathologist, who devotes the whole of his time to the work of the asylum. During the year seven young graduates acted as clinical clerks, and resided in the asylum during their term of office.

A considerable portion of Dr. Clouston's report is devoted to a consideration of the epidemic of influenza which occurred at Morningside. The disease appears to have been of a very virulent type, and the mortality, especially among the general paralytics, high. It is also pointed out that the annual production of pauper lunacy does not keep pace with the increase of population; that, in fact, the population of Edinburgh is becoming saner. Another satisfactory announcement is that the accumulation of chronic lunatics is abating.

If we take the past five years, 1886-90, we find that the total numbers of pauper lunatics chargeable to the urban portion of Midlothian have increased from 775 to 862, or only 87 in all, an accumulation during the five years of 11·2 per cent. against an estimated increase of 10 per cent. in the number of the general population. During the previous ten years, 1876-85, the increase by accumulation had been 32·5 per cent., or a rate of a half more than during the last five years, 1886-91. Both of those facts don't support any pessimistic theory of the modern increase of insanity. The fact that St. Cuthbert's, our

fastest-growing parish, paid considerably less for the support of its lunacy last year than five years ago tends in the same direction.

Dr. Clouston therefore altogether opposes the view that there is any serious increase in occurring insanity.

A matter of great general interest, the prevalence, the increasing prevalence, of depression as a form of mental disease, is noticed as follows :—

In the two chief divisions which we made of the mental condition of patients—first, those who were unduly and morbidly depressed (melancholia) on the one hand; and second, those who were on the other unduly and morbidly elevated and excited (mania), we commonly find the cases of mania greatly to predominate. During the five previous years we have admitted 847 cases of mania, and 617 of melancholia, or 37 per cent. more cases of mania. In no year in the history of the institution until this have the cases of depression been as numerous as those of exaltation; while this year we had 140 cases of melancholia, and only 134 cases of mania. Not that I believe depression to be less common as a mental affliction of humanity than morbid elevation and maniacal excitement, if we take all those afflicted into account, whether in asylums or in the outside world. The contrary is, in my experience, the case. There is in my experience more morbid depression out of asylums that is never sent to institutions for treatment, and does not need to be so sent. It is a far more manageable condition at home than mania. Morbid depression is the sort of mental disturbance nearest sanity, the reasoning power being less affected, the power of self-control less disturbed, and the conduct more normal. In fact, morbid depression is not regarded as insanity at all by the public till it becomes suicidal or violent. Therefore the subjects of it, be they rich or poor, are allowed in large numbers to remain at home, and are treated there until the symptoms get very bad, or the patient becomes markedly suicidal. The patients who suffer from maniacal states, on the other hand, are commonly difficult to manage among the neighbours or the public, or come under the notice of the police. Their morbidness of mind is commonly incompatible with home life, and therefore, whether poor or rich, they must be sent to institutions like ours for care and treatment. When in any year, for the first time in the history of the institution, the numbers of depressed patients predominate over those of the maniacal, one naturally thinks there must have been some distinct causes operating among those prone to mental upset in the direction of lowered nervous action and vitality, and therefore tending towards mental depression. For it may be said generally that the previous existence of such weak vitality, as is shown in the thinness of body, lassitude, want of mental energy, indigestion, a low nervous "tone" and general "lowering" of the system, tends towards a morbidly depressed condition if the mental part of the brain becomes affected. I have come to the conclusion, from my observations generally, without perhaps very definite or statistical data, that the year 1890 was, with us in Edinburgh at least, one depressing in its conditions to the nervous tone, and lowering generally to human vitality. Whether it was the influenza in the early part of the year that perceptibly lowered human vitality as a whole, or whether the prevalence of the influenza merely showed that European humanity was in a lowered state of vitality, so being a fit nidus for the influenza germs to propagate in, or whether it was the sunless, summerless, general character of the year here I cannot tell. We know that our mortality rate in Edinburgh in 1890 was 9 per cent. over the average rate of the five previous years. I distinctly connect the influenza in some way with the unprecedented number of melancholia patients sent here this year. Moreover, my own experience, and that of many of my medical brethren, to whom I have spoken, goes to show that a very considerable number of the people who had the influenza felt great mental depression both during their attacks and after the attack had passed off, often

for months. This latter experience was so exceedingly common that there must have been something in it. Of the thousands who were simply depressed in mind, if a few with a tendency to insanity passed into a further stage and became insane it would explain our numbers. All competent observers say that the worst of the symptoms in the bad cases of influenza were nervous. That was Dr. Brakenridge's conclusion in his paper at the Medico-Chirurgical Society here, and almost all the speakers at that meeting agreed with him. But the subsequent lowered nervous tone, left as an evil residuum long after the disease had been recovered from, has not had the attention paid to it that it deserves. I believe the epidemic of influenza of 1889-90 left the European world's nerves and spirits in a far worse state than it found them, and that they scarcely yet have recovered their normal tone. I shall have something to say as to the direct effects of influenza as a cause of death among our community when I come to speak of the serious epidemic of the disease that affected the asylum population, sane and insane, during the early months of the year. The influenza poison seemed to burn up the nervous energy, and leave the brain unable in some cases to recuperate.

The influenza was assigned in our official papers as a cause for the attack of melancholia in only a few cases, but a great many of the other patients admitted had suffered from the disease, and I was clearly able in many cases to trace the origin of the malady to it.

Life and Kinross.—This asylum is over-crowded, and plans are being prepared for the erection of a hospital block. Dr. Turnbull's report is mainly devoted to showing why this special form of accommodation should be provided. His remarks as to the details of accommodation are as follows:—

1. A day-room dormitory, with a number of small or single rooms attached (sick-room proper), for the treatment of cases of bodily illness, and of patients who are in bed during the whole or part of the day.

2. A reception and special observation ward, to which all cases would go on first admission, and in which cases requiring "special" observation, on account of suicidal or dangerous tendencies, would be retained. Connected with it there should be a series of single rooms specially arranged for treating the acute and violent forms of mental disorder, including padded-room, strong-room, etc.

3. A general observation ward, to which would be sent patients who, after a time, are found to need only "general" (as opposed to "special") observation, on account of their mental state, and whose bodily health does not require them to be in the sick-room. This ward should also have a number of single rooms for patients who, for any reason, cannot be placed in the dormitories at night.

4. An observation dormitory, in which suicidal, dangerous, or other patients can be kept under constant supervision at night.

5. A small ward which can be completely disconnected from the rest of the building if required at any time for the treatment of infectious disease, and which, at other times, could be used as an adjunct to either the sick-room or the reception ward.

6. Means for efficiently heating and ventilating the different rooms.

The above are required on both the male and the female side; and in addition there should be—

7. Dining-room, kitchen arrangements, and administrative rooms, suited for the class of patients in the hospital section; and

8. Accommodation for the requisite staff of attendants and servants.

It is important, also, that there should be direct and convenient communication between the hospital and the chronic wards, on both the male and female side, in order to facilitate administration and promote the efficient working of the asylum as a whole; and this point should be kept in view in deciding on the position and detailed plan of the new building.

Glasgow Royal Asylum.—Electric lighting has been introduced and is reported to be superior to gas in every respect except as to regulation; it is impossible to give a subdued or a brilliant light at pleasure.

The following paragraph from Dr. Yellowlees's report is worthy of attention. To what is therein stated, it may be added that in at least one asylum cases of general paralysis were returned as "recovered" when discharged merely during a remission of the more marked mental symptoms!

While the recovery rate thus varies from year to year, it is always powerfully influenced by the standard of recovery adopted by the Recorder. The statute gives no definition of recovery, and even tends to indicate a very low standard by making the safety of a discharge the chief test of its wisdom. A return to the condition in which the patient was before admission is, by some, called recovery. Even a congenital imbecile has, on this principle, actually been discharged recovered, and tabulated accordingly. The remissions of recurrent cases, though lasting but a few weeks, are also claimed as recoveries by some Recorders. With such views of recovery and a sanguine temperament, any recovery rate may be attained. Others hold that a person who has been certified as of unsound mind is not recovered until certifiable as "of sound mind," and it is upon this view of recovery that our tables are compiled. The incomplete recoveries are classified as relieved, not as recovered, and of this class no fewer than 38 were discharged during the year to the care of their friends.

The above statement is a serious reflection upon some superintendents, but we fear there is too much truth in it to be discarded as a libel.

Derby (Borough).—A greenhouse has been built and many other things done to add to the furnished appearance of the wards and the general comfort of the patients. An assistant medical officer has been appointed. Influenza was not directly fatal, but Dr. McPhail ascribes the high mortality among the epileptics to a low form of pneumonia connected with it.

Dr. McPhail has commenced the systematic instruction of his nurses and attendants.

Glamorgan (1889).—Among the physical causes of insanity in the

cases admitted, the chief were intemperance, injuries to head, previous attacks, and inherited tendencies. Dr. Pringle says:—

Next to drink, the last-named forms by far the most common single cause of insanity, and to increased education * and intelligence, in both cases, must we look for amelioration, and not to any process of repression. No man or woman capable of any intelligent thought and possessed of ordinary self-control would deliberately marry a weak-minded person or an epileptic; and yet many of the class that feeds our asylums seem to be quite ignorant of the terrible consequences to their children of committing what ought almost to be regarded as a crime. Moreover, the inter-marriage of those nearly related, in isolated villages and country districts, is often carried to such an extent that eccentricity, if not actual insanity, is the predominant characteristic of the inhabitants, and is often associated with exceeding narrowness of mental vision and inability to see questions from any standpoint but their own. Isolation is as injurious to a race as it is to an individual, and from this, by reason of its mineral wealth, Glamorgan has, to a great extent, been preserved; and, moreover, as I have formerly pointed out, it has a smaller percentage of lunatics to its sane population than almost any other county, and, therefore, financially a lighter burden to bear.

Glasgow, Govan, and Lanark.—In Dr. Campbell Clark's brief report the following paragraph occurs:—

The consideration of such cases opens up the wide question of asylum dietary. This is a matter of very much greater importance in the successful treatment of acute cases of insanity than is commonly supposed. To feed acute and critical cases with the proper kinds and quantities of nourishment and with due regard to the state of their digestive functions, needs a nicer discrimination than we are, perhaps, aware of; and I am satisfied now, after a careful experimental and clinical investigation of asylum dietetics for many years, that the digestive and intestinal troubles of the insane are by no means mythical.

Gloucester.—We consider that the subject mentioned by Dr. Craddock in the following paragraph deserves the judicious attention and cautious action of the superintendents of English asylums. Boarding chronic cases with friends is already sufficiently attended to in Scotland.

In view of the constantly increasing number of patients from the county, for whom room must be found, it has been my aim, for some time past, to encourage, as much as possible, the friends of all patients who could be kept at home without danger to themselves or others, to make the experiment of receiving such patients on trial: in many cases the experiment has been eminently successful, and several patients, who had been resident here for years, and who had come to be looked upon as permanencies, have returned to the care of their friends, and have been found manageable in a private family. Even where it has been found necessary to send the patient back, it cannot be said that no good resulted, for the friends, and often the patient also, are convinced that detention and treatment in the asylum are necessary, a fact concerning which much cynical incredulity is often displayed when stated by the medical officer. Thanks, moreover, to the excellent charity (Adelaide) attached to the asylum, your Committee is always able to help deserving cases, and as this help comes just at the time when it is most wanted, i.e., immediately on leaving the asylum, many a patient is thereby relieved from any fear of privation during the time that must often elapse before he can settle down into his old groove in the outside world, or resume his former occupation. I believe this to be much

* See Dr. Campbell's remarks on the deleterious effects of modern education.

better than the plan of sending such patients to the workhouse, which has been frequently tried and pretty generally found wanting. In this way are also avoided two objections to proceeding under section 57 of the Lunacy Act, the necessity imposed on guardians of payment for maintenance, and the necessity for keeping the patients' names for an indefinite time on the asylum.

Govan.—The percentage of recoveries on admissions was 53·4, a higher rate than usual, and 16 per cent. above the average of the six preceding years. How many of these will relapse?

Hants (1889).—Typhoid again appeared among the patients and staff. Only 12 cases occurred, but there were four deaths. As there appeared to be no doubt that the water supply was not above suspicion, a new one has been obtained. The new supply is abundant—80,832 gallons in 12 hours' pumping.

Hereford (1889).—We regret to find that the Visitors instructed Dr. Chapman to warn all future applicants for appointments in the asylum that pensions cannot be claimed as a matter of right.

In the early part of the year an epidemic of dysenteric diarrhoea occurred. The cases were numerous, but most of them trivial. Only one fatal case occurred, but in three others it acted as an auxiliary cause of death. The cause of the epidemic was obscure. That it was due to milk, and that the milk was infected from ensilage, was the theory least open to criticism in Dr. Chapman's opinion, and there could be no doubt that some cases arose by way of more or less direct contagion.

The accommodation in the infirmary is reported to be unequal to the requirements.

Hereford (1890).—Probably as the result of abolishing the claim to pension, the Visitors are obliged to report as follows:—

The difficulty of securing and maintaining a supply of tried and experienced attendants in the asylum has long been felt. The subject has recently become more urgent, and has been under the consideration of the committee in every detail. A reference to the report of the Commissioners in Lunacy will show that the matter (then under the consideration of the committee) did not escape their notice at their recent visit. In addition to changes in wages, uniform, leave of absence, and other details, there is prominently amongst the remedies suggested the provision of sitting-rooms for attendants, and dormitories for the night attendants, and of cottages for married attendants and servants. The committee are preparing plans for carrying out these suggestions, and will submit these with estimates to the County and City Councils at their next quarterly meetings.

Concerning the mortality, Dr. Chapman writes:—

I refer in almost every annual report to the large number of feeble, aged, and paralyzed patients we have; I should be glad to pass it over without remarks, were it not as prominent a feature of the inmates of our wards as ever. It is supposed that each asylum has the most difficult patients to treat of any, if one accept the reports of its officers. In this matter I am open to this suspicion, in saying that we exceed any other asylum in the large proportion of feeble patients. We unquestionably do so, however, in that aspect of it which can be tested by figures, viz., the proportion of our population over 70 years of age. Why, this being so, our mortality should be so much below the average of asylums, presenting, if not the lowest, usually one of the three or four lowest

figures, is not very evident. No doubt if the mortality were nearer the average of 9.9 per cent., that is, were there each year 8 to 12 more deaths than there are, this accumulation of feeble cases would soon be remarkably diminished, and indeed the total number in the asylum would fall to a much smaller figure than at present. As it is, I must keep before you one aspect of the matter that I have referred to not unfrequently before, and which it seems my duty to mention, though I do so without expecting that you will at once provide a remedy, but I may say that it is a more pressing matter with each passing year; these patients ought to have more space than we at present afford them.

This is excellent. It means—"I tell you the accommodation is very defective, but I know you will not remedy it. I have often told you so before, but it is of no use."

Holloway Sanatorium.—This report contains abundant evidence of the energy, enterprise, and success which characterize the management of this great hospital. Many structural improvements and additions have been effected during the year, and, most important of all, a large villa has been purchased at Brighton as a place of change for the patients and as a convalescent home.

Dr. Rees Philipps reports that —

Twenty-four cases of acute mania were admitted, and afforded the gratifying recovery rate of 100 per cent., calculated upon the number of such cases admitted during the year. Much of the success attained in the treatment of this class of cases must be attributed to the use of the continuous warm bath, which in carefully selected cases proved to be a therapeutic agent of great value.

Dr. Philipps will doubtless admit that for statistics of this kind to be of any use, the number of cases must be much larger. When he has treated 50 cases in succession he will not find he has cured cent. for cent. As it is, however, he has shown that good results can be obtained even without the proposed Hospital for the Insane in the Metropolis.

The following statements deserve attention :—

There is no doubt that it is almost impossible to have too much sub-division and classification of patients. No convalescent patient, no newly admitted one with any power of observation left, should ever be frightened by the sight or sound of a noisy, violent, or obscene lunatic. In the ideal asylum the divisions should be made many and diverse in their style and fittings; villas, cottage homes, a seaside branch, a town house if the asylum is in the country, farmhouse accommodation, all should be provided, and all would tend to promote the comfort and cure of the patients. Other hospitals for the insane are built, and wisely so, near large towns, so that patients and staff can join in town amusements, and have the advantages which proximity to a large town gives. It behoves the management to do what it can to obviate the drawback we suffer from our isolated position. In a small way the house at cheerful Brighton meets the want, but a house in London would be even more desirable. Patients could then do shopping, go to amusements, &c., more comfortably than at present. The house would be available to supply information to the friends of patients, who now often have to meet members of the medical staff at a club or a hotel.

At the present time there are twelve ladies and four gentlemen engaged in training in the nursing service of the hospital. They share in the various amusements and occupations of the patients, exercise a general supervision in the absence of the medical staff, and are held responsible for the safety of those who may be entrusted to their care. This combination of associate and nurse

is found to work well, and in course of time may be expected to largely replace the ordinary attendant, who is scarcely fitted by education and training to act as companion to the class from which the majority of our patients is drawn. The training school is thus established on a sound basis, as an integral part of the work of the hospital. The institution itself will benefit by the steady improvement which may be expected in its nursing service. The general public will gain by the constant supply of educated and skilled attendants available at any time for the treatment of private cases. Hence, in spite of the limitations imposed by the want of space which is now beginning to be somewhat severely felt, the hospital, as a sphere of usefulness, admits of further and considerable extension.

Isle of Man.—In his report, Dr. Richardson makes the following interesting statement:—

That rapidly fatal disease, general paralysis of the insane, is, fortunately, very rare indeed among the natives of this island. During the past six years I have seen no instance of it in a patient of Manx parentage. Of the two cases which died of this disease, the one was a private patient from Liverpool, and the other a resident, not Manx. The cases at present under treatment are, further, not natives.

Kent, Barming Heath—Dr. Davies refers to the great increase of leave granted to attendants in the previous year. He regrets that he cannot say that the extension has worked well, and he cannot recommend other asylums to follow their example. Each attendant has the whole of one day a week in addition to fourteen days' annual leave.

The Commissioners recommend that—

When a patient is known to have sustained serious injuries during life an independent medical man, with special pathological experience, such as the surgeon of a general hospital, should be called in to make the post-mortem examination.

For the protection of asylum officers we think the suggestion a wise one.

Kent, Oartham Downs.—During the epidemic of influenza the sufferers were principally officers and servants, but not more than four patients had the disorder.

Lancashire, Lancaster.—Many structural alterations have been carried out. The building is to be further protected from the spread of fire.

An additional medical officer has been appointed as pathologist. A new residence is to be built for the medical superintendent. The salaries of the attendants and nurses have been reviewed and substantially increased.

Lancashire, Prestwich.—Dr. Baker, one of the assistant medical officers, has retired on account of bad health, and has been granted a pension of £150 per annum.

The Commissioners report that the patients suffering from general paralysis at the date of their inspection were 169 males and 36 females, or a proportion of 16·1 per cent. of males and 2·8 per cent. of females. At the end of 1884 the general paralytics

were in the proportion on the male side of 11·8 per cent., and on the female side of 2·6 per cent. These figures appear to support the opinion held by Mr. Ley, that this formidable disease is on the increase in this district.

Mr. Ley's report is chiefly devoted to the consideration of how to provide for the accumulation of lunatics in Lancashire.

Leicestershire and Rutland.—On the recommendation of Dr. Higgins the wages of all the attendants, nurses, and servants were increased. This had not been done for sixteen years previously.

No decision has yet been arrived at as to how to provide for the ever-increasing number of patients.

Lamerick.—It may be worth while to point out that the reports by the Inspectors are not given.

During his first year of office Dr. O'Neill seems to have continued the good work begun by his predecessor, Dr. Courtenay, and is able to report a considerable number of important structural improvements.

Lincoln.—The Committee of Visitors is at last seriously considering the means of providing adequate asylum accommodation. Opinions are divided as how this should best be done, whether to enlarge the present asylum or build another in another part of the county.

The sanitary improvements have been continued, and with decided advantage to the general health; but that serious defects still exist is evident from Mr. Marsh's report.

London, City of.—The medical staff has been increased by the appointment of a clinical clerk. Many improvements have been effected during the year, not the least of them being the disposal of sewage by irrigation. Lectures to attendants and nurses are continued.

Dr. White points out that for 1889 he had the highest recovery rate (66·6 per cent. on the admissions) for the county and borough asylums, and he hopes to occupy the same position for 1890 with a rate of 64·58 per cent. The death rate was remarkably low, only 4·71 in the daily average number resident.

Mavisbank.—Applications for admission were so numerous that had the accommodation been double what it is it would speedily have been occupied. The movement of the population is rapid, and this shows, as Dr. Keay observes, that the institution is not merely a home for chronic mental invalids, but a hospital doing active and useful work in the treatment of the insane. Great credit is due to Dr. Keay.

Monmouth, Brecon, and Radnor.—This asylum is practically full, and it is suggested by Dr. Glendinning that additional accommodation should be provided by the building of an infirmary block. Cottages are to be built for married attendants, and it appears that the wages have been increased, but by what amount is not stated.

Mullingar.—This asylum is still much overcrowded. It is, therefore, not surprising that Mr. Finegan reports :—

It is, however, a matter of grave concern that tuberculous disease has proved to be the cause of death in no less than 48 per cent. of the cases. It is asserted by a few authorities that tuberculosis is quite preventable, if not an entirely curable disease. If such be true it is scarcely an enviable position for the physicians responsible for the treatment of these cases to try and satisfy their consciences in the belief that no effort has been spared to save them. We know, of course, that the insane, owing to a weakened nervous organization, are feeble subjects for resisting an attack of this awful malady when once it has gained an inlet to their constitutions, and if the most hygienic conditions are not at the disposal of the asylum physicians as a means of treatment the employment of medicinal remedies is at best disappointing.

It is satisfactory to learn that the enlargement of the asylum has begun. It has been decided to introduce the electric light. Cottages for married attendants are to be erected. Beef and mutton are no longer procured by contract. The animals are bought alive, and slaughtered on the premises.

The report left by the Inspector is very satisfactory, and points out many arrangements as indications of the energy and success of the management.

(*To be continued.*)

2. *German Retrospect.*

By WM. W. IRELAND, M.D.

On the Neuroglia of the Nerve Centres in Man.

Carl Weigert ("Anat. Anz.," 1890, No. 19, and "Neurologisches Centralblatt, No. 1, 1891) claims to have discovered a method by which a nerve fibre can be surely distinguished from a fibre of the neuroglia, even after the nerve fibres have become disconnected with the nerve cell.

His process, the details of which he does not explain, consists in dyeing the neuroglia deep blue, the other anatomical elements being unaffected.

Dr. Weigert states that his preparations confirm Ranvier's view that the fibres only lie against the body of the cell, and the protoplasm of the cell appears, under the microscope, to be of different composition. The fibres are smooth without varicosities. After death the tissue becomes altered, and granules and molecules appear. The composition of the neuroglia is different from the neurokeratine of the peripheral nerves. This is brought out by Weigert's process of dyeing. It is only at the exit of the roots of the nerves that a tuft of fibres of the neuroglia goes a little way along the nerve trunk. It is on the surfaces of the nervous centres that the network of the neuroglia is thickest. In the spinal cord all the single fibres of the white substance are

separated from one another by strands of the neuroglia. In the zone of Lissauer the fibres of the neuroglia are abundant; they are even more so round the central canal. In the *substantia gelatinosa Rolandi* they are rare. The olivary bodies in the medulla oblongata are rich in fibres of neuroglia. In the cerebellum there are many in the white substance, but few in the grey substance. The cells of Purkinje are surrounded by a basket of very delicate fibres. In the white substance of the cerebrum there is a thick network of neuroglia; in the layers of the grey matter the neuroglia is rare. Weigert's preparations show bright inter-spaces between the fibres.

New Colouring Method for the Brain Tissues. "Neurologisches Centralblatt," No. 3, 1891.

Dr. T. H. Ziehen found that Golgi's method of colouring laboured under some disadvantages. The preparations of the nerve tissues did not keep well, and the black colour given to the nerve cells obscured all details of their inner structure, while the nerve fibres generally remained uncoloured. Greppin tried to remedy the dark colouring by treating his preparations with hydro-bromic acid. To obviate the last disadvantage Golgi himself, Ramon Y. Cajal, and Kölliker preferred to study the nervous system in embryos and new-born animals, in which all or most of the nervous fibres have no axis-cylinders. On the other hand, Flechsig thought to combine Weigert's method of dyeing with logwood with Golgi's method of dyeing with silver. Though Dr. Ziehen admits that these were improvements on the original plan, he thinks he has found out a better process, which he thus describes: Small, square pieces of cerebral tissue, taken from an animal recently killed, are put to harden in a mixture of one per cent. solution of chloride of gold and one per cent. of solution of corrosive sublimate in equal parts. In this solution the preparation is kept at least three weeks, or, what is better, several months. There is no necessity for changing the solution often. The pieces assume a red-brown metallic look, and can be stuck upon cork and cut in thin slices. The slices, put in alcohol, have a dark blue colour by transmitted light, and a metallic brown colour by reflected light. For differentiation they are now put into a weak Lugol's solution, 1 to 4. Here they are allowed to lie a longer or shorter time, according to the thickness of the sections. Tincture of iodine diluted with alcohol can be substituted for Lugol's solution. Then the slices are washed in absolute alcohol and mounted in oil of cloves and Canada balsam. Metallic instruments should be avoided as much as possible, but contact with the mikrometer knife does not seem to have bad effects. Dr. Ziehen finds, as a result of this process, that both the fibres with axis-cylinders and those without, as well as nerve and neuroglia cells with their processes, appeared to be coloured bluish green. A

greater number of coloured nerve cells now appear than through Golgi's method, and the branches of cell processes are more numerous. The ramifications of the axis-cylinder processes are more easily seen, and the nuclei granules are better distinguished. The contour of the cells and nuclei is more visible, and though the interior is coloured dark blue it remains almost transparent. There is some *minutiæ* in the colouring, and specially in the decolorizing of the sections which affect their appearance. Some elements are better brought out by the longer or shorter time in which the iodine solution is allowed to act upon them. Dr. Ziehen tried hardening his preparations with chromic acid, and putting them several weeks in a mixture of chloride of gold and sublimate, and then treating the sections with iodine. The result was that the body of the ganglion cells appeared almost transparent, but sharply defined, while the protoplasm processes presented a peculiar black colour. Their appearance may be made to vary through keeping them a longer or shorter time in the solution, so that the processes and axis-cylinders and different parts of the cells may be studied in separate relations.

The author promises to publish the description of the observations which he was enabled to make through this new method.

On the Circulation in the Brain during Epileptic Attacks.

Dr. Rosenbach gives in the "Neurologisches Centralblatt" (No. 16, 1891) a *resumé* of the observations of A. Todorski, published in the "Russian Wratsch" (No. 25, 1891). The experiments were conducted in the laboratory of Professor Bechterew, of St. Petersburg. Todorski excited convulsive attacks in dogs and cats through applications of the interrupted current to the brain cortex, or through injections of essence of absinth, cinchonin, or cinchonidin into the veins. During the fits the circulation of blood in the pia mater was observed through a trephined opening covered with glass, and the blood pressure was measured at the central and distal ends of the divided carotid. He found, as a result of his observations, that both at the beginning of the epileptic convulsion and during its whole course there was marked hyperæmia of the pia mater. New arterial twigs appeared, and the brain bulged into the hole made by the trephine. It appeared from measurements of the blood pressure in the carotid that after electrical stimulation of the cortex, and especially during the tonic period of the epileptic fit, the pressure, both in the central and distal ends of the artery, is increased. From this we may conclude that there is a diminution of the resistance in the branches of the brain vessels through relaxation of the capillaries. In order to find out how far this alteration of the circulation was influenced by the convulsions Todorski made a comparative experiment, in which one animal had curare injected into the crural vein after ligature of the femoral artery of the opposite side. This was

followed by diminution of the convulsions, with the exception of the muscles of one extremity, in which the course of the epileptic attacks could be observed. In order to avoid the objection that alteration in the circulation was caused by the curare itself Todorski commenced the injections of that drug an hour before the inducement of the epileptic attack. It is known from Schtsherbak's observations that curare influences the circulation of the brain only during twenty-five or thirty minutes after its injection. This comparative experiment proved that the blood pressure in the carotid was not influenced by the curare.

Hallucinations of the Muscular Sense in the Insane. "Die Hallucinationen in Muskelsinn bei Geisteskranken," von Dr. AUGUST CRAMER, Freiburg (Baden), 1889.

Dr. Cramer has for several years made a study of this difficult subject. Admitting the existence of a muscular sense, through which the impressions of accomplished muscular movements are conveyed to the brain, one may theoretically assume that in disease such sensations may become disordered, and Dr. Cramer claims to have shown that deceptions of the muscular sense not only present themselves in insanity, but that they constitute symptoms of practical importance. He divides them under three heads: Hallucinations of the muscular sense in the locomotor apparatus, in the apparatus of speech, and in the muscles of the eye.

As regards the first of these categories, Dr. Cramer shows that a false or deficient impression of the position of the body or limbs may cause the patient to assume strange positions in order to redress or obviate them. This may also follow deranged sensations, which have no connection with the muscular sense.

Dr. Cramer observes that the acquisition and realization of speech is made through the muscular sense. Thinking is speaking without voice. When thought is lively, there is a slight nervous impulse transmitted to the muscles of the motor apparatus, which causes involuntary muttering or an irresistible desire to emit words. It appears, from a number of cases cited by Dr. Cramer and other physicians, that patients occasionally mistake their own voices for those of some imaginary being, and often refer these voices to the precordial region in connection with something which they feel there. At the same time, these fanciful voices are sometimes the result of subjective noises in the ear. In considering hallucinations of the muscular sense in the oculomotor muscles, Dr. Cramer shows how our ideas of size and direction, and our conception of motions are connected with movements of the eyes, of whose nature and quickness we are informed through the muscular sense. These sensations are blended with those of touch and the movements of the body to form a single act of perception.

In the part of the work which deals with clinical observations, the author sets himself to show that involuntary motions, constrained positions, and involuntary actions, and impulsive utterances (*Zwangsgreden*), and, perhaps, some appearance in hallucinations or illusions of sight, are all owing to hallucinations of the muscular sense. Sometimes they alternate with one another. Such symptoms occur in the acute stage of paranoia. They often pass away, so that the patient rarely falls into the chronic incurable form of paranoia. Sometimes the patient constructs a whimsical theory to explain his deranged sensations, or attributes them to divine or satanic agency. Dr. Cramer describes thirty cases, in which the prominent symptoms were fixed ideas and the feeling that some one was repeating their inmost thoughts or revealing their past deeds through voices heard from various directions. A patient, described by Dr. Kandinsky, imagined that his thoughts were noted by invisible spies, who, by means of a peculiar machine, were able to register the almost imperceptible motions of his tongue. In three of Dr. Cramer's cases, the patients could suppress the impulse to speak, but when they did so, they began to hear the voices proclaiming their thoughts.

Dr. Cramer does not always make it clear that these symptoms can be explained by perversions of the muscular sense. The impulse to speak or mutter may arise from a central, instead of from a peripheral irritation, and in cases where people hear different voices in the right and left ear, one would be disposed to think that the starting point was irritation of the auditory nerves or auditory centres. It, however, may be admitted that in the acute form of paranoia the whole nervous system is in a state of extreme excitement, and that there may be hallucinations both of the muscular sense and of other sensory nerves, as well as motor incitations to the muscles of the voice.

Dr. Klinke, in a paper on Verbal Impulses (*Zwangsgreden*), in the "*Allgemeine Zeitschrift für Psychiatrie*," *xlvi*. Band, 1 and 2 Heft, says that, after observing many cases of the kind, he considers Cramer's explanation to be the most probable one. He promises to show, in a future publication, that abnormal sensations in the tongue and throat may arouse delusive fancies leading to derangements of speech. Sometimes these take the form of babbling and childish sounds. On the other hand, patients suffering from melancholia often feel a dislike of speaking. Sometimes they complain of distress and difficulty in speaking, accompanied by a feeling of constriction in the tongue or throat.

Singular Case of Aphasia.

In the "*Zeitschrift für Psychologie und Physiologie der Sinnesorgane*" (Band ii., Heft 3), Dr. Robert Sommer gives a further study of a case of so-called aphasia, already described by Dr.

Grashey in the "Archiv für Psychiatric," Band xvi., Heft 3, of which see *resumé* in the Journal for October, 1887, p. 447.

In his paper, Dr. Grashey described a patient called Voit, who suffered from fracture of the base of the skull. Amongst other symptoms, there was aphasia, which was considered not to be owing to any destructive lesion of the third frontal lobe or the parts around, but to diminished duration of the memory of sensory impressions. After seeing objects, Voit quickly forgot them and could not recall their names, but on the words being said to him or shown to him in writing he could speak them without difficulty. At the same time his memory for names was very fugitive. Dr. Sommer informs us that Voit now works in a brewery at Würzburg. He was refused any compensation from an insurance office against accidents on the plea that he could carry on his calling as well as ever. Dr. Sommer adds that Voit conceals his incapacity, which, nevertheless, seems of a serious character.

Dr. Grashey's idea was that the memory of seen objects passed away so rapidly with this man that often only a part of the name was apprehended. Dr. Sommer devotes a great part of his paper to show that Voit arrives at the names of objects by writing, *i. e.*, he slowly brings from the depths of his memory the letters which compose the name of the object which he sees. It can be shown by other means that he quickly forgets the shape of an object. It is found that he cannot draw an object from memory; for example, if he sets to draw an animal which he has just seen, he will draw the head well enough, and then add a shapeless continuation for the body. After having words in his mind he forgets them quickly, though sometimes he manages to keep hold of the word by repeating it. In searching his memory for the name of a seen object, he seems to have a singular capacity for guessing at the first letter, without being at the time aware of those which follow. What is singular, giving him the first syllable often fails to help him to guess the rest of the word. He writes the letters slowly and then reads off the name. Thus the association of ideas does not pass from the visual object to the name, and from the name to the letters indicating the sound; but the association of the seen object rouses the series of motions by which the word is written out, and then he arrives at the spoken name by reading off what he has written. When prevented writing the word with his hands, Voit makes motions with his feet, as if tracing the letters, and, if his feet be restrained, he makes motions with his tongue, as if writing with that organ. Dr. Sommer affirms that if the man's tongue be also kept from moving he cannot realize any name of a seen object. Sommer finds that conceptions exist in this man's mind without his being able to state them in words; for example, Voit could, by nodding his head, indicate that he could recognize the common nature of two musical instruments or two weapons without being able to give any classifying name.

Dyslexia.

Professor A. Pick ("Neurologisches Centralblatt," Nr. 5, 1891) considers dyslexia to belong to the same class of diseases as intermittent limping in horses. This consists in weakness, followed by stiffness of the right leg. After a rest, from five to ten minutes, the incapacity disappears, but on the horse again trying to run the weakness returns. These symptoms are known by veterinary surgeons to be dependent upon arterial degeneration. In the same way in dyslexia, the patient has a difficulty in reading, which obliges him to stop. This disappears on taking a rest, again to return when reading is renewed. It is dependent upon arterial sclerosis, and the symptom is due to intermittent contraction of the vessels of the brain, *Claudication intermittente* of Grasset. In dyslexia the seat of the disease may be assumed to be the third frontal or the parts around. As this sclerosis increases, the loss of function sometimes becomes confirmed. The degeneration often follows syphilitic disease of the vessels, and sometimes affects the heart or the kidneys, as well as the brain.

Another Case of Dyslexia.

Dr. S. Weissenberg ("Archiv für Psychiatrie," Band xxii., Heft 2) describes a case of dyslexia, the peculiarity of which consisted in the patient being able to recognize single letters without being able to collect them into words. He was a man of fifty-seven years of age. The dyslexia was followed by paraphasia, paraphasia, amnesia, aphasia, and considerable impairment of the intellect. Three days before death there was right-sided hemiplegia. He died in a comatose condition six weeks after the beginning of the disturbance of the power of reading. It was found on examination that a sarcomatous tumour occupied almost the whole posterior part of the left hemisphere, and that a hæmorrhagic abscess had destroyed a part of the second frontal gyrus, but the third frontal had escaped. Dr. Weissenberg would infer from this case, and others of a similar character, that there is a special centre for the capacity of reading, *i.e.*, collecting characters so as to find words.

Insanity following Influenza.

Professor Kirn, of Freiburg ("Allgemeine Zeitschrift für Psychiatrie," xlviii. Band, 1 and 2 Heft) has arrived at the conclusion that influenza is a more frequent exciting cause of insanity than any other febrile affection. He has collected fifty-four instances observed by himself or other physicians. Nervous symptoms are prominent in ordinary cases of influenza. There are headache, sleeplessness, pains in the limbs, and neuralgia often implicating the trigeminus, and great prostration of strength. Dr. Kirn classifies the cases which pass into insanity under two heads. 1. Where delirium occurs during the febrile condition of influenza. This frequently accompanies pneumonia. There are delusions and hallucinations,

strange dreams, shouting of a joyous character, or howlings and lamentations. In one case, a boy of seven years, the influenza commenced with mental aberration, the child wandering away without knowing where he was going. Patients affected with delirium during the course of the influenza were rarely found to have any hereditary predisposition to insanity. The patient generally recovered from the mental derangement in a few weeks. In the second, or post febrile form, Dr. Kirn had the details of thirty-nine cases. The insanity generally appeared in from four to eight days after the cessation of the fever. In two it came on as late as three weeks after. From the clinical symptoms he divides them into three forms, characterized by the conditions of mental exhaustion, melancholia, and mania. The exhaustion is of the same character as those cases in which the constitution of the patient has been reduced by fevers or the puerperal state. There is excitement suddenly appearing, with confusion of the senses, and a tendency to depression, with delusions of a dismal character. If the delirium become higher there are delusions of the senses, rapid changes of mood, and tormenting thoughts. The bodily condition is one of weakness and anæmia. Recovery generally sets in in from three to six weeks. The second, or melancholic form, is the commonest. Dr. Kirn collected twenty-two cases. It seems a kind of exaggeration of the depression and disquiet of the ordinary convalescence from influenza. Sleeplessness is the first striking symptom, then discontent, with reproaches against the attendants, and distrust and suspicion against the physician. The patient is hypochondriac, or fears ruin, loss of money, or loss of honour, and occasionally there are attempts at suicide, frightful hallucinations, painful delusions, and refusal of food. The prognosis is good. Recovery, as a rule, takes place in six or eight weeks, though it is sometimes delayed for several months.

Dr. Kirn studied six cases of mania following influenza. They presented the symptoms of simple typical mania without hallucinations and without delusions. The delirium generally commenced about a week after the invasion of the influenza. Recovery generally supervened in from six to eight weeks.

Dr. Kirn holds that the toxic matter of the influenza has an injurious effect upon the whole nervous system, and that it acts most powerfully upon those who already have a hereditary tendency to insanity. He found that 54 per cent. of those who became insane laboured under this predisposition.

Dr. Schmitz, in a paper on *Insanity after Influenza* ("Zeitschrift," xlvii. Band, 3 and 4 Heft), gives as his conclusion that influenza is mainly an epidemic nervous disease.

Operative Treatment of Insanity.

Dr. Burckhardt, Superintendent of the Asylum at Préfargier, gives in the "Allgemeine Zeitschrift für Psychiatrie" (xlvii. Band,

5 Heft) a description of his experiments, which records the invasion of surgery into the domain of insanity. He indulges the hope that by operative treatment we may succeed in finding a new aid against incurable lunacy. None of his cases treated were of traumatic origin. The indications to the operation were purely "psychiatric." As Dr. Burckhardt fills as many as 85 pages, we are obliged to miss out many important observations. For the explanation of the antiseptic precautions and details of operative surgery, we may refer to the original paper, should any English physician have the hardihood to imitate Dr. Burckhardt's operative procedures.

The first patient which he describes was a woman fifty-four years of age, who had been sixteen years in the asylum of Préfargier. It was a case of excited dementia, with occasional explosions of maniacal fury. She was abusive and dirty, and spat at, struck and kicked anyone who came near her. The fits of passion arose suddenly, which made her all the more dangerous. She had hallucinations of sight and hearing. Dr. Burckhardt put to himself this question—Could one not remove the emotional and impulsive element from this woman's brain, and so change the patient from an excited into a quiet dement? The author here gives a learned discussion of the reasons which induced him to think that the irritation existed in a particular portion of the cortex of the brain.

As the result of his cogitations Dr. Burckhardt determined to remove a portion of the grey matter near the point of the conjunction of the motor zone with the centres generally assigned to speech and hearing. With this view the scalp was shaved, the skin divided, and an opening made by the trephine in order to remove a portion of the brain of about two centimètres in breadth from the superior parietal lobule, and gyrus supra marginalis of the right hemisphere. The operation, which is carefully described, lasted four hours. About five grammes of the grey matter of the brain were removed with a sharp spoon. The operation was performed on the 29th December, 1888. About ten days after there was paralysis of the left arm and weakness of the left leg. The latter soon passed away, but the paralysis of the arm lasted for several weeks. Although the patient was not so violent, the fits of rage still returned; the motor explosions were manifested by blows of the fist, but she now rarely kicked. She was still very abusive, and had fits of melancholy. Dr. Burckhardt felt confident that she had hallucinations of sight, so he determined upon a second operation, which was performed about ten weeks after the first one.

It was determined this time to remove a portion of the upper and middle temporo-sphenoidal convolutions. The operation lasted two and a half hours. About two and a half grammes of brain were removed. The wound healed quickly. The patient showed

an elevation of spirits which he had not noticed after the first operation. She laughed and jested, and murmured words to herself, otherwise her mental condition did not seem altered by the second operation. Her health, however, seemed affected. She had attacks of diarrhoea, and was thin and white. She was treated with tannin and tonics.

As no further change appeared it was determined to try a third operation, which was performed five months after the first one. The intention was to remove a portion of the parietal lobe on the left side. Two openings were made with the trephine, and the intervening bone, about two millimètres in breadth, was punched off with a chisel and the edges pared. The dura was then opened, the transparent pia separated, and a portion of the cortex cut with a Graefe's knife. The pieces removed weighed $5\frac{1}{2}$ grammes. After the patient had recovered from this third operation, through assiduous care and nursing, it was found at the end of January, 1890, that her condition was stationary, but, as Dr. Burckhardt observes, what had been attained was very pleasing. She had lost a great part of her excitability and violence. Her spontaneous crying and singing and her hallucinations of sight and hearing were gone. She now slept well, and suffered the presence and assistance of other persons, and although she appeared to be demented, she gave some proofs of right observation and correct inference. It was impossible, however, to carry on a conversation with her. She was word deaf. If one spoke to her, the verbigeration increased, and rose to threats. Dr. Burckhardt, in consideration of this tendency to increased talking, thought that the neighbourhood of the motor centre of speech should be the next point of attack. "The risk of making the patient aphasic," he observes, "did not seem to me worthy of consideration in view of the expected advantage, otherwise it was not designed to take away the whole side of Broca's convolution, but only a part." It was not expected from the advanced age of the patient that the lost speech function might be restored from the education of the analogous portion of the brain on the right side. On the 12th February, 1890, about two years after the first operation, the fourth one was performed. It lasted two hours and a half. The pia mater was found to be œdematous and pearl grey. It was opened, and a portion of the Broca's convolution, weighing a gramme and a half, was removed. It was ascertained the same day that the patient was not aphasic. She seems to have recovered from the operation about the end of February. The result is thus summed up by Dr. Burckhardt: "Frau Borel has been changed from a dangerous and excited dement into a quiet one. The incessant flow of words is interrupted; she has become quiet. Her intelligence has not returned, but she has lost nothing." Dr. Burckhardt records a few of her observations, which show more sense than is generally found in the stray remarks of demented people.

The second case described was a man of thirty-one, who had been eight years in the asylum, labouring under primary dementia, which had now become chronic. There were ideas of grandeur, paroxysms of rage, and hallucinations of hearing. There were deviations of the head and eyes to the left. As altogether the case had some resemblance to general paralysis, Dr. Burckhardt determined that the point of attack should be between the central and frontal convolutions of the left hemisphere. The operation was performed on the 17th of April, 1889. An opening was made with a large trephine at the edge of the first and second frontal gyrus behind the parallel sulcus. Under the pia there was found an œdematous mass, out of which a little fluid issued. The convolutions were broad and massive, of a firm consistence, and "cyanotic" colour; a portion of the cortex, weight not given, was removed with the sharp spoon. The wound rapidly healed. After the operation the patient became quieter. The motion of the eyes and head to the left did not seem to return, but on the 4th of August he had a pretty severe epileptic fit, which was renewed three times in the spring of the next year. This was regarded as real cortical epilepsy, and was treated with bromide of potassium. The fits ceased to return during the summer. Burckhardt remarks that the portion of brain removed is believed by some writers to be the centre for the movements of writing. In this case, however, no agraphia followed the operation. The patient was able to write a card to his mother at the dictation of an attendant. The general result of the operation is stated to be that the man was more composed, easier to deal with, and more disposed to converse.

The next subject was a man, thirty-five years of age, who had been four years in the asylum. His insanity had been of slow growth, passing from anxiety and suspicions into sleeplessness and abiding fear of persecution. He heard voices, and was violent and destructive.

Dr. Burckhardt cites the observation of Luys that in the cases who preserved lucidity of the intellect the paracentral lobe was found to be hypertrophied only on one side. Taking into consideration that there were auditory hallucinations with violent actions, Dr. Burckhardt thought that the point of attack should be where the auditory centres were connected with the motor area. This induced him to trephine above the left ear. The operation lasted about two and a half hours. The brain was found of a slate colour; about 2·80 grammes were removed. The patient did not become word deaf after this operation, and the hallucinations became less intense; but as Dr. Burckhardt avows his intention of performing a second operation, it is clear that he does not consider the result quite satisfactory.

The next subject was a widow, thirty-seven years old, who suffered from primary insanity (*primäre Verrücktheit*) with

hallucinations of hearing. Voices shouted out her thoughts to her; apparently heard in both ears. After being two years in the asylum this woman passed into a state of excited dementia, with permanent auditory hallucinations. In her case the same operation was performed, a portion of brain weighing three grammes being removed from the posterior part of the first and the middle of the second temporo-sphenoidal convolutions. The substance of the brain was found to be unusually soft. After the operation the patient was found to confuse words, and in some instances to have forgotten the names of familiar objects. She said that she had a feeling of distress and uncertainty in her resolutions. The improvement after this operation does not seem to have been of a decided character. Five months after the patient was removed by a sister to Geneva. A second operation in the spring was contemplated; but, at the close of the year 1890, the poor woman took advantage of her sister's absence to leave the house, and she was no more seen till her body was found in the Rhone two days after. We have a description of her brain. It was found that the portion designed had been successfully removed. There were marks of inflammation or degeneration at the depressed spot, which had healed well.

The next case described was a man of twenty-six years, labouring under primäre Verrücktheit or paranoia, passing into dementia. He was much plagued with loud voices shouting to him and giving answers. Occasionally he had also hallucinations of sight and smell. The first operation tried was excision of a portion, weighing 4.6 grammes, from the auditory area. Eight months after 2.5 grammes were removed from the third frontal (Broca's) convolution. Here the pia was found to be thickened, and of a dull reddish colour. No symptom of ataxic aphasia was noticed after the ablation, so that Burckhardt was doubtful whether the motor centre on the other side was not in full function. An improvement is claimed in this case, the auditory hallucinations and tendency to talking and muttering being less marked.

The sixth observation was a man of thirty-three years old, suffering also from primäre Verrücktheit, with very marked hallucinations of hearing, and given to making attacks on others. A portion of brain was excised from the auditory area. The brain tissue was found to be much softened. The immediate result was complete word-deafness and cessation of the hallucinations; but on the fourth day after the operation convulsive attacks began, which carried him off in two days.

Dr. Burckhardt has a firm faith in the view that the mind is made up of a number of faculties, holding their seats in distinct portions of the brain. Where excess or irregularity of function occurs he seeks to check it by ablation of a portion of the irritated centres. He defends himself from the criticisms which are sure to be directed against his bold treatment by showing the desperate

character of the prognosis of the patients upon whom the operations were performed. "The nature of physicians," he observed. "is various. One holds to the maxim: *Primum non nocere*, Another says: *Melius anceps remedium quam nullum*. As I belong to the second category, I hailed the experiments of Goltz as not only of theoretical but practical importance; I was, however, first led to this operative treatment when Macewen, Horsley, and Bergmann opened the way, and showed to myself and my friend Socin the surgical methods of procedure."

3. *French Retrospect.*

By Rev. H. HAWKINS, Chaplain of London County Asylum, Colney Hatch.

"*After Care,*" at l'*Asile Ouvroir, Sainte Marie, Paris, Grenelle.*

By steamboat, on 11th June, from the Pont de la Concorde, past the Bridges des Invalides, d'Alma, de Jena, past the Eiffel Tower to the Pont de Grenelle, thence, turning to the left, a short walk brought our party to the Rue du Theatre, No. 52, where, after two removals, the Asile of which we were in search has its local habitation. It is known as the "Asile-Ouvroir Sainte Marie." "La Supérieure?" inquired a member of the community, by whom the door was opened. We were shown into a small waiting-room, simply furnished, in which were some flowers, a crucifix over a table, and a few books.

Presently came in the mother superior, a kindly, pleasant person, with benevolent countenance, who readily entered into conversation. The Asile Sainte Marie is a home for the "after care" of female mental convalescents. As will be presently related, it fulfils various functions.

There were (as was understood) more than forty convalescents in residence, and ten sisters, under the direction of their superior. The mother was good enough to show us over the home. In the shady garden, which, in addition to its ordinary use, is a weekly tryst for convalescents and their friends, a little girl, the child of one of the inmates, was called forward by the mother. Young and old are cared for there. Among their community was an aged woman, past four score, there for her life's short remainder, so that though, as a rule, residence is limited to a few weeks, there are generous exceptions.

We had a look into a comfortably-arranged dormitory, but did not go in, as an invalid was lying down. Adjoining, was a sister's bedroom, with a view into the larger apartment. Our visit was paid at the hour of recreation, but some convalescents, under a sister's charge, were occupied at needlework on their own account. This religious community leads an active life, with them "laborare

est orare," but hours and seasons of special devotion are duly observed. We were privileged to see their chapel. At the entrance were busts of Dr. Falret, founder, in 1841, of the Asile, whose work on its behalf extended over thirty years, and of the Abbé Christophe, his coadjutor, representatives of the system on which their society is founded, "La double base de la Religion et de la Science." The chapel interior was reverently arranged; it was fitted with stalls, and there were pictures and a harmonium. Two persons were present at their devotions. Though the spirit of the institution is essentially religious, it does not appear that attendance at religious services is pressed on the convalescents or their visitors.

We took leave of the kindly and obliging superior, gratified by the results of our visit to the Asile Sainte Marie, at Grenelle.

It may interest some readers of the Journal to hear a few particulars of this work from reports of the society. Its main object is the "after care" of mental convalescents from asylums in the department of the Seine. As has been already mentioned, the founder of the "Œuvre de Patronage et Asile" was M. le Docteur Jean Pierre Falret; with him was associated M. l'Abbé Christophe. Their object was the "after care" of female mental convalescents (*sorties guéries*) from La Salpêtrière. The work was begun fifty years ago, and was co-operated in by Sisters of the Order of St. Vincent de Paul, who, having at that time the charge of charitable organizations in all districts of Paris, were in a position to administer pecuniary and other material help, as well as religious consolation and kindly counsel. The Asile is managed by Sisters of the Order of Notre Dame de Calvaire, whose duties, however, are not limited to the interior work of the home. They work both within and without, and mental convalescents, often physically infirm also (*doublement frappés et dans leur corps et dans leur esprit*), are especially amenable to and benefited by religious influences wisely applied. For such cases is wanted, to use words from the report, "le sentiment religieux et la charité chrétienne," as well as the resources of science, "la science pour enrayer le mal, la religion pour agir sur les âmes, les calmer et leur donner de la consolation."

The sojourn of convalescents at S. Marie is ordinarily for a few weeks, five or six, a temporary rest and change, but sufficiently long to answer the purpose, and, in cases where a longer abode may be desirable, there is no doubt that an extension of time is cheerfully granted. It is said that whereas formerly sisters or others waited at the gates of the Salpêtrière to receive discharged convalescents, now the Salpêtrière has recourse to the Asile. Probably not the Salpêtrière only, for though until 1867 the asylums of Bicêtre (for men) and Salpêtrière were sufficient for the needs of the insane poor of Paris, since that date four additional asylums—Sainte Anne, Ville Evrard, Vaucluse, and

Ville Juif—have been opened. The work of S. Marie is known beyond Paris. In the words of the Superior, "Notre Asile est connu même en province."

The following statistics will furnish some idea of the results of the past year, 1890:—

Number of convalescents resident 1st January	...	38
Admissions during year	... ..	71
Placed out in Paris	... ..	60
Remitted to asylum	... ..	7
Died	... ..	1
Sent back to country	... ..	3
Number of convalescents resident 31st December	...	38

Compared with the numbers of those mental convalescents within the area of this "home," needing, equally with its inmates, rest, change, and other after care, these results of 109 convalescents under care, and 60 restored to their homes, or otherwise provided for, may seem inadequate. The administration has often lamented that it could, from lack of means, do no more, especially in view of the increasing number of mental invalids needing convalescent treatment. Still, there is the consolation of "something attempted, something done." The reports give some pathetic instances of the comfort which the Asile at St. Grenelle has afforded, *e.g.*: A young girl, after a month's stay there, was placed by the sisters in a respectable situation. After a few days, however, a relapse occurred. In her trouble of mind, she betook herself to one of the Paris churches, Notre Dames des Victoires. A lady, noticing her excitement, kindly asked her if she had not any shelter (*d'Asile*). At that word she brightened up. "Yes," said she, "*j'ai un asile*," and at once set off to place herself under the care of the sisters of S. Marie, who received her with the kindest welcome.

Another young woman, a former inmate of the home, was visited, in response to a message, by one of the sisters. She was in bed in great suffering. On seeing her visitor, she said she was alone, abandoned, and prayed to be taken to an asylum, for there she would be so well cared for. Her desire was gratified, but, though tenderly and watchfully ministered to, she died at the end of a few days.

Another incident related in the community's last report is that of a woman who came to the Asile with a letter of introduction from the Director of Asylum from which she had just been discharged. Her home had been unhappy, and in answer to inquiries she now stated that her husband had gone off, sold up her home, and that, to use her expressive phrase, she was "*jetée sur le pavé*." It need hardly be said she was received with kindness.

Such cases bear eloquent witness to the value of such a home as that of S. Marie, at Grenelle. Would that we had many such in our own country. The late Earl of Shaftesbury, first President

of the After-Care Association, expressed his opinion that a "home" was a necessity. "Have a home at once" was the advice, years ago, of an experienced official of a home of rest. "We must have a home, while they, or we for them, are looking for employment, and as a rallying place for ourselves."

It may be here stated that the earnings of work in 1890, in the Asile Ouvroir, amounted to 2,635 francs (about £105 8s. 6d.), besides an amount set apart as a reserve fund for convalescents on discharge.

Réunions du Dimanche.

No part of the system of this community is more interesting than that which is known as the "Réunions du Dimanche." Sainte Marie is "at home" on Sundays; receives, as guests, not only former inmates, but also husbands and children in company with some convalescent, or on a visit to wives and mothers still in residence at the Asile. These Sunday reunions are naturally very happy occasions. They are held, it seems, throughout the year. The mother and sisters are hostesses. The latter assemble in greater numbers, and are at the service of all "à chacune et à toutes." What a pleasant change to many of the guests, from murky, unwholesome quarters of Paris to that pleasant retreat at Grenelle. Said a child to the Superior, "Oh, ma mère, quelle joie de venir passer une journée a votre maison de campagne."

The guests and the household stroll about the garden. Sorrows, difficulties, anxieties are, for awhile, forgotten, or confided to the sympathetic sisters, who speak words of consolation, encouragement, hope, counsel, according to the circumstances of each case. The children are amused, and helped to forget the troubles which sometimes already overcloud their young lives.

Presently follows dinner, plain, but substantial, to which complete justice is done, or, in the words of the report, "auquel tout le monde fait honneur." Then is held a service in the chapel, where the soothing sound of the organ and chanting, and a short address from the chaplain, tranquillize and inspire with fresh hope spirits often weary and dejected. At last comes the hour for departure. Farewells are taken. "A bientôt." The prospect of another visit is held out, but the same guests are not expected on two successive Sundays. These Sunday reunions are greatly appreciated and very beneficial. Moreover, they enable the community, which cannot (as yet) undertake the "after care" of men, still to show some kindness and hospitality to the male relatives of their convalescent inmates.

During the year 1890, 1,435 persons, men, women, and children, took part in these gatherings, at an expense of 2,276 francs, or about 1s. 3d. a head.

It would be a kindly act if owners of pleasure grounds in the neighbourhood of public asylums were sometimes to invite some

of the convalescent patients to be guests at a field or garden party. The authorities would take care that only well-conducted members of the establishment availed themselves of this privilege, and would also send attendants in charge of the visitors. Such acts of hospitality have been shown in one of the northern suburbs of London, and the kindness has been much appreciated, and entertainers have had no cause to regret their endeavour to brighten, by a few hours' recreation, the spirits of the mental invalids who visited them.

Secours à Domicile.

The society of S. Marie, at Grenelle, cares for not only the convalescents in residence in the "home," and those who, after having left the institution, revisit it with their friends at these "Réunions du Dimanche," and, perhaps, at other times also, but it seeks out, in their own homes, those who have need of being visited. It keeps touch with mental convalescents in their family life.

There are those who, on account of illness, stress of work, or other cause, are unable, in their necessities, to seek out the sisters, so these visit them in their homes or abodes. In this way they ascertain what kind of help is most needed, and how it may best be given. A little assistance towards payment of rent, gifts of linen, clothing, boots and shoes, warm coverings in winter time, etc., are often opportune and welcome. If desirable, an invitation is sometimes given to return awhile to the "home," and soothing, consolatory words and wise counsels often calm and encourage the mind of the persons to whom the visit is paid.

During the year 1890, 6,406 francs were distributed, either in the "Asile" or at their homes, to about 726 persons, an average gift of nearly 8s. 6d. each.

An objection was taken, at a meeting, to domiciliary visits to invalids of this class, on the ground that they would prefer, owing to the nature of their malady, not to be sought out. It was affirmed that all that "after care" could do was to take charge of mental convalescents up to the day when they were able to look after themselves, from which time there should be discontinuance of communications. The experience of S. Marie does not confirm this view. Their convalescents take pleasure both in revisiting their former "home" and in the visits paid by the sisters to their own habitations. How much comfort and help, in numerous cases, might be ministered to many poor and friendless convalescents from mental derangement in our own land if they were occasionally invited to social gatherings and cheered and relieved in their abodes by seasonable visits of sympathetic friends!

The total year's income of the Asile, at Grenelle, for 1890, was reckoned at 43,034 francs; the expenditure at 42,923; leaving a balance (on the right side) of about 111 francs. The community has suffered loss from the withdrawal of some State subsidies;

nevertheless, in the words of the Archbishop of Paris, "malgré le Retrait des allocations du Conseil Général de la Seine, votre Œuvre vit." A brief summary (Report 1890, p. 18) of work for 1890 is as follows:—Received in the Asile, including those in residence at the year's beginning, 109; placed out, 60; number of persons at reunions, 1,435; number of domiciliary visits, 726.

The preceding sketch may convey some idea of the "after care" work at S. Marie, Grenelle. The aim of those engaged in it is, by availing themselves of the resources of religion and science, to confirm and sustain convalescence and to ward off threatened relapse.

The question naturally occurs: Are there any features in this system which, in this country, we could advantageously copy? We, too, have an "After-Care" Association, doing good, though too limited work. In one respect, the English Society is less restricted in its field of operations, for, whereas the "Œuvre de Patronage" appears to receive convalescents only from the department de la Seine and—at all events formerly—from one asylum, la Salpêtrière, the English After-Care Association offers aid, as far as its means permit, to poor and friendless female convalescents from any asylum of the insane, metropolitan or provincial.

On the other hand, the After Care Association has no home, however small, for the temporary reception of mental convalescents. These, indeed, in necessitous cases, it usefully assists by boarding them out in selected homes, under supervision; by seeking suitable employment; by gifts of money and clothing, etc.; by introduction to friends, etc. No small benefits these. But the Society has no "home," as it should have, and, maybe, will have, of its own. Neither, among the very numerous "homes" on the list of the Charity Organization Society, is there (as far as is known) a single one specially appropriated to the wants of mental convalescents.

The writer of this paper was kindly allowed, some years ago, to insert in the "Journal of Mental Science" (Oct., 1879) a plea for convalescent homes on behalf of the insane poor. Perhaps, one day, they may be recognized as useful auxiliaries to asylums. Such homes, if possessing some garden space, would afford opportunities of occasionally holding similar reunions to those at Grenelle; and gatherings of mental convalescents might also be held, as suggested above, by invitation of friends. As regards "Secours & Domicile," judicious and kind friends could usually be found, on request, to render assistance of this kind. S. Marie, Grenelle, and our own "After Care" Association also supply another illustration of Shakespeare's words, "'Tis not enough to help the fallen up, but to support him after."

P.S.—There does not appear to be any *distinct* system of "After-Care" Treatment in Ireland, Scotland, or the United

States, apart from that afforded by the asylums themselves, or agencies for relief of the poor. Information, however, on this subject would be interesting. In Switzerland some organized "After-Care" Treatment exists, or is being promoted.

4. Therapeutic Retrospect.

By HARRINGTON SAINSBURY, M.D.

Ethylene or Ethene Bromide, C²H₄Br₂, a new remedy for Epilepsy.
"Therap. Monatsh.," June, 1891.

Dr. Julius Donath, of Budapesth, brings before our notice on p. 335 of the above journal his own experience with this compound. Reviewing the action of bromides in epilepsy, Dr. Donath holds that it can scarcely be doubted from clinical evidence that the effective agent in the bromides is bromine. Thus the bromides of potassium, sodium, and ammonium act alike in this disease, and moreover the same is found to hold of the recently introduced Rubidium-ammonium bromide (Prof. Laufenaue). The prolonged use of the bromides of the alkalies, is, however, liable to be followed by a train of toxic symptoms: Mental torpor, slow speech, unsteady gait, tremor, ataxia, in some cases mental derangement (delirium, maniacal attacks), further anæmia, wasting, skin eruptions, intestinal and bronchial catarrh. Of these, with the exception of the skin eruption, the cause, according to Dr. Donath, is the prolonged use of the alkalies, for other salts of potassium, for instance, may bring about the same results. Accordingly, Dr. Donath sought for some compound of bromide with more harmless base, and he thought to find amongst the organic compounds one such whose base, being burnt up in the body, would liberate an exceptionally active bromine, since it would act in *statu nascendi*. Amylene bromide was first thought of, but discarded, because of the difficulty of preparing a chemically pure compound, *i.e.*, free from isomeric varieties. Ethylene bromide, C²H₄Br₂, which is readily obtained in purity, was ultimately selected. The compound is a slightly brownish liquid, having the odour of chloroform, and a sweet burning taste. At 0° C. it becomes a white crystalline solid; at 131° C. it boils. In water, the heavy liquid, Sp. gr. 2.163, is insoluble, and sinks to the bottom, but it mixes in all proportions with rectified spirits, and in fixed fatty oils, *e.g.*, the oil of sweet almonds, it dissolves to form a clear solution.

For internal administration an oily emulsion is best, *e.g.* :—

R Bromide of ethylene	...	...	5 pts.
Oily emulsion	...	...	100 pts.
Oil of peppermint	...	...	2 drops.

Of this emulsion adults should take 20-30 drops twice daily, in $\frac{1}{2}$ tumbler of water or eau sucrée. Every third day the dose may be raised till it has reached about 70 drops. Dr. Donath has not exceeded this dose thrice daily. These doses correspond to 1.5-3 grains of ethylene bromide twice or thrice a day. Children of 8-10 years should begin with 10-20 drops. The dilution of the emulsion with water ($\frac{1}{2}$ tumbler) or with milk is absolutely necessary, to prevent gastric irritation.

Used after the above method, the author has never seen more than slight signs of stomach irritation rarely amounting to nausea or vomiting, and readily yielding to a diminution of the dose or on the addition of a small dose of opium to the emulsion. No toxic effects after absorption have been seen, notably no eruption.

Other formulæ for the administration of the drug are:—

R Rectified spirits of wine	}	of each 5 pts.
Ethylene bromide .		
Oil of peppermint ... ..			2 drops.

Of this 5-10-15 drops are to be taken, well shaken up in $\frac{1}{2}$ tumbler of milk, twice or thrice daily.

Or the bromide mixed with oil of almonds, may be given in gelatine capsules

R Ethylene bromide	... ..	3 drops
Oil of almonds	6 "	

2-4 capsules twice or thrice daily.

For hyperdermic use oily solutions might be employed.

Dr. Donath employed ethylene bromide in 21 cases of genuine epilepsy. Ten of these cases gave definite results, the other eleven either on account of the shortness of the time during which they had been under observation, or because of the long intervals between the attacks, could not be utilized.

Dr. Donath concludes from his experience of the drug, the records of which are given in detail in the "Therap. Monatsh." *loc. cit.*, that by its means the fits are in general diminished both in frequency and severity, that they are not infrequently replaced by the slighter forms of petit mal, *e.g.*, "absences" of mind, and sometimes by attacks of twitchings or clonic contractions, without loss of consciousness. This last was witnessed in three cases, and the author insists rightly on the extreme interest of these abortive attacks, since they further analyze the fully developed disease, and form the counterpart to the fits of mental abstraction. Thus in the attack of the grand mal we have both the convulsion and the abolition of consciousness; in the mental abstraction of the petit mal the convulsive element falls away, and now here under the influence of ethylene bromide, consciousness may remain during an attack of convulsions; artificially we thus produce a Jacksonian seizure. In certain of the cases less confusion and depression were observed after the attack; in one case the author

is inclined to attribute to the ethylene salt the development of an aura never previously experienced. As is pointed out, it is impossible at this early stage to compare the new drug with the long-tried potassium salt, but so far as the results obtained go they are encouraging, and suggest that even if ethylene bromide should be less effective than potassium bromide, it may yet prove a valuable substitute in cases where habituation to the potassium salt has occurred, or where unpleasant by-effects have set in. In conclusion, Dr. Donath begs that this remedy may undergo a sufficient trial at the hands of those who have at their command the necessary material.

Theoretically we cannot see that the introduction of this new base can have any advantage over so innocuous a base as sodium, though it may have many over potassium and even over ammonium. There is, however, something to be said as to the possible greater efficacy of the bromine in the nascent state if this really does take place, and the organic base is actually burnt up in the organism. In any case, as Dr. Donath suggests, the efficiency of the ethylene salt in epilepsy, if established, will give further proof that the bromine is the active agent.

Chloralamide.

In the "Brit. Med. Journ." for May 16th, 1891, Dr. John Gordon furnishes us with a contribution to the study of the action of this drug. His examination is physiological, dietetic, and clinical, and has in view the determining of the value of the statements—1. That chloralamide does not depress the cardiac, respiratory, or cerebral centres, or cause marked lowering of blood pressure. 2. That it does not interfere with digestion. 3. That its action is more rapid than that of sulphonal, and is not accompanied or followed by depression, giddiness, or motor inco-ordination.

His first experiments are upon frogs, and they establish the diminution of the reflex activity of the spinal cord under the influence of chloralamide. By the method employed a stimulus of constant intensity, *e.g.*, a sulphuric acid solution (1 in 800 strength) was applied, and the time then measured up to the response to this stimulus. The experiment recorded shows very clearly the lengthening out of this interval and feebleness of the response after the injection of chloralamide.

The next experiments concern blood pressure, pulse and respiration rate; they were made upon the smaller carnivora. An illustrative experiment on a cat is recorded; the animal was under ether. The injections of chloralamide were made into the peritoneal cavity, into the femoral vein, and again into the peritoneal cavity. The quantities injected were severally 3.9 grains, 3.9 grains, 6.2 grains, and 9.3 grains, in all 23.3 grains. With the first two doses the effect on the blood pressure was not very

marked, but after the third and fourth doses it fell to about $\frac{1}{4}$ of the original pressure. Pulse rate and rhythm were scarcely modified at all, so that in this case the quality of the pulse, not its frequency, measured the depression. The respirations fell from 60 to 24, and then ceased, whilst the pulse still numbered 144, and was regular.

The peripheral structures, motor nerve, and muscle fibre suffered decided lowering of their irritability.

Observations on the effects of chloralamide on digestion and metabolism were made on healthy people, who were kept on a carefully-regulated diet. In no case was appetite impaired, no abdominal pain, no vomiting, diarrhoea, or constipation were witnessed. There was no thirst; in fact, there were no signs of alimentary tract irritation.

On metabolism the influence was not marked. Small doses, *e.g.*, 5 grains of chloralamide appeared to stimulate, if anything, the excretion of urea, but doses of 25 grains caused a slight reduction of the urea coefficient. The phosphates excreted were slightly reduced in amount, but, oddly, the maximum of the reduction occurred with the smaller doses.

Clinical observations on the effect of chloralamide as a hypnotic were made on a number of cases of insomnia from various forms of disease. The results gained here are as follows: Pain as a cause of insomnia was not easily combatted by chloralamide, though, where the pain was moderate, the drug was fairly reliable. In painless insomnia excellent results were obtained; hypnotic action followed usually within half-an-hour. There was no tendency to deferred action, such as is not uncommonly witnessed with sulphonal. The sleep was tranquil and natural; no craving was noticed. The most reliable doses were 30 to 45 grains; excitement, giddiness, inco-ordination, headache, indeed, many of the features of alcoholic intoxication sometimes follow the use of chloralamide.

Dr. Gordon found chloralamide very satisfactory in the treatment of the insomnia of old age, hysteria, and pulmonary diseases. In criticizing these results we would point out—1. The desirability of having actual statements of the number of experiments performed, in particular of those on blood pressure, and pulse and respiration, and on metabolism. 2. That the recorded experiment on blood pressure does show a notable reduction of this with the large doses. 3. That the experiments on urea and phosphate excretion seem by no means conclusive, more especially those which show a reduction in the phosphates greater with the smaller dose; here, more particularly, a large number of experiments are necessary. The results obtained clinically agree with those already recorded by other observers, but again we should like to know the total number of cases in which chloralamide was employed; the nine cases given are "types of many cases," according to Dr. Gordon. The most important parts of the investigation are the blood

pressure and metabolic experiments. These bear on the value of the statement that the introduction of the group NH_2 , or a substitution derivative of NH_2 , does actually remove or lessen the depressant action belonging to the chloral group. The examination of the more delicate action of a hypnotic drug can only be undertaken in hospital practice, and on a large scale, and in this investigation we shall do well to watch the influence of such drug on what may be called the tone of the nervous system, as measured by the brightness of the eye, the steadiness of the hand, the sense of refreshment experienced by the patient, etc., as already insisted on by Dr. Clouston.

Synthetical Hypnotics and Digestion.

Dr. Gordon communicates some further experiments on "The Action of some recent Hypnotics on Digestion" to the "Brit. Med. Journ." His method was that of Grützner, viz., he peptonized freshly-prepared and carefully-washed blood fibrine, which had subsequently been stained by an ammoniated solution of carmine. This carmine-stained fibrine, also carefully washed till the washing were colourless, was digested by pepsine in the presence of hydrochloric acid. The influence of the hypnotics was ascertained by adding varying quantities of each drug to the tube in which digestion was to take place. Each set of tubes was controlled by one tube containing no hypnotic. The rate and amount of digestion were determined by the liberation of the carmine stain and the diminished bulk of the fibrine. In this way it was found that weak solutions of chloralamide, urethane, and sulphonal were without appreciable influence on the peptonizing process. Strong solutions, however, did retard digestion, and in proportion to the amount of the hypnotic present. On the putrefactive process it was found that neither in weak nor in strong solution did the drugs interfere markedly. This latter result is somewhat surprising, seeing that chloral hydrate ranks as an antiseptic; if confirmed it would suggest that the amido group is the cause of the loss of antiseptic action, for we know that ammonia compounds are frequent products of putrefaction. A similar explanation may perhaps hold for the amido compound urethane. As to the sulphonal, it would be interesting to learn to what extent it was soluble in the acid peptic fluid. Paraldehyde was investigated in capped tubes, on account of its volatility, and in them it was found that a certain proportion of the drug favoured very decidedly the digestion; putrefaction, on the other hand, was prevented or delayed, according to the amount, large or small, of the paraldehyde. So far as these experiments go they are very interesting. They furnish another reason for favouring the use of paraldehyde.

5. *Dutch Retrospect.*

By Dr. J. PIETERSEN.

The Influence of Music on Mental Disorders.

At the quarterly meeting of the Dutch Psychological Society, held at Utrecht on November 27th last, Dr. van Deventer opened a discussion on the above topic. He reviewed the position held by music among the ancients, and cited numerous classical authorities who have made mention of its curative influence in bodily and mental disease. Following such quotations he brings us to the days of Pinel and Esquirol, who made special investigations with this agent in the treatment of mental aberrations. Their immediate successors appear to have over-estimated its influence and over-strained its use, for by some it was even regarded as the only psychical specific; theories were freely promulgated by which the nature of mental disturbances and the favourable influence of music on such were to be explained, while a connection was demonstrated between mental operations and musical sounds. In their experiments and mode of treatment eminent musicians lent their aid and guidance, but in many cases with anything but a gratifying result to the patient; with the laudable aim of curing the sufferer, but frequently against his will and inclination, they would, for days in succession, have the finest musical masterpieces performed in some adjacent apartment, the consequence being that the condition of some of the patients was frequently aggravated rather than improved, and that extreme mental exaltation even supervened at times. The measures adopted by Esquirol in 1824 and 1825 had been more systematic, he first tried the effect on selected patients, and subsequently on a large assemblage of insane, chosen mainly from convalescents, quiet maniacs, and some melancholiacs, and under the personal supervision of himself and his medical staff at the Salpêtrière. His observations led him to advise that with the insane the musicians should be always placed out of sight, that the number of instruments should be limited to a few, and that a process of selection should always be adopted, a proper estimate being taken of the mental condition of each patient; the preference was to be given to musical pieces which prior to his malady had proved agreeable to the patient, and such especially as brought to his mind the memories of his youth. Notwithstanding these precautionary measures its influence would be undetermined and doubtful so long as the affection itself was active; improvement in such cases was rare and cure never resulted. Some patients, among whom were musical adepts, declared that harmonies were discordant or terrible to their ears, and even the most capable of these became irritable and excited on hearing what to the normal ear were

pleasant melodies. In the period of convalescence, however, music would be found of value if precautions were taken against undue excitation of the imagination and an excessive rousing of the passions. From this we gather that music is by no means to be regarded as a harmless form of mental treatment; the factors that come into play are numerous and varied, the use of vocal, instrumental, or concerted music, the instrumentation, the tone, musical colour, rhythm, subject, harmony, and delivery, the duration, associations, and meaning of the subjects performed, the time of life and individuality of the hearer, his social status and mental culture and development, and his morbid leanings and disposition all have to be studied. The same music too will have different effects on different psychic states. Primarily it must be urged that in all *acute mental conditions* music is directly contraindicated, bodily and mental rest being here of the first consideration. In melancholiacs in this stage the condition of listless apathy is thereby much increased, and sometimes agitated excitement may result, the patient feeling acutely the antithesis between his feelings and his surroundings. Some patients who perform on some sort of instrument take refuge therein in an attempt to banish their feeling of desolation, or, roused thereto by their surroundings, endeavour to instil some cheerfulness into their depressed spirits, or to divert their thoughts. In the more *chronic forms*, as well as during the period of reversion to mental health, it frequently serves a beneficial purpose, acting favourably by inducing natural sleep; a favourite melody may thus at times exercise an extremely salutary effect even in cases in which for a lengthened period no hopeful symptoms have been observed. During such a performance of music, unmistakable signs of emotion manifest themselves, and the patient begins to show interest in his surroundings, and the first symptoms of improvement appear, he becomes more cheerful, and shows a mental comprehension of what was previously unintelligible to him. In *acute mania* its application during this stage simply increases the unbridled excitability, though frequently the attempt is made to manage such patients or occupy them by pianoforte playing; they will often demonstrate by their performances the boisterous turbulence of their mental states. In *chronic mania* music is frequently of service to inure the patient to an orderly and regulated form of life, and thus to bring him back within the pale of social conduct from which his malady may have caused him to drift. On the other hand, during the return from mania to mental health, a patient will show himself to be extremely sensitive to music, and relapses may occur if such a form of recreation or employment be too readily adopted. In *moral insanity*, at least in the more expressed forms, it appears to produce no effect, and the patient seems to remain uninfluenced. In those cases of moral insanity in which the condition is the outcome

of education and environment, music will be found to exercise an excellent influence, and it may, therefore, be regarded as of some value as a differential diagnostic of the cause of the malady.

In very young *children*, and especially those inheriting a neurotic tendency, its employment must be adopted with great caution. Marion relates the case of a child some six months old, who, already excited by the playing of her nurse, evinced unmistakable signs of deep emotional agitation on suddenly hearing the *Marseillaise* sung by someone near her. In *neurasthenia*, especially in cases of organic hypersensitiveness, music by inducing functional irregularities acts prejudicially, subsequent tinnitus in the shape of musical sounds, auditory pain, unpleasant sensory disturbances, mental anxiety and confusion, convulsive seizures, unconsciousness, etc., may supervene, while in particular instances, the subjects of chlorosis or cardiac disease, the after-result may be most serious. He instances one of his own cases, a *neurastheniac* suffering from heart disease, who at the sound of distant music would for some time subsequently be subject to auditory hallucinations. As a rule this class of patients has an idiosyncrasy for particular sounds, so that the throbbing noise of a steam engine or the tinkle of a tramway bell becomes extremely painful to them, though they can frequent concerts with pleasure and without deleterious results. With some again it is exactly the opposite. They cannot endure the sound of reed music, while to others that of string music, and especially the upper notes of the violin, are distressing and unbearable. As an indication of the age it has been observed that a large number of neurotics are passionate lovers of Wagnerian music; here the sensuality and pessimistic views of the day find a ready echo in the characteristic elements of the music with its voluptuous expression and power over the passions. At the end of a busy and toilsome day it will act as a stimulant to these subjects, engendering a spurious mental revivification, and it is for the very reason that by its influence unpleasant sensations are temporarily put aside only subsequently to return with greater intensity, that we must regard it as a dangerous stimulant. In the acute stages of *delusional* and *impulsive* insanity the use of music is generally to be deprecated. It should, of course, be omitted wherever, by its means, a delusion is strengthened or an impulsive feature encouraged, and still such sufferers are frequently literally tormented and harassed by the misdirected but well-meaning zeal of those who flood them with music so as perchance to draw their thoughts away from contemplation of self. Sometimes by musical influence sensory delusions are aroused, and especially in those forms of alcoholic insanity in which hallucinatory disturbances are easily evoked. For the rest we may regard music as a valuable agent in particular affections to employ the patient, to lead his thoughts into definite channels, to improve his disposition and to control his will.

Orchestral music, especially under good and proper management, comes into prominence in fostering a mutual kindness of disposition, provoking a friendly co-operation and an interest in the patient's surroundings, and furthering the progress towards a better social bearing; bad habits, too, are by its means eradicated. The high value of music as an educational means among *idiots* is well-known. In compound psychoses such as *general paralysis* of the insane, *epileptic* and *hysterical* insanity, etc., one cannot lay down any fixed rules for guidance, as the effects are by no means constant, but in hysteria the patient so frequently gives expression to the abnormal feelings aroused in him by the playing of some instrument, that music should in such cases be expressly discountenanced. In all cases circumspection must always be exercised. At first we must limit ourselves to the performance of a single simple melody, taking precaution against exaggeration or excess, giving especial preference to concerted music, avoiding all harmonies which have a moving effect on the feelings, which give expression to the existing morbid conditions, which lead the imagination into unhealthy channels, or which by their nature have a fatiguing effect on the mind.

The Use of Opium in Melancholic States.

In the "Psychiatrische Bladen," Deel viii., Afl. 4, Dr. Tellegen discusses the value of opium in melancholia, and reviews the opinions of some of the most prominent alienists of the day on this subject. Ball sums up his experience in these words: "Except in cases of insomnia, in which the liquid extract of opium may prove beneficial, opium preparations and salts of morphine are to be excluded in the treatment of melancholia; they seem, instead of quieting the mental perturbation, rather to induce an opposite effect." Voisin, on the other hand, remarks: "Treatment with morphine generally cures melancholia, whether this is accompanied by delusional states or not, and especially when the condition of dejection is associated with anæmia; the symptomatic phenomena of mental depression, stupor, ecstasy, inclination towards suicide, religious or mystic delusions, disappear altogether with morphine and usually within a comparatively short time. The melancholic terror, too, fades with equal rapidity." Clouston puts no faith in opium; in his observations, he found loss of appetite and diminution in body weight to follow its use, and he only records one case in which it did good service. Mickle is of the same opinion. Blandford, however, to take an opposite view, has found the preparations of opium serviceable in subacute melancholia, whether given by the mouth or subcutaneously; in acute melancholia he advocates its use, not only as a soporific, but also as a brain stimulant and nourisher; in melancholia with stupor he also recommends it. Brosius declares against it, while Schüle as warmly defends its use. Kovalevsky

considers that there are many hypnotics for use in melancholia less deleterious in their action on the organism than opium; his experience is that more harm than good is done by it, and that patients recover more speedily without it. Guislain, who at first found no advantage from its use, has now come to the conclusion that in selected cases of melancholia and with proper dosage it may be beneficial; he prefers morphine to other opium preparations. With Engelken, he thinks that it is extremely serviceable in recent cases of melancholia, though it does not always bring about a cure, and its application must frequently be temporarily suspended if the condition of the patient is not to be aggravated; opiates act beneficially also in those mental disorders, which are accompanied by an extreme mental sensitiveness, and in which the patient is always harping on his own miserable condition, as well as in those in which the emotional disturbances are prominent without marked intellectual declination. Others who employ opium mainly as a symptomatic remedy, and who do not regard it as having a direct influence on the course of melancholia, speak highly of it as a serviceable agent in the coincident symptoms of the psychosis, *e.g.*, the inclination to suicide, insomnia, and the conditions of mental anguish. Tigges is of opinion that so long as melancholiacs are treated with opium, suicidal cravings are less marked, and that no drug acts so beneficially in the insomnia of melancholia as morphine; while, in the conditions of mental anguish, Kraepelin advocates the use of opium in gradually increasing doses. Most alienists are of opinion that in so-called symptomatic melancholia, *e.g.*, the melancholia preceding maniacal attacks, the melancholia of insanity of persecution, as well as in that of general paralysis of the insane and circular insanity, no favourable result is to be anticipated from its use. The following considerations are the result of the author's own experience, coupled with a careful review of the literature of the subject:—1. Many cases of melancholia, in fact the larger number, recover without the use of any therapeutical measures, by restorative nutritional treatment, change of surroundings, and mental and bodily rest. 2. It is neither probable nor possible that opium can always be of use in cases of melancholia; we must carefully watch its effect and at the first signs of unfavourable influence cease its administration. There are many individuals who show a certain idiosyncrasy towards opium, and on whom it acts as an excitant and sleep destroyer. 3. It is not to be denied that, owing to the recent introduction of other soporifics, opium need less frequently be employed as a hypnotic, though it must still be considered of great value as such in melancholia. 4. It is in private practice that opium will be found most useful and reliable in treating melancholic conditions. There is no class of the insane who are more acutely sensitive to their environment, and who, after their recovery, look back with more dread and distress on their asylum

experiences than melancholiacs, and when treatment at home or in some other private surroundings is possible, medical men shrink from consigning their patients to such institutions; it is only when continued insomnia, wearying both to the patient and his friends, the leaning towards suicide, and refusal of food complicate the case that asylum treatment is, as a rule, advocated. Now it is just in these three conditions that opium will be found of inestimable value: it will induce sleep, create a blunting to the suicidal inclination, and diminish the mental tension, so that the patient is less disposed to oppose the administration of suitable food. 5. With Schüle and Guislain, he believes that opium can, in some cases, shorten the duration of the affection, exercising a specific influence such as is also possessed by the bromides. Its administration must, in preference, only be resorted to when the malady has lost its power, and has, as it were, expended itself; this can only be judged of by trial doses with the drug. Long-continued employment of opiates he deprecates as injurious (Ziehen, on the contrary, puts his patients for months, in some cases a whole year, under an opium course). 6. Experience teaches that opium acts better in anæmic than in hyperæmic conditions, and he agrees with Savage that it is less favourable in its action in young persons than in elderly ones and those in whom the climacteric change is exerting a morbid influence. 7. As to its influence on melancholia with stupor, authorities are not agreed. Krafft-Ebing considers it to be contra-indicated, whereas Blandford and Ziehen advocate its employment.

In conclusion, he advises that the earlier administrations should be by subcutaneous injection of morphia, commencing with small doses. Later, when given by the mouth, the dosage is to be slowly or rapidly increased, according to the effects on the patient, and it is best given twice or three times a day, the first dose early in the morning, the second and third two hours before and at bedtime. By this means the digestive functions will not be disturbed, and food may be regularly administered during the day, a matter which is, undoubtedly, of the first importance in melancholia.

6. *Swiss Retrospect.*

Histological Technique of the Central Nervous System.

By A. MERCIER, M.D., Assistant Physician to Burghölzli Asylum, Zürich.

(Continued from p. 481.)

Method of Staining Axis-Cylinders and Cells in a Continuous Series of Sections.

For this purpose the pieces must be imbedded in the microtome of Gudden and cut under water. This microtome has the advantages of easy manipulation and accuracy of working. The sections may be made of equal or varying

thickness, according to desire. The imbedded piece, being always covered with water, keeps well. There are two sizes of the microtome in general use—a large one by which sections of the whole brain can be cut, and a smaller one furnished with two tubes of different sizes, by which all the lesser parts of the nervous system can be cut. These microtomes have a square table standing on four iron feet. A metal basin is sunk in this table, and in the centre of this a metal tube which terminates above in a large circular plate. On this plate the knife rests. The lower end of the tube can be raised by a micrometer screw, the wheel of which records the movements in fractions of millimeters. The piece to be imbedded must first be put for a few minutes into warm water (104° F.). It must then be well dried on filter paper, and then with a small forceps placed in the tube, the bottom of which has been raised to the required degree. By experience, almost any position of the piece can be secured by propping it up, *e.g.*, on small pieces of cork. Next, the piece having been well placed in the centre of the tube, the latter is to be filled with paraffin. This requires care, lest the piece should be upset. In place of paraffin a mixture of paraffin and stearin can be used. The paraffin or the mixture must have been boiled, but at the time of pouring into the tube it must have cooled slightly, and should not make more than the characteristic "prinkling" of hot paraffin. After a minute, in order to prevent too great retraction, more paraffin should be added. In from six to twelve hours the paraffin will become hard, and the basin can now be filled with water, distilled or simply boiled and filtered. The paraffin is next to be cut away all round the piece. In twenty-four hours the cutting may be commenced. The water in the basin must be in sufficient quantity to cover the knife as it lies on the plate. In the act of cutting the knife must always rest on the plate, the thumbs being placed on the knife; the movement must be from left to right (never from right to left), and it must be performed with the thumbs, not the hands. After the first section has been cut the knife is to be put on the upper part of the ring. The section which floats on the water must be carefully removed by means of a lifter (a needle will be helpful in the removal of this section). It is then placed in distilled water, which must be in sufficient quantity to allow the section to float freely and the lifter to be removed without damage to the section. The section can remain for a longer or shorter period in the distilled water. The next section is placed in a small glass dish on the right hand of the first one; this order is maintained for the subsequent sections, and the series is numbered from left to right. It is well to label the dishes to prevent error.

When the requisite number of sections has been made it is advisable to stain only a given number each day, say from 10 to 20. The best stains where large numbers of sections are taken are those whose manipulation is the simplest. The following is the method of staining:—The dish containing the section in distilled water is quite emptied of the water, the section being carefully secured against the side by a needle. The stain is now poured on to the section so that the latter is completely covered; should it rise to the surface it must be again immersed by means of a glass rod. The time during which the sections remain in the staining fluid will depend on the nature of the section, *e.g.*, spinal cord or brain, the strength of the fluid, and the thickness of the section. Thin sections should remain in the fluid for the longer period, approximately twice as long as thick sections. The first sections of a series will need to be examined 12-18 hours after immersion, in order to determine the degree of staining. It is desirable to use weak staining solutions, since the elements of a tissue take up the colour much better if long exposed to such, than if placed for a shorter time in a stronger solution. After 18-24-48 hours, according to circumstances, the staining fluid is poured off; it may be used again if filtered. The section is drained quite dry, and then the decolorizing fluid is poured on it, and allowed to remain till no more colour is given up to the liquid. It may be necessary to change the decolorizing fluid. It is

sometimes advisable, *e.g.*, with carmine staining, to wash in distilled water before using the special decolorizing liquid. Decolorizing is generally performed with the section upon the slide. This done, one brings the slide with the section into absolute alcohol, where it should remain for 20-30 minutes or even more; it is better for the section to be too long than too short a time in the alcohol. After the alcohol bath the sections are to be immediately covered with oil of cloves or oleum origani (oil of thyme?). The sections after removal from the alcohol dry with great rapidity, hence the oil must be applied quickly and freely over the whole surface of the section—a small camel-hair brush is useful for this purpose. Should the section float on the oil it must be gently pressed under with a glass rod. The section will, in general, be sufficiently cleared after a few hours, and the oil can then be removed; in doing this it is important to secure that the section shall occupy the position which it is to maintain on the slide. The last portions of oil are best removed by filter paper. In some cases it may be found best to remove the oil by pouring on to the section a few drops of xylol, which is allowed to remain 5-10 mins. The xylol is then removed, and the section dried. The preparation is finally mounted in Canada balsam, which for smaller sections may be placed on the cover-glass, but for larger sections is best put direct upon the section. The preparation must be kept quite flat in a dry place. Moderate heat facilitates the drying of the balsam. Sunlight bleaches stained preparations; they should, therefore, be kept in closed cabinets.

1. Ammonio-Carmine Stain.

Gerlach's formula for this was:

1 pt. of best well-powdered carmine.
1 pt. of caustic ammonia.
50-100 pts. of water.

This solution must remain uncovered for 24 hours, to get rid of the greater part of the ammonia. Filter; cover with paper.

Friedländer speaks very well of this solution.

Stöhr recommends the following modification: 1 gramme of best carmine dissolved in 50 c.c.m. of distilled water + 5 c.c.m. of caustic ammonia. This solution is left uncovered till it no longer smells of ammonia (three days); it is then filtered and covered.

Another good formula is as follows: Rub up in a mortar 1 part of carmine, add caustic ammonia to the extent of 3-4-5 parts, rubbing constantly. Let the paste so formed dry for 24 hours, and now rub the powder with 50-100 parts of distilled water. Leave uncovered for 24 hours, and filter and then cover with paper and cork. The strengths of $\frac{1}{4}$ or 1 per cent. may be thus prepared, or by further dilution a scale of strengths may be prepared. By keeping such solutions improve; they require frequent filtering. The amount of time required for staining must be tested by using a strong and a weak solution. In general 24 hours will be required to stain this section properly. Such sections are to be then washed in distilled water for one or two hours, then in acidulated water (acid acetic., 20-30 drops; distilled water, 300 drops) for 20-30-60 mins. Then follows the alcohol bath, then the oil of cloves, then mount in Canada balsam.

2. Nigrosin.

Make two solutions of strength 1 per thousand and 1 per two thousand. Sections should remain in the staining fluid 12-24-48 hours, according to circumstances; in general 24 hours in the 1000 solution will suffice.

Two methods may now be adopted—1, the section may be treated like a carmine preparation, *v.s.*, and undergo washing aq. destill. $\frac{1}{4}$ -1 hour, then in aqua acidulata, etc.; or 2, the stained section may be placed for 10-15 minutes into 40% alcohol. The section rapidly gives up its colour in this. It is then washed in 96% alcohol for some minutes, then in absolute alcohol for 10 minutes, cleared in oil of cloves, and mounted in Canada balsam. The 40%

alcohol solution decolorizes much more actively, viz., in from 5-10 minutes, if a few drops of acetic acid are added to it.

3. English Aniline Blue-Black.

Several preparations are sold under the name of aniline blue-black; the best is the English one. This stain is very efficient and durable. The cells stain a light blue, the nucleus and nucleolus a dark blue; the cells of the cortex cerebri and cerebelli may be advantageously stained with this colour, and the cells of Purkinje in particular show up well according to Telgersma.

Pathological changes in ganglionic cells may also be well shown by aniline blue-black; the neuroglia does not stain.

Three solutions in distilled water should be prepared, of strength $\frac{1}{100}$, $\frac{1}{200}$, and $\frac{1}{300}$. Sections should remain $\frac{1}{2}$ hour in the first solution, or five hours in the second, 12 hours in the third.

Wash now in distilled water, immerse in alcohol (absolute), clear in oil of cloves, and mount in Canada balsam.

I prefer to wash in an acidulated 40% solution of alcohol instead of in distilled water, *vide supra*, and then in absolute alcohol.

Sections stained in aniline blue-black fatigue the eyes less than carmine sections.

4. Picrocarmine.

We follow Friedländer's directions for the preparation of this solution, viz., take of ammonio-carmine solution (carmine 1 pt., ammonia 1 pt., distilled water 50 pts., Gerlach's formula), one part, pour into it with constant stirring first a few drops, and then to the extent of 2-4 parts of a saturated solution of picric acid.

During this addition, a precipitate which forms, and at first redissolves, should finally become permanent. The larger the quantity of ammonia present the greater is the quantity of picric acid required. The liquid is now filtered, and to preserve it a few drops of phenol are added. Should the solution become turbid it will clear on the addition of a few drops of ammonia.

Stöhr's modification of this process is the following:—

R Distilled water, 50 c.c.m.

Caustic ammonia, 5 c.c.m.

Carmine, 1 gramme. (The quantity is not named in the paper, but see above, No. 1.)

Stir with a rod to complete the solution of the carmine.

Now add 50 c.c.m. of a saturated solution of picric acid; leave uncovered in a wide-mouthed jar for two days; filter.

This stain is in many cases excellent, giving double colouring, often within a few minutes. The nuclei are picked out deep red, the connective tissues light red, the protoplasm yellow. The differentiation, according to Friedländer, is accentuated by placing sections after staining in a watch glass containing acidulated glycerine (one part muriatic a., 100 pts. glycerine).

The picro carmine solution stains specially well when there is present some free ammonia, but in such case the carmine tint predominates. By the treatment with acidulated glycerine the red tint is removed from the connective tissues, which may present a yellow colour, but the carmine hue persists in the nuclei. Hyaline and colloid material stains a deep yellow. The red colour of the nuclei persists, but the yellow of the picric acid is only moderately enduring. To preserve the yellow colour it is advisable to add to the water, alcohol, and glycerine used in the preparation of the section a small quantity of picric acid so as to tinge them a light yellow. Treated thus the stained sections keep their colour very well, either in glycerine or in Canada balsam.

5. Borax-carmine.

Mix in a porcelain dish:—Carmine, 50 c. grammes.

Borax, 2 grammes.

Distilled water, 100 grammes.

And heat to boiling with constant stirring; add, drop by drop, dilute acetic acid until the colour has changed from blue-red (at the start) to the colour of ammonia carmine; let stand 24 hours; pour off, and then filter. Add now some drops of phenol to preserve the liquid. In this solution the section acquires a deep colour after a few minutes, but the stain is diffuse. To complete the process and get differentiation the section must be placed in the following solution :—

Muriatic acid...	...	1 gramme.
Alcohol ...	...	70 "
Distilled water	...	30 "

In this solution the section gives up much of its colour. In from a few minutes up to half-an-hour it is removed, washed in distilled water or in alcohol, cleared in oil of cloves, and mounted in Canada balsam. Other authors using the same borax-carmine solution place the section in it for 5-15 minutes, wash for $\frac{1}{2}$ -1 minute in a solution of muriatic acid one part, alcohol 100 parts, then very thoroughly in distilled water, and then proceed with the alcohol bath, oil of cloves, and Canada balsam.

6. *Cochineal-Alum Stain.*

The method proposed and employed by Czokor gives good results. The formula is :—

1 part finest cochineal.
1 part of alum.
100 parts of distilled water.

Boil till the solution is reduced in volume by one-half; add a few drops of phenol; filter.

Sections stain in this solution in about 24 hours; they are then to be washed in distilled water and then placed in alcohol. Oil of cloves and Canada balsam complete the process.

The cells show a violet colour, the axis cylinders a more reddish tinge.

7. *Carmine-Alum.*

Take one gramme of carmine, 100 c.c.m. of a 5% solution of alum in distilled water.

Warm the mixture and boil for 20 minutes; cool; filter (Greenacher); sections stain in this solution in from 5-10-15 minutes. The subsequent treatment is as in process No. 6.

The cells are stained as in the borax-carmine process, but not so deeply; the nuclei are violet-red. The sections do not overstain, even though they be left some hours in the solution. They do not require much washing.

8. *Aniline blue.*

This substance can be employed in strong or weak solution, e.g., 1 per 1,000 or 1 per 100 of distilled water. The time required for staining is 12-24 hours for the weak solution, some minutes to a few hours in the strong solution. They are to be washed in alcohol, which rapidly decolorizes them, cleared in oil of cloves, which also decolorizes them; for this reason, these stages must be rapidly gone through; then the preparation is mounted in balsam.

Cells and axis cylinders, also to a slight extent the neuroglia, are stained blue. This reagent is not to be recommended for human specimens, but the tissues of reptiles, fishes, birds, and some mammalia, e.g., the calf, colour very well.

Should this process be adopted we advise that, before cutting, the piece should stand for a long time in water in order to get rid of the chrome salts.

9. *Bismark-brown.*

The solution may be either watery or alcoholic.

1. Watery. Make a saturated solution of Bismark-brown in distilled water (3 or 4%); boil; cool; filter.

2. Alcoholic. Make a concentrated solution of the stain 2-2.5% in a 40% alcoholic solution.

Let the sections stain for five minutes; wash in alcohol 96% or in acidulated alcohol (muriatic acid 1 pt., alcohol 100 pts.); immerse in alcohol, then in oil

of cloves; mount in Canada balsam. The nuclei are stained brown; the protoplasm a light brown. The watery and the alcoholic stains colour in the same way, and the sections are not liable to over-colour themselves. Sections thus stained photograph well. The several carmine methods give better results than this reagent (V. Kahliden).

10. *Gold palladium carmins.*

Henle and Merckel have recommended this stain, which, unfortunately, has not proved successful in my hands. The section passes from water into a solution of gold palladium (1 in 500), there it remains five to ten minutes, and acquires a deep yellow colour; it is now placed in the usual ammonia-carmine solution, and in a few minutes acquires a deep red colour. Wash thoroughly in distilled water, immerse in alcohol, clear in oil of cloves, and mount in Canada balsam. The myeline fibres appear yellow, the neuroglia, cells, and axis cylinders a deep red. Ranvier adopts the plan of bringing the section after the ammonia-carmine staining into a bath of, alcohol two parts, formic acid one part. This decolorizing fluid is allowed to act for five to ten hours. The further stages are the same as just stated. The cells and axis cylinders remain red, but the neuroglia is now decolorized.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

JUBILEE YEAR.

The Fiftieth Annual Meeting of the Medico-Psychological Association of Great Britain and Ireland was held on July 23rd, at the City Asylum, Winson Green, Birmingham. At the opening of the meeting the chair was taken by Dr. Yellowlees. Among others present were Drs. H. Hayes Newington, Bonville B. Fox, Clouston, D. Nicolson, S. Rees Philipps, J. Macpherson, Oscar Woods, Conolly Norman, E. Marriott Cooke, S. H. Agar, T. Outterson Wood, E. W. White, Douglas, H. Chapman, J. Glendinning, Rutherford, Hack Tuke, W. R. Nicholson, W. S. Kay, J. G. McDowall, S. R. Macphail, R. Baker, J. Merson, A. E. Urquhart, R. Percy Smith, H. Savage, Pietersen, H. Rayner, A. C. Suffern, T. v. de Denne, Jeffries, G. H. Savage, H. T. Pringle, J. F. G. Pater-son, T. H. Walmsley, N. E. Manning, Fletcher Beach (Hon. General Secretary), etc.

Apologies for absence were received from Professor Benedikt (Vienna), Professor Tamburini (Italy), Professor Krafft-Ebing (Vienna), Dr. Motet (Paris), and Dr. Morel (Ghent).

Dr. YELLOWLEES—My occupation of the chair this morning is purely formal. On taking it my first words were to thank you for the honour you did me in electing me to it. My last words in it, before I pass on the honour to my friend, Mr Whitcombe, are again very heartily to thank you. (Applause.)

Mr. WHITCOMBE then took the chair as President for the year, and said—Gentlemen, I thank you very much for the distinguished honour you have conferred upon me, feeling as I do that it is the greater because this happens to be our Jubilee meeting. We have a large amount of business to do to-day, therefore my remarks must be very brief indeed. I am glad to say that one of the first things I have to do as President is to read a telegram of congratulation from Professor Benedikt as follows: "I congratulate the Association. May it remain fresh as youth, energetic as manhood, and wise as age, and its influence always increase for the benefit of mankind. Hail to the members! Wishes Moritz Benedikt." I propose that this telegram be placed on the minutes. (Hear, hear).

The PRESIDENT—The minutes of the last meeting were printed in the

Journal. I take it that no one will wish these minutes read, and that you are willing they be confirmed. (Hear, hear.) The next business is the election of the Council. The names which have been sent round to you are those of the gentlemen proposed as officers and members of the Council for the ensuing year.

Dr. YELLOWLEES—Mr President, before this list is returned may I offer a suggestion or two. The first is one that has already been before us in the Council, that as Dr. Baker, if elected President-Elect to-day, will be withdrawn from the Council, the name of Dr. Hayes Newington should be substituted for his. Otherwise we should lose Dr. Newington's services from the Council altogether, and that we should all deplore. Then, among the members of the Council whose names are given in this list, there are some who have not attended a single meeting of the Council for two years. I hold that men who have been absent from Council meetings for two years should not be continued on the Council. (Hear, hear.) I really think that anyone appointed on an important body like this, who does not attend a single meeting for two years, must either have been unfortunate in his home engagements or does not care about the duty.

A MEMBER—What is the rule as to new members of the Council?

The HON. SECRETARY—The rule is, "Four of the members of the Council shall retire by rotation each year in the order of election, and neither they nor the President shall be eligible for re-election for one year."

Dr. T. Outterson Wood and Dr. S. Rees Philipps were appointed Scrutineers, and the voting papers were collected.

The voting papers were then submitted to the Scrutineers, who shortly afterwards announced that the following officers and Council for the ensuing year had been elected:—

<i>President</i>	E. B. WHITCOMBE, M.B.C.S.
<i>President-Elect</i>	ROBERT BAKER, M.D.
<i>Ex-President</i>	D. YELLOWLEES, LL.D., M.D., F.F.P.S.G.
<i>Treasurer</i>	JOHN H. PAUL, M.D.
<i>Editors of Journal.</i>	{ D. HACK TUKE, M.D. GEORGE H. SAVAGE, M.D.
<i>Auditors</i>	{ ERNEST WHITE, M.B. HENRY RAYNER, M.D.
<i>Honorary Secretaries</i>	{ CONOLLY NORMAN, F.R.C.S.(I.), for Ireland. A. R. URQUHART, M.D., for Scotland. FLETCHER BEACH, M.B., General Secretary.

Members of the Council.

T. S. CLOUSTON, M.D., F.R.C.P.	J. G. McDOWALL, M.B.
A. CAMPBELL CLARK, M.D.	H. GARDINER HILL, M.B.C.S.
J. WIGLESWORTH, M.D.	B. B. FOX, M.D.
S. H. AGAR, L.K.Q.C.P.	J. E. M. FINCH, M.D.
HAYES NEWINGTON.	C. HETHEBINGTON, M.B.
J. B. SPENCE, M.D.	T. OUTTERSON WOOD, M.D.
W. R. NICHOLSON, M.B.C.S.	F. C. GAYTON, M.D.
D. NICOLSON, M.D.	F. H. WALMSLEY, M.D.
OSCAR WOODS.	H. T. PRINGLE, M.D.

The PRESIDENT—The Scotch Examiners remain as they were. In Ireland Dr. Oscar Woods has been bracketed with Dr. Conolly Norman as an examiner, and in England Dr. Mickle and myself have been appointed.

The Treasurer's report was presented by Dr. HACK TUKE, who said—I very much regret that Dr. Paul is unable to be present to-day. I will place the balance-sheet in your hands, and read it to you, and one or both of the auditors will speak on the matters which require explanation. If the accounts could have been made up on the same lines as last year, we should have had much more in hand.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

1891.]

Notes and News.

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The Treasurer's Annual Balance Sheet, 1890-91.

RECEIPTS.	£	s.	d.	EXPENDITURE.	£	s.	d.
To Balance—Cash in Hand, 1889-90	376	6	8	By Annual, Special, and Quarterly Meetings ...	46	13	0
Subscriptions received from England and Wales...	324	14	0	Expenses of Reporting at various Meetings ...	15	19	8
Subscriptions, Secretary for Ireland	88	17	0	Editorial Expenses	12	12	0
Subscriptions, Secretary for Scotland	52	10	0	Printing, publishing, engraving, advertising			
Examination Fees (Scotland)	37	16	0	expenses, and postage of Journal (3 months'			
Ditto ditto (England)	84	13	0	payments excluded from last account,			
Sale of Journal	135	6	0	£141 15s. 6d.; payments to date, £409 9s. 4d.)	551	4	10
Dividends on Consols, Gaskell's Fund, £1,347 Stock	36	2	4	Sundry Expenses, Printing, etc.	32	15	7
Dividends on Consols, £306 Stock	8	4	0	Treasurer	6	6	0
				Secretary for Ireland	3	4	4
				Secretary for Scotland	8	6	7
				General Secretary	6	10	8
				Examiners' Fees (England)	9	19	6
				Ditto ditto (Scotland)	4	1	2
				Double (Second) Prizes	21	0	0
				Balance in hands of Treasurer	718	13	4
					325	15	8
					£1044	9	0

Examined and found correct.
 (Signed) T. OUTTERSON WOOD, }
 18th July, 1891. ERNEST W. WHITE, }
AUDITORS.

(Signed) J. H. PAUL,
TREASURER.

Dr. WHITE—In the first place you will notice that the balance last year was £376 6s. 8d., and that this year the balance is only £325 15s. 8d. The cause of it is this. We have to make our balance up after the 14th July, and I think it will be extremely advisable that in future years you should have your balance-sheet struck on the 30th June, the end of the six months. Last year the making up of the accounts was extremely hampered, and the audit was very difficult indeed, because the accounts from Scotland arrived very late. This difference of £50 in the balance-sheet is owing to the fact that the examination fees for Scotland last year were a hundred pounds, and this year they amount to £157, but the money has come in since we struck the balance-sheet, so that our balance-sheet does not exactly represent the financial condition of the Association to-day. The second prize will be explained by Dr. Beach.

The HON. SECRETARY—The Examiners found the work to be of such merit that they awarded two bronze medals instead of one.

Dr. WHITE—The subscriptions for England and Wales were higher than for the previous year, and so they were for Ireland and Scotland. The examination fees, however, would suggest a different conclusion so far as that department is concerned, but as I have explained, the examination fees are not fully represented in this balance-sheet.

The PRESIDENT—To put the matter in form, I propose that the balance-sheet be received.

Dr. BONVILLE FOX—A suggestion was made last year with regard to the investment of a portion of the funds of the Association. I should like to ask whether it has been found practicable or not? I agree that it is desirable that the Treasurer should have a very fair balance in hand, but one or two objections were raised last year as to the largeness of the balance standing over, and the suggestion I mention was made then. I only wish to ask as a matter of curiosity whether it has been found practicable to act upon it?

Dr. HACK TUBE—Dr. Paul wished me to state that if it were the wish of the annual meeting that a certain sum should be invested he was quite willing. But looking not only to himself, but to subsequent Treasurers, I think it might be a very great inconvenience not to have a good balance in hand, which might happen if too much were invested. He is quite willing, however, to leave £100 invested if it be the wish of the meeting.

Dr. FOX—I should be most reluctant that Dr. Paul or any other Treasurer should have to draw upon his private purse for the purposes of the Association.

Dr. OSCAR WOODS—It seems to me a very unbusiness-like thing to keep such a large amount of money on the current expenditure, and I would be prepared to move a resolution that £250 be put into consols. We should still have £100 to carry forward to meet current expenditure.

The PRESIDENT—I think I can assure the Association from Dr. Paul's own lips that he has frequently been for a long time out of pocket in regard to the funds of the Association. I do not think it a right thing for our Treasurer to be placed in such a position, and at present I think the matter should be left as it is. Dr. Paul is always anxious to take care of our money.

Dr. HAYES NEWINGTON—At Glasgow last year this question was raised, and very good reasons were given why we should have a good balance in hand, and the matter was shelved entirely.

The subject then dropped.

Dr. RAYNER—I have a suggestion to make with regard to the examination fees. I do not think that they should go into the ordinary income of the Association. I think it would be desirable, after the Examiners' fees and other expenses have been deducted, that that money should be set apart, docketed and labelled, and allowed to accumulate, and perhaps hereafter voted to some special object by the Association. I think it very desirable that the nett sum accruing from this source should be ear-marked and set apart.

Dr. NEWINGTON—Would not such a suggestion as that rather hamper the

procedure of the Association with regard to special expenses? For instance, last year we spent a little more in the way of printing than usual. Possibly if we were to tie up our little windfalls we should be unable to provide for these exceptional demands.

Dr. URQUHART—I have great pleasure in seconding the President's proposition; but I find that we have a good deal of trouble with regard to the balance-sheet and the audit, owing to the fact that the date for closing the accounts is so near the date of the annual meeting. I think that our accounts should be closed on the 31st December, at the same time as the year for the Journal ends. That would give us plenty of time to submit a balance-sheet that would not be so imperfect as has been the case for the last two years. This year Dr. Paul asked me to send in my accounts in the middle of July, and the consequence was that I had to hold over about £30 belonging to the Association which should have appeared in the balance-sheet which Dr. Tuke has presented to-day. I don't think that there is any adequate reason why the accounts should not be closed on the 31st December, and I hope that it will be possible for the Treasurer to take that course in the future.

Dr. WHITE—In connection with this I am empowered by Dr. Paul to say that he finds the auditing and the preparation of the balance-sheet extremely difficult under present conditions. The examinations were held in July, and the monies were then being collected in Scotland and Ireland. They came in practically after our accounts closed, and the balance-sheet had to be drawn without them. Dr. Paul suggests that the balance-sheet should be made up to June 30th in future. Of course the 31st December would be the preferable day if we had our annual meeting anywhere near that date, but we hold it six months later.

Dr. URQUHART moved that the accounts be made up to December 31st in future.

Dr. HEURTLEY SANKEY seconded the motion.

Dr. NICHOLSON—I don't know whether in the absence of the Treasurer we ought to alter the date on which the annual accounts are made up. It seems to me scarcely fair to Dr. Paul.

Dr. OUTTERSON WOOD—I am strongly of opinion that the accounts ought to be closed on the 30th June, as being nearer the period of our annual meeting, and yet allowing the Treasurer sufficient time to get our accounts in order for the annual meeting. Hitherto there has been no fixed date, and the greatest possible difficulty has arisen with regard to the audit. That I have had some practical experience of. I propose as an amendment that the accounts be made up to June 30th in each year.

Dr. URQUHART—The 30th June is not such a good time as the 31st December. Some of us feel that the date of the annual meeting should be fixed earlier in the year than it falls now; and if we close the accounts on the 30th June that will hamper us in regard to the date of the annual meeting.

Dr. OUTTERSON WOOD—I have moved that the accounts be made up to the 30th June. If any alteration should be thought necessary afterwards by the Association it can be made. I don't think it fair to Dr. Paul, who has a very strong opinion on the subject, that we should make such an alteration behind his back. Any small sums that come in after the 30th June, and any small expenditure incurred after that date and before the annual meeting, can be dealt with by a little verbal explanation to the Association. Then we should get our income and expenditure brought down to date, within a reasonable time of the annual meeting, so that we could rule our course accordingly.

Dr. WHITE—I beg to second that.

Dr. YELLOWLEES—I think it is quite certain that the 31st December is the best date, but as Dr. Paul says that he would like the 30th June, we ought to respect his opinion.

The amendment (for the 30th June) was carried.

The motion that the balance-sheet be received was carried.

The report of the Scrutineers having in the meantime been presented,

The PRESIDENT announced the result, and called upon Dr. Baker, who had been unanimously appointed President-Elect, to suggest the time and place for the next annual meeting.

Dr. BAKER—I thank you very heartily for your kindness in making me President-Elect of this Association, and as next year is the centenary of the projection of the Retreat at York, I shall esteem it a great honour if you select York as the place of meeting for that year. (Applause.)

The PRESIDENT—I take it that York is unanimously selected as the place of meeting for next year. (Applause.)

The PRESIDENT—I have now to call upon Dr. Yellowlees for the report of "The Care and Treatment Committee."

Dr. YELLOWLEES—The presentation of the report is a very formal matter. Its preparation has entailed great labour and a very voluminous correspondence, for which Dr. Hayes Newington deserves the very hearty thanks of the Association. (Applause.) The Committee consisted of twelve members, and the views of no one individual have prevailed. There has, in fact, been a good deal of compromise before it was drawn up in the form in which you have it. For myself I simply move its adoption, with the mention of certain verbal alterations made by the members of the Committee since it was placed in your hands. There are some of them so purely verbal that to mention them will suffice.

(Dr. Yellowlees enumerated the alterations, but as they will be found embodied in the report, it is unnecessary to repeat them here.)

Dr. CARLYLE JOHNSTONE—May I ask the Secretary to read the instructions given to those gentlemen who drew up this report?

The HON. SECRETARY referred to the shorthand writer's notes of the meeting last July.

[The terms of reference from the Annual Meeting to its Committee were as follows:—"To prepare resolutions to be submitted to the next Annual Meeting in order that the opinion of the Association as to the best arrangements for the medical care and treatment of the insane should be clearly expressed."—*Journal*, Oct., 1890, p. 525.]

The PRESIDENT—I have great pleasure in seconding Dr. Yellowlees' resolution, that this report be adopted. I can assure the Association, although I have taken, I am sorry to say, very little part in its preparation myself, that a great deal of attention and a very large amount of labour have been expended upon it. I think myself it is a very useful and good expression of opinion on the part of the Association at the end of its first fifty years.

Dr. OUTTERSON WOOD—Speaking of the infirmary ward, did you say that it should receive cases of advanced brain disease?

Dr. YELLOWLEES—It should receive cases requiring bodily nursing also.

Dr. OUTTERSON WOOD—Why not say "all cases requiring bodily nursing?"

Dr. YELLOWLEES—The paragraph before says "Cases of advanced brain disease." It must receive both classes.

Dr. SPENCE—It appears to me that this is a very unfortunate document. I think it would be well if we set apart one of our quarterly meetings for the discussion of this paper, and then, perhaps, those of us who had no idea that it would be brought up to-day would look into the matter more closely and be able to express an opinion later on.

The PRESIDENT—Do you propose that as a resolution?

Dr. SPENCE—Yes.

Dr. YELLOWLEES—I really deprecate that very much. It would practically mean putting it off for another year. The report was issued to every member a fortnight before this meeting, and it would not have been issued except with reference to it. It was stated that the report would be circulated before the

annual meeting, and I think we should discuss it and get done with it. No quarterly meeting could deal with it so appropriately. The report is really drawn up for this annual meeting, and I greatly deprecate any postponement.

Dr. CLOUSTON—The quarterly meetings are held in London, Dublin, and Edinburgh. We should have to refer it to the meeting held in England. That would be extremely inconvenient.

Dr. NICOLSON—The matter should come up for discussion to-day and should receive attention from us, who are in every respect qualified to deal with it. There are not likely to be men of greater ability present at any quarterly meeting, and we should only have a fractional portion of the Association there to discuss it. I am sure the question has received every consideration at the hands of those who have taken all this trouble about it, and although there may be verbal alterations which may suggest themselves, it seems to me that the general ideas throughout this document are those which we are, every one of us, prepared to support. If it is to get the full weight and support of the Association we ought to be strong-minded enough in the matter to speak out to-day. Certainly no harm can result from it, and there is every probability and likelihood of various portions of the report being taken up and discussed in the public papers. Thereby an opportunity will be given for the matter being further discussed from our point of view, so that lay people as well as ourselves may yet once again have the opportunity of hearing what we have to say on these various topics which so much interest the whole of our social and domestic life. Therefore I am most anxious that the work of the Committee should be recognized in the sense of supporting the proposal, that after the verbal amendments have been made, suggested by the Council to-day, the matter should be allowed to go abroad in the form in which it has been submitted. I have, therefore, a strong feeling that we should act upon it at once, and not stultify ourselves after having gone through a large sphere of thought and practical experience by scratching it out by the stroke of a pen here to-day.

Dr. URQUHART—Dr. Carlyle Johnstone asked a question with regard to the scope of the Committee. As the proposer of the Committee at the last annual meeting, I might say what was in my mind at the time. It is reported in the Journal in these words: "I think that is the more reason why we ourselves should move. If it is a question of national importance, I do not see why we should not take it up on different lines; and I would move that a Committee be appointed to formulate a series of propositions as to the treatment of the insane."

Dr. CARLYLE JOHNSTONE—I think, Mr. President, if that was the instruction to the Committee, the Committee has exceeded its instructions. The scope of the report presented to-day is simply enormous, and I think that this meeting has not had anything like sufficient time to discuss the report of the Committee as presented. To my mind, it is a question whether we should be justified in discussing this report for which we have not asked. The instruction seems to me to have been rather loose, and the Committee read their instruction in a still looser way. The report covers ground which really comprises several treatises on insanity. I move, "That the Association having received the report of the Committee, beg to thank the Committee for the trouble they have taken in preparing the report." All I propose to say in addition is, that I utterly disapprove of this document. I think the best thing to be done is to let this matter drop altogether.

Dr. MCDOWALL (Menston) seconded the amendment.

Dr. HAYES NEWINGTON—Before I go very deeply into this matter, I should like to make a personal explanation. Two or three members have spoken as if this report emanated from my brain. I wish to say that it is nothing of the kind. Certain duties were left to Dr. Yellowlees and myself, just to bring matters into a focus, but our labours have only been those of ordinary members of the Committee, and my own labour in addition has been only that of corresponding and setting things in order so that every member should fully express

his opinion. Every member of this Committee has had an opportunity of expressing his opinion, if not always personally at one of the five Committee meetings we held, yet in answer to the six or seven very voluminous circulars which have been sent out by this Committee. That is the share I have had in this matter. I am perfectly well aware that this report does not abound with brilliant and dangerous arguments or statements. I may say that in some points it is not quite pointed enough for myself, and that I should like to have put things a little stronger. Other members of the Committee would have liked to strengthen their statements too, but I think you will see that in the report of a Committee representing all shades of opinion your Association could not bring forward a report that would fully express the opinions of all those who did the work. What is the object of appointing a Committee? Why should not the Association itself express an opinion? Why, we appointed a Committee for convenience, so that the various points should be taken up and opinions compared, and a document be produced which should really represent the average of opinion in the Association on very many important points. I do not see how the Committee could have produced anything stronger than this on that assumption. With regard to the instructions to the Committee, they were extremely loose, and that is a great pity; but when Dr. Johnstone says that this is a document which is going to do harm to this Association I hardly follow him. He might as well say that the constant publication and the reading of the ten commandments in church is going to do harm to the Christian religion. (Laughter and applause.) Why did this subject come up at all? It is simply because for several years past people who have little knowledge of this subject, and some who have none, have expressed opinions and published them, and we, with our extended experience in matters of lunacy, think it only fair that the Association should bring forward its views on these matters. Everybody can accept it as far as it goes, and, if necessary, supplement it by the expression of private opinion.

Dr. Clouston—I think that Dr. Carlyle Johnstone has looked at the report from a point of view that it was scarcely intended to bear. I do not think it is intended as a literary model. It is essentially and purely a business document, and, as Dr. Newington has so well expressed it, it is an endeavour in a general way to focus and concentrate the general opinion and sentiment of the members of this Association in regard to its subject. It has very largely had reference to the opinions of outside people, who take a great interest nowadays in this question of mental disease. It is really a matter of some importance that this Association should not abnegate its duty of educating the general public. The general public are at present our masters, and whatever education we are able to give them in the shape of this report, or in any other way, we ought to give them. We shall do good not only to the public, but to the insane, and to all engaged in their treatment. It will in the long run spread that knowledge which alone will enable insanity to be rightly treated. And from this point of view it will certainly do good. As for Dr. Newington, he was a man not to be envied during its preparation. Dr. Newington had to boil down all the literary efforts of the Committee, and put them into some sort of passable shape. I think he has done it remarkably well. (Hear, hear.) We all had to give and take, as Dr. Yellowlees remarked. We had to look at the matter from the point of view, not of perfection, but of expediency at the time. On the whole, it should be a useful document. It does not profess to be an original one. I understand, for instance, that members of the Committees of more than one asylum have stated that from the lay point of view such a report would be considered very useful. Looking at it in that light, I have very great pleasure in supporting the adoption of the report.

Dr. CHAPMAN—If taken as a pronouncement of this Association, this report may seem to have too much of a milk-and-water character. It may not be the highest pronouncement that might be expected from an Association like this,

but then it must be remembered that it was pointed out that it was only a pronouncement on particular questions which required to be treated of for the instruction of the public. With some preface which should indicate this intention, I should be prepared to support the report.

Dr. JEFFRIES—I support the amendment. In several quarters very advanced views are being expressed, and I take it that this report will be taken up as a sort of counterblast. On these grounds I think it should receive more consideration before it is issued. I do not think it meets all these advanced views, and if published may do more harm than good in its present form. I look upon it as a sort of dogmatic pronouncement, and as we are advancing so rapidly I do not think that we should formulate anything in the shape of dogma on the treatment of the insane. On this ground I support Dr. Carlyle Johnstone's amendment.

Dr. OUTERSON WOOD—A good deal is said regarding patients in asylums, in regard to classes of patients, administrative staff, etc., but nothing is said about the asylum itself, the advantages of selecting a certain kind of site and avoiding a certain kind of surroundings, and so on. If this document is to go forth as a kind of counterblast to other documents that have contained some very startling and astounding statements, this report says nothing whatever in reply to them.

Dr. CLOUSTON—In answer to Dr. Wood, I would point out that there is a statement in the report, "A hospital should not be placed in such a position as to deprive patients of outdoor exercise and occupation, which are essential as a means of cure in the case of recent as well as other forms of insanity."

Dr. YELLOWLEES—In moving the adoption of the report, I purposely avoided making any remark about it. I did not seek at all to enter into its merits, nor do I now, but I certainly do not accept Dr. Carlyle Johnstone's valuation of the report, nor his criticisms upon it. I think, considering the Committee from which the report emanates, it would not be quite the kind of treatment which these gentlemen deserve, to have it treated in the ignominious way which he suggested. Definitely, I will say that this report was not intended by the Committee as a counterblast, or anything of the kind. By the Committee, the London County Council's report was deliberately ignored. It did not seem dignified that this Association should bandy arguments with the County Council Committee. (Hear, hear.) At the very beginning of our discussions it was distinctly resolved by our Committee that we had nothing to do with that report, but had been instructed to formulate the opinion of the Association upon certain subjects. The report we now present is the formulated opinion, with necessarily a good deal of compromise in it, and with the absence of the point and verve with which one would speak in expressing individual and personal convictions. It had to be a document which could be approved by twelve men. Therefore it takes a wider scope, and is more comprehensive in its language, but less emphatic, probably, than it would have been had it been written by anyone of us individually. I do not think there is anything here which does not bear on "the care and treatment of the insane," construing those words, as we did, in their widest sense, and I hope the meeting will receive and approve this report. As to the subject of asylum construction, it was deliberately set aside as one that involved so much speciality, and was so dependent on varying conditions and circumstances that the Committee thought it better not to make any pronouncement on the subject.

The PRESIDENT—In putting this amendment before you, I just wish to say one word as President, and that is, that if this Association looks upon this report as an answer to anything coming from a Committee of the London County Council, I ask every member of the Association to vote against it. I think that nothing could be more degrading on the part of this Association than to throw a report of this kind upon the public as a reply to an attack said to have been made by the London County Council. I now put the amendment.

"That the Association, having considered the report of the Committee, beg to thank the Committee for the trouble they have taken in preparing their report."

The amendment was lost, only three votes being given for it.

The original motion was then put and carried with two dissentients.

ELECTION OF MEMBERS.

The ballot for the election of ordinary members then took place, when the following were unanimously elected:—

John Thomas Wilson, M.B., C.M., of Aberdeen, 55, Hill Street, Springhorn, Glasgow.

John Carswell, L.R.C.P. Edinburgh, L.F.P. and S.G., Certifying Medical Officer, Barony Parish, 2, Lansdowne Crescent, Glasgow.

Arthur Price, M.R.C.S. Eng., and L.S.A., Cert. Medico-Psychological Association, Medical Officer H.M. Prison, Birmingham, 2, Handsworth New Road, Birmingham.

Harold B. Shaw, B.A., M.B. and Bc., D.P.H., Cambridge, Senior Assistant Medical Officer, Hants County Asylum. Address—County Asylum, Fareham, Hants.

George A. Watson, M.B. and C.M. Edinburgh, Senior Assistant Medical Officer, Birmingham City Asylum, Winson Green, Birmingham.

George Moore, M.D., M.R.C.S. Eng., J.P. for the County of Durham, Medical Superintendent of the Jersey Lunatic Asylum.

Arthur N. Davis, L.R.C.P. and L.R.C.S. Edinburgh, Medical Superintendent Borough Asylum, Plymouth.

Henry Talbot Sidney Aveline, M.R.C.S. Eng., L.R.C.P. London, Assistant Medical Officer City and County Asylum, Fishponds, Stapleton, Bristol.

Henry James Mackenzie, M.B. and C.M. Edinburgh, Junior Assistant Medical Officer, Camberwell House Asylum, Peckham Road, London, S.E.

HONORARY MEMBERSHIP.

The PRESIDENT—There are two gentlemen whom I have the pleasure of proposing as honorary members of this Association. These gentlemen have some little time since been elevated to Inspectorships of Lunatic Asylums in Ireland. They are recommended for election as honorary members by six Irish members of our Association, and I have great pleasure, therefore, in proposing that George Plunkett O'Farrell, M.D., University of Dublin, and Edward Maziere Courtenay, M.D., University of Dublin, be and are hereby elected as honorary members of this Association.

Dr. NICOLSON—It has always been assumed that honorary membership of this Association is a distinctive mark of our esteem, and so far as we can bestow an honour on those who have been promoted to the most elevated positions in lunacy work in this country, I think we ought to do so. The Association, in making them honorary members, certifies its appreciation of the work they may have done, and shows that it regards them as being prepared still to support the objects of the Association in connection with the work they may be called upon to do in another sphere. I strongly support the proposition that these gentlemen be elected honorary members as a distinctive honour to be conferred upon them by this Association.

Dr. CONOLLY NORMAN—I beg very heartily to support the motion.

The PRESIDENT—These gentlemen are proposed in a proper manner, and are recommended by six Irish members of the Association. I therefore put it to the meeting at once that those two gentlemen be honorary members of the Association.

The motion was carried unanimously.

PARLIAMENTARY COMMITTEE.

On the motion of the PRESIDENT, it was unanimously resolved to reappoint the Parliamentary Committee.

PROPOSED APPLICATION FOR A ROYAL CHARTER.—COLONIAL BRANCHES.

Dr. HACK TUKE—I have to bring forward a proposition which has been before the Council this morning, that our Association should apply for a Royal Charter, and that in future our title should be "The Royal Medico-Psychological Association." It is well-known that societies are extremely anxious to obtain this privilege, although I am not aware of any very definite advantage that accrues from it; still it is well known that this title is supposed to confer very considerable general advantage, and I therefore proposed it to the Council this morning. The Council approved of the suggestion, and I was requested to mention it to the annual meeting, whose sanction is necessary before the application can be made. I propose that counsel's opinion be in the first instance obtained as to the proper course to be pursued and as to the expense involved, and according to that report will no doubt be the action of your Association. Probably we should not wait till the next annual meeting for the matter to be entered upon; but the President might call a Special Meeting in order to obtain the opinion of the members. I conclude by proposing "That it is desirable to apply for a Royal Charter and to add the prefix 'Royal' to the present title of the Association, and that the Secretary be requested to take counsel's opinion as to the proper course to be taken in order to carry this resolution into effect."

Dr. URQUHART—I suggest that we drop the "Great Britain and Ireland."

Dr. TUKE—You are thinking of the proposed Colonial Branches?

Dr. URQUHART—Yes. I think it should be the "Royal Medico-Psychological Association."

A MEMBER—Why not put in British?

The PRESIDENT—It was proposed at the Bristol meeting, that with regard to colonial branches, each member elected in the colonies be approved by the General Council. That resolution appears to me to come in properly at the present time when Dr. Tuke proposes some alteration in the name of the Association, and I move that this Association should arrange to receive Colonial Branches.

Dr. WHITE—I have very much pleasure in seconding that proposition. It was very fully discussed in Council as to how these Colonial Branches were to be established, and we formulated that resolution as it stands. Therefore, I presume that you will put it to the meeting that Colonial Branches shall be established on these lines.

The PRESIDENT—I take it that there can be no possible objection to such a thing.

The motion respecting Colonial Branches was carried unanimously.

The PRESIDENT—I shall now be very pleased to second Dr. Hack Tuke's proposition, and I put it to the meeting that steps be taken to obtain counsel's opinion on the proposition he has made in regard to a Royal Charter.

Dr. TUKE—And that a special meeting of the Association be called to take action accordingly, if such be their judgment.

The PRESIDENT—Yes.

The motion was carried unanimously.

UNIFORMITY IN THE EXAMINATIONS.

Dr. YELLOWLEES—The resolution I have to bring before you is a very formal matter; it is intended to secure uniformity in the examinations. As you are aware, we have had for three years an examination in different sections of the country. The examinations have been different for the different sections, and have differed very greatly indeed in their difficulty. It seems very desirable that the examinations should be uniform, and that the Examiners should arrange their questions so that the same questions should be taken throughout the country, and that the examinations should all take place on the same day. That can be done, because the written examination does not require the presence of any one of the Examiners. Either the head of the asylum or the Assistant Medical Officer can be present simply to see that there is no collusion and no copying. The papers are then sent to the Examiners, who appoint at their own

convenience the proper day for the candidate's attendance. It seems very desirable in this way to secure uniformity in the standard of examination, and I do not see any difficulty in carrying it out. As the presence of the Examiner is not required at the written examination, and as these examinations always take place at an asylum, there is always someone who can be present. I beg to move accordingly.

Dr. URQUHART—I have very great pleasure in seconding this proposition if it is arranged that this should be added to the motion—"provided that any duly-qualified person temporarily resident in this country may have a special examination on payment of double fees, subject to the consent of the President and Examiners." There exists at the present moment a difficulty with regard to these examinations. They are held twice a year in Scotland. A gentleman, holding a colonial appointment, returned home recently to take a Diploma of Public Health, towards which he is entitled to ask for a special examination. At the same time he desired to submit himself to instruction in an asylum, to qualify himself for the Certificate in Psychological Medicine. Neither the July nor the December examinations are suitable in point of time, and, therefore, the attention he is now giving to psychological medicine will be wasted as far as our examination is concerned, if Dr. Yellowlees' motion is carried as it stands. In order to meet such a case the *addendum* I have proposed should be accepted.

Dr. YELLOWLEES—I shall be very glad to accept that, always supposing that the candidate fulfils the conditions of our examination.

Dr. CLOUSTON—The carrying out of this resolution might result in a diminution among those who take this examination from the University of Edinburgh. Hitherto we have had a large number from among the members of my classes. I have intimated that it would count the same to sit for this certificate as for my class examination. The consequence was that a large number of young men who had been studying this subject, clinically or otherwise, came up for this examination if they could spare the three guineas.

Dr. YELLOWLEES—The examination is fixed for a time that will suit all classes of students.

Dr. CLOUSTON—As an assessor in Scotland, I arrange the questions with regard to the teaching in my classes. When you have to arrange questions for London and Dublin and elsewhere, I am not at all satisfied that those would suit the sort of teaching that I have given, or that others may have given.

Dr. NICOLSON—It seems hardly right to make these special candidates pay a double fee. If we said that such a candidate as has been mentioned should have a right to be examined under conditions to be approved by the Council, it would relieve us from the necessity of putting a condition of £ s. d. in the resolution.

Dr. URQUHART—I am bound to differ with Dr. Nicolson. It is rather an expensive thing, this examination, because some of the Examiners have to travel a considerable distance.

Dr. NICOLSON—I do not object to the double fee being demanded, but to its being stated in the rider.

Dr. CLOUSTON—I must say that I cannot help feeling that anything which will add to the general uniformity of our examinations in the three countries will be of great benefit.

The motion with the rider was carried unanimously.

NOTICE OF ELECTION.

Dr. HACK TUKE—I propose to add to the Rule Chapter VI., Section 1, the following words:—"The name of the candidate must appear on the circular calling the meeting, at which his name will be submitted for election." I am quite certain that at the time this rule was made it was the intention that the names of candidates should invariably be on the agenda paper sent to every member of the Association, and that no one should be elected whose name might be simply brought forward on the morning of the day of the meeting; but that a period should be allowed to elapse sufficient to enable every member

to have the name sent to him, so that he might know who would be proposed at the following meeting.

Dr. SAVAGE seconded the motion, which was carried.

MEDALS AND PRIZES.

The PRESIDENT—There is no medal to present this time, as there are no candidates.

THE JOURNAL.

Dr. RAYNER—Dr. Tuke has suggested to me that this being the Jubilee year of the Association, it would be well to bring the index of the Journal up to date. Dr. Blandford did this about eleven years ago, and it has been a great help to those who have to refer to the Journal. I should be very pleased to undertake the work of bringing the index up to date. (Applause.)

Dr. OSCAR WOODS—I propose that Dr. Rayner's offer be accepted with thanks.

The PRESIDENT—I am sure that an offer of this kind does not want to be put to the meeting. I take it that the motion is carried unanimously. (Hear, hear.)

Dr. HACK TUKE—An old and esteemed member of the Association has requested me to make this proposition, that the first volume of the Journal of the Association, which was then called "The Asylum Journal of Mental Science," be reprinted by the Association. It is not only very difficult to get, but there is another reason why it should be reprinted, namely, that it may be uniform in size with the succeeding Journals, which are of a different size. It would be, it seems to me, a very proper time to do this work, being the Jubilee year of the Association. I cannot speak as to the expense. I think, however, it is a very reasonable proposition, and it would be very gratifying to members to be able to secure for a small sum the first volume in order to complete their sets. It will induce them to look out for the second and following volumes among the secondhand book shops.

Dr. EES PHILIPPS cordially seconded.

Dr. CLOUSTON—I should be very sorry to make what might seem to be an invidious motion, that we do not reprint it, but candidly I do not think it is worth reprinting. I can understand Dr. Tuke standing there caressing this old volume—(laughter)—but it is only valuable as an archæological curiosity, and I do not think we should spend the hard-earned money of the members in reprinting it.

Dr. HACK TUKE—We propose to charge a small sum for it.

Dr. YELLOWLEES—Is there anything in it beyond its archæological interest?

Dr. HACK TUKE—There are contributions in it from some of our most respected members, living or dead, namely, Drs. Conolly, Bucknill, Thurnam, Boyd, J. Wilkes, R. Gardiner Hill, W. Ley, Manley, L. Robertson, Parsey, Stewart, Thomas Green, and others.

Dr. OSCAR WOODS—This motion seems to have resolved itself into a question of sentiment. If Dr. Tuke could ascertain the cost of reprinting, and report to the next Quarterly Meeting, we could then decide whether it was worth while or not.

Dr. CLOUSTON—Let us accept the motion subject to this provision, that it should not cost the Association more than £10. ("Oh, oh.")

Dr. SPENCE—I propose that the expense of reprinting be ascertained and reported to the next Quarterly Meeting, and that the Quarterly Meeting be empowered, if they think well, to authorize the reprinting of the same.

Dr. WHITE—I second that.

Dr. CLOUSTON—I think we should set a limit, and not allow any Quarterly Meeting or any body under the sun power to bankrupt the Association.

Dr. YELLOWLEES—I agree with Dr. Clouston.

Dr. WIGLESWORTH—I think Dr. Tuke did quite right in bringing the matter forward.

Dr. URQUHART—The difficulty with me is that I want the first six volumes reprinted. (Laughter.)

Dr. WOODS—You can get other volumes, but you cannot get the first.

Dr. HAYES NEWINGTON—No one can say exactly what the cost is likely to be. If each member is going to purchase his copy, those who want the volume should give in their names, because until we know the number of buyers we do not know what the cost to the Association is likely to be. But if we can afford to sell the Quarterly Journal for 3s. 6d. it would not be a tremendously large sum to waste.

Dr. WIGLESWORTH—At what price would you publish it?

Dr. HACK TUKE—Not less than five shillings.

The motion was proposed by Dr. SPENCER and seconded by Dr. WHITE, put to the meeting, and carried unanimously.

VOTES OF THANKS.

Dr. SAVAGE—The duty that devolves upon me is a pleasant one. We all of us know that the Association must have a head, and a head in good order. This last year we had an excellent President, one who worked most energetically in every respect, and attended our meetings not only in London, but in the provinces, and, as I am reminded, he has also been present in Ireland. There has never been a President who was such a pervading spirit. We feel all the better for this Scotch mixture. (Laughter.) Its brilliant qualities have, at all events, been in evidence this time. I am sure, without detaining you longer, without attempting to paint the lily or adorn the rose, or crush the thistle—(laughter)—you will recognize that I have the greatest pleasure in proposing a vote of thanks to Dr. Yellowlees. (Applause.)

The PRESIDENT—That does not want seconding. I am sure, Dr. Yellowlees, that every member desires me to convey to you the thanks of the Association for the manner in which you have filled the Presidential chair.

Dr. YELLOWLEES—It would be ungracious in me not to feel pleased with the compliment you have paid me. The work has been not only an honour, but a great pleasure, and I feel very grateful to you for the kindness you have shown me. (Applause.)

Dr. HAYES NEWINGTON—As time presses I simply move a vote of thanks to the Editors, the Treasurer, the Secretaries, and the Auditors of this Association. It is very obvious that in these prominent officers we have gentlemen who work most readily and efficiently to promote the welfare of the Association, and who devote a great deal of time and trouble to our interests. I beg to mention the names of Dr. Hack Tuke, Dr. Savage, Dr. Paul, Dr. Urquhart, Dr. Conolly Norman, and Dr. Fletcher Beach. (Applause.)

Dr. YELLOWLEES—I beg to second that wholesale vote of thanks, for no man knows better than your late President how well the work has been done.

The motion was carried unanimously.

Dr. HACK TUKE—As one of the Editors, and on behalf of my colleagues in the work of the Association, I beg to thank you very sincerely for this kind vote of confidence.

The PRESIDENT—I beg to propose that Dr. Hack Tuke, Dr. Savage, and Dr. Fletcher Beach be the delegates of this Association to the International Congress on Hygiene and Demography to be held in London shortly.

Dr. CLOUSTON seconded the motion, which was carried unanimously.

After luncheon the members reassembled to hear the President's Address. (See Original Articles.)

Dr. BAKER—It is my pleasing duty to propose a vote of thanks to our President, Dr. Whitcombe, for his highly interesting, thoughtful, and able address. No one can have listened to it without feeling that the President has brought to bear all his mind and will and strength to try and raise in our minds the thought, "How best can we do something to try and improve the condition of the insane?" I think he has hardly given enough credit to some of those

hospitals for the insane which are devoting themselves entirely to following out the scheme which he so ably discussed, that of taking persons of social and educational position at a low rate of payment. Many of these are received in our hospitals for the insane, and really the very *raison d'être* of these hospitals is to give to these poor people that for which they would have to pay higher rates in private asylums, to which, in fact, they could not hope to be admitted. In the institution over which I preside fully half the number of the patients are received at less than cost, and the whole of the larger sums received from the higher class of patients is spent in giving to the poorer people every comfort that can possibly be given to them. The reason why hospitals are so much needed is that they may give these poorer people these great comforts. I am afraid, with the existing competition, that we are rather likely to overlook this reason for our existence. These people who have been highly educated, and many of them luxuriously brought up, feel very greatly depressed and uncomfortable at having to be sent to any of the county asylums, and I do earnestly hope that what you have said, sir, may be an incentive to all of us to try and receive as large a number of indigent people in these hospitals as we possibly can rather than try to show that we are making a large amount of money. Another suggestion in the President's Address is being gradually adopted, that of providing separate buildings for the acute cases of insanity on the grounds of the institution. I am quite sure that there are many curable cases that are sent into relatively small asylums who do feel acutely the uncomfortable surroundings for want of their separation. I remember very recently seeing a lady in consultation who had previously been insane, and she said that it clung to her for a long time after leaving the hospital that she had been in such unpleasant surroundings, and that although she had been well for a number of years, she often felt intensely sorrowful in thinking of the sad scenes among which she had lived. I have great pleasure in proposing this vote of thanks. (Applause.)

Dr. CONOLLY NORMAN—I second this motion with very great pleasure. The subjects which the President has gone over are so many that for me to refer to them in detail would be tedious. We have listened to the early history of the Association with great interest. I was glad to hear from our President his general expression of satisfaction at the recent changes that have taken place in the direction of liberalizing the government of asylums in this country. It always occurs to me when I hear my friends on this side of the water lamenting the change in the mode of governing asylums that they are rather too timorous. I think the general course of English history, which has shown us so bright an example of freedom slowly broadening down, should lead us to be less fearful of the popularization of our institutions, and I am glad to hear that his experience at least has been that the more public county bodies which now exist are rather more instead of being less liberal than their predecessors. The whole history of our Association, as sketched by the President, recalls to one's mind the motto of this great progressive city in which we are to-day, "Forward!" It occurred to me, when we were talking a little earlier in the day about the progress of this Association, that we might in the future, after this Jubilee meeting, quarter the arms of Birmingham on its escutcheon, with this inspiring motto. (Applause.) As to the prejudice against private asylums and their proprietors, this is merely the reverse side of the prejudice and dread of lunacy which was so universal a few years ago. That dread, that hatred, and that disgust towards the lunatics is gradually being broken down, and the prejudice that did exist against lunatics is, to a large degree, transferred to those who attend and look after them—very unjustly—I hardly need say. The President has dwelt on a number of questions in a very light and delicate manner—"burning questions" nowadays in reference to the matters of hospitals for the insane and the further subdivision of asylum work. There are two or three things which occur to one in regard to these subjects. We hear a good deal nowadays about separation between acute and chronic cases. The great difficulty of course about that matter is that a

case that comes to us as a recent one is not in the least necessarily an acute case. Cases frequently come to asylums which are recent as far as any overt act is concerned, but which are really extremely chronic. I can hardly see how the division, which we hear so much about, between the acute and chronic cases can be practically worked. We have also heard a good deal with reference to the question of special hospitals. Now it occurs to me that for this disease of insanity the asylum is already the special hospital. If it is not, all I can say is it ought to be. That asylums are what they are arises from the necessities of the case, and if an asylum differs from other special hospitals it differs because insanity differs from other diseases. It has certain legal and social relations which cannot be avoided in dealing with insanity. We hear of special hospitals which are to be attended by a great consulting staff, but is that the way in which a hospital for any other special disease would be carried on? Are gynaecological hospitals manned by alienist surgeons, physicians and pathologists? No; they are manned by obstetric physicians and surgeons, and similarly hospitals for the insane should of course be manned by alienists. It is always the characteristic of Englishmen to depreciate their own work. One hears a good deal in this country of the defects of our asylums, but I think there is a reverse side to the picture, and our President, in telling us of the progress which has been made during the last fifty years, has pointed with characteristic modesty to the other side of the picture. He advocated uniformity in the mode of teaching our subject, but with all possible respect I deprecate uniformity. Uniformity means equilibrium, and equilibrium means death. Once you obtain absolute uniformity in the teaching of any subject the period for the development of that subject is over. I think every possible competition and every possible endeavour to produce multifariousness in the teaching should be aimed at. I have very great pleasure in seconding the resolution which has been proposed, and in joining my thanks with those of all the members of the Association for the admirable address we have heard.

Dr. YELLOWLEES—The motion has already been passed by acclamation, and in your name I will tender to Dr. Whitcombe our very hearty thanks. (Applause.)

The PRESIDENT—Gentlemen, I have to thank you very warmly for the very patient hearing you have given me. As I stated in my Address I was perfectly aware that my opinions were not altogether those of others, but I ventured, because of the position in which you had placed me, to bring before you subjects which I hoped would be the material for much discussion. (Applause.) The multiplicity of the subjects I have dealt with, each one of which individually was sufficient for a Presidential Address, may, I hope, be taken up as subjects for discussion at our quarterly meetings. (Hear, hear.)

Dr. CLOUSTON—I agree thoroughly with most of the opinions contained in this suggestive Address. In the first place, in regard to teaching, I am very glad to inform this Association that that great medical teaching body, the University of Edinburgh, which has something like two thousand medical students, will in future provide that all its students shall study mental diseases, an ordinance to that effect having been passed by the Scottish Universities Commission a few weeks ago. (Applause.) This, I think, cannot fail to have a very great influence in the study of our subject. It cannot but happen that if we have something like two hundred men a year paying some attention to the subject we shall have twenty or thirty of them with original minds taking up the study and doing original work, whether in asylums or wherever they may happen to be. Thus we shall have medical men in various spheres who will have studied the subject and will be able to read intelligently these problems, which hitherto men in their position have not been able to deal with for want of special education. This, I think, will give an enormous fillip to the development of our subject in the future. (Hear, hear.) I can scarcely agree with you, Mr. President, as to the utility or advantage of uniformity of teaching. I think,

with Dr. Conolly Norman, that the more diverse the teachers are in their methods the better. I think we have not yet arrived at a perfect mode of teaching medical psychology, whether clinically or by lectures. There is a name to whom we are more indebted than many of us know—Griesinger—as a teacher and writer on mental diseases, whom we all followed more or less; but we ought to teach individually and not slavishly to follow or copy him or any other teacher. But I have little doubt that you mean, not uniformity of method, but that we all should endeavour to teach our students the clinical facts at present recognized by all to be definite and reliable. There is another point, a small one, on which I could scarcely coincide with you. When I heard your Address and thought of its general tendencies it scarcely sounded to me in accordance with the spirit of the times in regard to the mixing up of different classes. We are in the beginning of a democratic era, when instead of separating men into different classes we are all going to be welded into one. Socialism is in the air in this new era—(laughter)—and when I look about me at the hall in which we are met and think that this hall is ordinarily used for the amusement and recreation of a number of our fellow creatures, whom we at present very badly and improperly ticket as “paupers,” I ask whether any class of society might not meet in this room with the greatest pleasure and edification—(applause)—and enjoy being in this room and looking at its architecture and its pictures. (Hear, hear.) In Scotland we have a large number of institutions where both classes are mixed to a very considerable extent. They mix in church, in the grounds, in some recreations, and in the general management, and I think I can appeal to my friends Dr. Rutherford and Dr. Yellowlees and others in Scotland whether we have been injured in our mode of treatment or financially, or otherwise, or whether the people of Scotland, who are supposed to be a shrewd and practical people, have anything to say against it. Therefore I do not believe in the difficulties you called into existence. There are a great many people who, though they are paupers, are well educated and have fine feelings, people who could associate with any “class” of society, and I do not think it is a right thing to be talking about them as though they were of a different flesh and blood from the next “class” above them, and to talk as though it were going to be a tremendous hardship to mix one with the other. I am no prophet, and I know it is a dangerous thing to prophesy, but as your county asylums in England come to be officered by the men who are at present assistants, and they find that the lunacy law allows them to make provision for a certain number of private patients, I shall be very much surprised indeed if you do not find in every asylum in England this mixing up of classes. I believe that this tends to raise the status of asylums in many respects; it is good for the patients and it tends to elevate the staff. I know the idea of having private patients induces people to come as nurses and attendants who would not think of coming if the institution were thought to be purely a “pauper” asylum. Therefore I distinctly differ from the rather strong language you used, Mr. President, in regard to this matter. Lastly, one word about nursing. I think there is one thing that has scarcely been sufficiently dwelt upon, the immense amount of purely selfish comfort you and I enjoy from having educated nurses, from being able to trust them, and having them well skilled in carrying out intelligently our orders for the actual treatment of disease. In dealing in our hospital block with over seventy female patients and a much larger staff than usual, with the diet and everything different from the ordinary wards of an asylum, I have the very great advantage of having the very best head nurse in the United Kingdom—(laughter)—who is able to watch the effects of drugs, to use special diet in different cases, to provide for risks and contingencies, and to train our probationers in a way that takes a load off my mind. In conclusion, Mr. President, I congratulate you upon your Address and thank you for it. (Applause.)

Dr. HACK TUXE—I should like to express my admiration and thanks for the very useful Address of the President. He has quoted from the original circular

that was issued when this Association was formed. I should like to refer for a moment to the period immediately preceding the origin of it, because it appears that some pain was given to the worthy progenitor of this Association, Dr. Hitch, by its having been subsequently asserted that it originated at a festive meeting. I don't know that he need have taken it to heart so much, but in a letter he addressed to me, some years ago, he says: "At the meeting of the Association, held at one of the County Asylums, the President made a speech in which he stated that the origin of the Association arose out of a festive meeting of some of my medical friends. This being stated by the President of the meeting, and subsequently published, I confess my interest in it diminished very much from that time, the more so as no member present took the trouble to correct the President's mistake." I believe the only surviving original member of the Association is Dr. Davey, who formerly was at the Hanwell Asylum, and afterwards at Northwoods, Bristol.* Of the distinguished foreign associates who were elected very soon after the Association was formed, M. Calmeil, whose name will always be associated with general paralysis, is the only survivor. When he looks back to the time when he wrote his remarkable work, in 1826, on this form of insanity, he must be very much struck with the advance that has been made in its study, and the intense interest a disease, which then had for him so great a charm, still possesses for medical men at the present day. (Hear, hear.) I think that our meeting in Birmingham at the present time, although some may possibly think we ought to have met in the Metropolis, is fully in accordance with the views of those who founded the Association. It should never be forgotten that one of the leading objects of this Association, as laid down when it was founded, was that we should meet frequently in the provinces, and especially that we should meet at some asylum. It was stated in the very earliest resolution that meetings should be held year by year in the United Kingdom in one or more of the hospitals for the insane, and we have certainly followed the intentions of the founders of the Association by coming here in this our Jubilee year. (Hear, hear.) Dr. Clouston has spoken on the question of education, and I heartily sympathize with him in regard to the advance that has been made in the education of medical students in psychology, but as one of the Commissioners said to me the other day, "You must take care in attempting to do what you are now doing in regard to examinations that you do not also increase the number of lunatics." (Laughter.) One is a little afraid that by over-study we may increase the number of patients, as well as the knowledge acquired by medical students. With regard to another question, we really have at the present time made considerable advance in the separation of various classes and the provision of separate buildings for the insane, and I think some are hardly aware how much has been done in that direction for some years past. I think that if members would take the opportunity, when they are in Germany, of visiting, for instance, the Alt-Scherbitz Asylum, they would find that it is so arranged that on the same estate they are able to separate the different classes according to their mental condition. That amounts, I think, to pretty much what is required in the direction of separation of different classes of insanity. So in America, in the Kankakee Asylum, the system is carried out in its entirety. Therefore, I think that subject is not at a standstill by any means, but is being increasingly carried out. I think that the Address of our President is one of very great interest, and extremely practical in its character.

Dr. WALMSLEY—I see that several Boards of Guardians have notified to the Local Government Board that some such steps would be advisable. In giving his evidence before the Hospitals Inquiry Committee Dr. Bridges, the Local Government Board Inspector, said, "It is the desire of the Local Government Board to link all their institutions with some of the London hospitals, in the

* It was suggested that Dr. Hitchman, who is still living, was an original member, but we find on enquiry that he joined at a later period.

hope that some of the assistant surgeons should be induced to come down there; in fact that they should be invited to come down there and take with them large bodies of students and general practitioners to observe the cases." In that case County Asylums would become Local Government Board institutions. I venture to put it to you, if it would not be fortunate when some such suggestion is made, that you should be in a position to reply, "Our asylums are already constituted educational centres, and there are systematic courses of lectures and demonstrations given"—as at Bethlehem, where there is a course which a large number of students attend—"by qualified men." I think it becomes a question whether some such system should not be carried out in every one of our asylums.

Dr. SAVAGE—I feel that the Address is one so eminently practical that it should be thought over before being talked about. There are a few points which I think are quite open to discussion. On the question of uniformity of teaching, for instance, to which Dr. Clouston has already referred, I quite agree that by no possibility can there be a time-table clause or any thorough method of securing similarity in the teaching. But it seems to me that in the future education of students a limit should be made to the lectures, and that some definite understanding should be arrived at as to what is meant by teaching. Dr. Hack Tuke and I have recently had brought before us by leading members of the profession the little importance which they attach to formal lectures. They think that in insanity the teaching should be almost purely clinical. We think no instruction complete without some formal lectures, and I rather take it that the President in his Address, in referring to uniformity of teaching, was thinking more that there should be some uniformity as to the proportion of lectures and the proportion of clinical teaching. Again, I think I rather agree with the President, and not with Dr. Clouston as to the socialistic principle. We are not all Scotch, and we are not all well educated. Education in Scotland is very different to education in England. It has long been recognized that the primary education there is superior to the primary education hitherto given in England, and in Scotland a man of the artisan class, at all events, can more easily mix on a level with his social superiors. When you find blacksmiths who can correct your quantity in Latin and Greek, and so on, it is very different, but for the lowest classes in Birmingham to mix with the highest classes in Birmingham in our asylum would not be conducive to the good of either. That is my personal feeling—it may be wrong. It is all very well to talk about lifting up the poor, but you may degrade them by interfering with their freedom of movement. As far as feelings are concerned no man would feel mixing with people of a lower class more than a wealthy "self-made" man. You may say it would be a good moral lesson, but giving moral lessons is not our function. Our function is to cure the patient, and if by putting him into more congenial surroundings we can facilitate his recovery, we ought to try and give him those surroundings. The mixture of classes answers admirably in Scotland, we are told; it seems to answer in America. Therefore on us rests the onus of proving that it would not answer elsewhere. That is what may be said, but, as far as a mere expression of opinion goes, I am rather in accord with the President than with Dr. Clouston.

Dr. NICOLSON—A point occurs to me in dealing with the President's Address. I am bound to say that the inmates of Broadmoor are largely the indications of the failure of our profession to make itself acquainted with psychological work, and practically carry it out in the houses of the artisans and poorer labourers, who ultimately come to Broadmoor because they have not been properly looked after. Quite half of the inmates there I could point to as being failures in that sense. Medical practitioners are so unwilling to assert themselves and to have the courage of their opinions, and to insist upon their patients who are going off their heads being removed in time from those who are in danger from their dangerous proclivities and from the opportunities of carrying out their high and mighty

notions. The result is that the patients are allowed to carry out these violent acts and to come to a premature end. There are a great number of cases in which the medical practitioner has hinted that the patient ought to be carried away, but has left it to the family to carry out his advice—that is, generally speaking, not to carry it out. After what the President has said to-day in the way of encouraging increased education in psychology amongst medical men, I do not think I need say anything more as to the importance of this matter, and as to the special risks that are incurred by not saying in such cases that the patient must be removed to a special asylum sooner. If the right practice in these matters becomes more general in the profession, much good will have resulted from the President's remarks on the question of education. We want those who are sent out from our medical schools instructed in the preliminaries of psychological work so as to be able to see what is probably going to happen in the minds of the unfortunate patients who happen to come before them in private practice. (Hear, hear.)

Dr. YELLOWLEES—The President made one valuable suggestion that ought not to be lost sight of, and that is the formation of an Education Committee. There are a great many questions bearing upon the education of nurses and students which might very properly come before such a Committee, and I think we ought to have such a Committee. As we have half-a-dozen Examiners, I think the Examiners and the President might constitute a Committee for educational purposes, always to be available for reference on occasion arising. The paper was so full of suggestions that one hardly knows what to take first. As for the indictment that the medical profession fills Broadmoor by not being more explicit, I scarcely accept that, though certainly increased knowledge of insanity would enable them to speak more emphatically as to the treatment necessary for the "half-baked" folks who ultimately reach Broadmoor. As to the mixture of all classes in asylums there is a great deal to be said on both sides. I am expecting shortly to lose all my pauper patients, and I look upon that as by no means an unmixed gain. I have seen patients of the better class who were much benefited by having the opportunity of visiting, helping, teaching, and reading to those of a lower grade, just as they would have done at home when busy in works of well-doing. I heartily join, sir, in the praises that have been offered to you for your admirable Address. (Applause.)

The Meeting then separated.

The members dined together in the evening at the Great Western Hotel, Birmingham. The Mayor (Mr. Clayton), Sir Walter Foster, M.P., Sir Thomas Martineau, Mr. Lawson Tait, Dr. Wade, and Mr. Alderman Lloyd were among the guests.

THE BRITISH MEDICAL ASSOCIATION.

BOURNEMOUTH, JULY, 1891.

SECTION OF PSYCHOLOGY.

President—P. MAURY DEAS, M.B.

Vice-Presidents— { HENRY JOHN MANNING, M.B.C.S.
 { D. NICOLSON, M.D.

Honorary Secretaries— { P. W. MACDONALD, M.D.
 { WILLIAM HABGOOD, M.D.

WEDNESDAY, JULY 29, 1891.

The PRESIDENT proceeded to deliver his Address, in which he dealt in a masterly manner with Lunacy Legislation and the Lunacy Act, 1890. With regard to private asylums, he was of the opinion there was a distinct demand for such institutions, and that if the public confidence in them ceased the public

would cease to have recourse to them. He then dealt with the protection which the new Act was supposed to give to medical men signing certificates, and proceeded to criticise the spirit of distrust and suspicion which ran through the Act. With regard to the introduction of the "judicial authority," he thought nothing could be more ineffective, and he pointed out how the introduction of urgency orders rendered it easier to get a person under treatment, and that although this was an advantage to the patient, it was not exactly what was intended by the framers of the Act. Again, the Act places the medical chief of an asylum more in the position of a gaoler. He then classified the alleged difficulties in working the new Act into three divisions. 1st. Those which seem good and useful. 2nd. Those which seem unnecessary or useless. 3rd. Those which seem positively hurtful and objectionable.

1. *Good and useful Enactments.*—(a) The supposed protection to medical men signing certificates he considered insufficient. (b) Power for local authority to provide accommodation for private patients and other classes of the insane was a valuable addition. (c) Enactments for regulating and restricting the reception of insane persons into workhouses was a decided advance. (d) The provision for private patients being placed under treatment without delay in urgent cases is an unqualified boon, also that allowing the reception of voluntary boarders.

2. *Unnecessary or useless Enactments.*—(a) The reception order by a justice acting ministerially would be unobjectionable, but the justice and not the asylum medical officer should be responsible for all documents being in due form, and the Commissioners in Lunacy should deal directly with him. (b) The multitudinous reports are a masterpiece of useless and unnecessary circumlocution. (c) With regard to the duration of reception orders, this is not of the smallest practical value and is a veritable trap for the unwary. (d) The prohibition of the licensing of any new private asylums has established a most valuable monopoly for the licenses of the private asylums. (e) The section which prohibits a member of a committee of a registered hospital from presenting a petition for the reception of a patient into that hospital is most unnecessary and contrary to justice and common sense. (f) The power given to the Commissioners in dealing with registered hospitals is of a most objectionable and inquisitorial character.

3. *Hurtful and objectionable Enactments.*—(a) Calling the medical superintendent of an asylum the manager. (b) The right of a patient to be examined by a justice. (c) The posting of notices in asylums regarding patients' correspondence. (d) The power given to the Commissioners to give an order for the visiting of patients or for their medical examination. (e) The giving power to receive more than one patient in an unlicensed house. (f) Restrictions as to mechanical restraint. (g) Empowering the Commissioners in Lunacy to make rules.

The PRESIDENT concluded by stating the following rough heads as indicating the direction reform should go :—

1. Insanity and its treatment should be a compulsory subject in medical education. 2. No one should give a medical certificate of insanity except properly qualified. 3. Especially so with regard to asylum officers. 4. The appointment of district inspectors and certifiers. 5. The inspection being that of procuring more frequent visitation of individual patients. 6. Diminution of the powers of the Commissioners who should be made more a medical board with special experience in the treatment of insanity. 7. The simplification of legal forms. 8. The cumbrous and costly method of inquisition to be simplified.

Dr. NICOLSON, in relating his experience of the delay occasioned by the provisions of recent legislation, called attention to the wants of knowledge of the treatment of insanity among the members of the profession generally. Were this not so the insanity of individuals would be discovered before acts of violence were committed.

Dr. FARQUHARSON, M.P., said the very able and outspoken address of the President was especially interesting to him, as he had followed the Lunacy Bill very carefully in its passage through the House. Already it had been found necessary to introduce an amending Bill to prevent a deadlock. He thought the danger to medical men from signing certificates would be minimized if the plaintiffs were bound to pay into Court a proportion of the costs before the action. This would prevent actions being brought by men of straw.

Dr. BUCKNILL approved of the bringing in of the judicial authority and deprecated the tone of blame which ran through the President's Address.

Dr. DRAPER suggested the establishing of local homes for the reception of cases suspected of being insane; these should be examined by an expert specially appointed. Again, a medical man called in should be paid for examining the patient whether he certified or not.

Dr. ROLSTON supported the suggestion of Dr. Draper.

Dr. SAVAGE thought the Act was defective, and there was a tone of distrust through it from first to last. The Act did not sufficiently protect medical men. Voluntary boarders should be encouraged by the Commissioners, whose duty it was to administer and not to make the law. Again, although a person was not decidedly insane, he should be allowed to submit to treatment. The procedure of inquisition required amendment, and governors of hospitals should not be prevented from signing orders of admission.

Dr. CLIFFORD ALLBUTT, from his position as a Commissioner in Lunacy, forebore discussing the Address, for which the meeting had so much cause to thank the President. With regard to voluntary boarders, the object was to check abuses and not to discourage legitimate voluntary boarders.

Dr. NEEDHAM spoke against the many absurd and vexatious provisions of the Act. The mass of returns required at irregular times for no object was most obnoxious.

Dr. LANGDON DOWN pointed out how difficulties arose in procuring judicial orders of admission. He did not consider the intervention of the judicial authority any safeguard whatever to the public.

Dr. STANLEY HAYNES commented adversely upon the provision allowing more than one patient in a private house. He regarded the Act as unsatisfactory and vexatious.

Dr. OUTERSON WOOD thought the Act, having had upwards of twelve months' trial, they were in a position to criticise it. The appointment of every Magistrate as a judicial authority had now been proved necessary. The difficulty of procuring medical certificates continued. In the case of voluntary boarders the Act said *any person* may be so received, and such admissions should be encouraged.

Dr. C. ALDRIDGE spoke strongly of the inconvenience, worry, and hardship inflicted by the provisions of the Act.

The PRESIDENT, in the course of his reply, drew attention to the attempt made in certain quarters to discourage the admission of patients as voluntary boarders, and called attention to the wording of the Act upon the subject.

A paper was then read by Dr. T. CLIFFORD ALLBUTT, F.R.S., on "The Proposed Hospitals for the Treatment of the Insane." (See "Original Articles.")

The PRESIDENT—We must all express our obligation to Dr. Allbutt for the very interesting manner in which he has opened this discussion, and for his extremely valuable suggestions. It is stated on the agenda paper that, in conjunction with Dr. Allbutt's paper, Dr. Walmsley will read one on "The Desirableness of Throwing Open our Asylums for the Post-Graduate Study of Insanity." As that touches on matters alluded to by Dr. Allbutt, it is desirable that Dr. Walmsley should read his paper before we enter upon the discussion.

Dr. WALMSLEY then read his paper. (See "Original Articles.")

Dr. SAVAGE—One feels that the agitation of this subject is of importance, as a notification that the subject of lunacy is being more carefully studied.

In all directions one finds there is a desire on the part of the public, as well as of medical men, to know more. I think nearly all of us who have practical knowledge of insanity, and especially those who have had a good deal to do with both treatment and teaching, are sure that the essentials of a hospital are not covered by the proposition made by the London County Council. First of all, for the treatment of the insane, one ought, as Dr. Allbutt pointed out, to consider fully that much more depends upon other things than drugs. We all feel that the enormous amount of arsenic and phosphorus and similar drugs that have been given are of little or no use. The gross ignorance on subjects of the kind is astonishing. I remember being called into the country to see an idiot, when the doctor said, "I have done all I can; I have been giving phosphate of iron." If more knowledge of insanity existed, not only among the public, but among our own profession, perhaps such things would not occur. With regard to the question of teaching the students in London, if, as I say, it has become absolutely necessary that teaching should be considered, the present means for teaching can be organized. At the present time Bethlem Hospital is pretty fully supplied with students. But there are many other hospitals and asylums in the neighbourhood of London, and I agree with Dr. Walsley in saying that immense advantage would accrue not only to the patients, but also to the medical officers themselves, if the asylums are utilized for teaching. One is sure that the admission of students, of classes, into an asylum is not only good for the medical officers, but for the patients. One feels that the lines upon which this proposed hospital has been started are wrong, but in connection with asylums, one recognizes that some greater and more useful plan may arise. We all feel the importance of having had Dr. Clifford Allbutt's and Dr. Walsley's opinions on this subject.

Dr. MACPHERSON—Up to the present time we have been directed to five separate asylums to find a dozen hospital classes in connection with those asylums. The asylum over which I have the medical supervision is at present erecting a large hospital in connection with itself. But it has occurred to me that the discussion might have taken place from the very opposite point, and that, instead of talking about the establishing of lunatic hospitals for the treatment of the insane, the energies of those who have directed attention to this matter might more justly be directed towards dispersing and removing all the chronic harmless patients from the existing asylums. In this way, I think, the energies of medical officers of existing asylums would be less hampered, and their work would be less interfered with by administering to the wants and necessities of the large numbers of harmless chronic patients who do not derive any benefit from medical treatment. In Scotland we have had for a long time the boarding-out system of pauper lunatics. It has worked very well, in so far as it has kept down the numbers who accumulate in pauper asylums, but I fear that it has at last reached the breaking point, because there is a tendency on the part of the peasantry who used to receive these patients to expect more money for their maintenance, and because there is also a tendency on the part of the boards to reduce the weekly charge. The difference between boarding-out and keeping a patient in an asylum is therefore so little that the parochial authorities won't exert themselves to do so. I think it is right that we should in no way attempt to conceal the fact that medical skill can do nothing towards the cure of those chronic cases. I therefore think that measures should be adopted to draft these patients into industrial colonies or large chronic institutions for such cases, where the elaborate and expensive working of the majority of asylums for acute cases is not required. I believe that by removing chronic patients, leaving only the curable and those needing attention in the existing asylums, you will greatly develop the curative energies of those asylums, so that each one will become a curative hospital for insanity without the necessity of adopting the plan proposed by the London County Council's Committee.

Dr. MEECIE—I think we have had a very great advantage indeed in hearing the opinions of a Commissioner in Lunacy on this vexed question of the con-

tinuation of asylums or their substitution by hospitals, and I have no doubt it will be a gratification to all to find that the opinion of such an authority is distinctly in favour of the continuation, with modifications, of the present system. It seems to me, as has been said, that this idea of the founding of hospitals for lunatics is, as it were, the inarticulate expression of dissatisfaction with the present way in which lunatics are cared for and treated, and it seems to me that this is due to the fact that they are treated wholesale. The cry is for more individuality in the treatment of the insane. In this connection I would deprecate very strongly the suggestion made by the last speaker, that chronic cases should be separated from the acute, for he seems to assume that the chronic case is necessarily incurable. I am perfectly sure that that opinion is erroneous, and that there are many old cases which astonish us by complete recovery. More than that, I wish very strongly to put this opinion before the meeting, that however chronic a case may be, and however long standing it may be, there is no case which is not improvable to some extent, provided, that is to say, that we treat it individually, and study and treat it with a view to its own individual peculiarities. In cases of very long standing, 25 and 30 years, I have seen very material improvement. Then, the view that Dr. Clifford Allbutt put before us of the little village for lunatics, in which each section, with its bungalow and so on, should be provided for, with all the proper surroundings adapted to it, is a very charming one, and we should all desire to see it brought about. Asylums are apt to stagnate, and in order to do good work, and to keep fully alive the intellectual side of one's nature, it is absolutely necessary to have abundant contact with other minds. I don't see how that is to be obtained without throwing open the doors of the lunatic asylums to the profession at large, and (under reasonable restrictions) allowing the profession of the neighbourhood to go in and study lunacy within the walls of the county asylum.

Dr. MACPHERSON—May I explain that I did not mean that no chronic case of long standing had recovered, but that the great majority of cases of long standing are incurable.

Dr. BUCKNILL—I don't know whether a man who has not made up his mind has any right to address such a well instructed audience as this. A man who enters into a discussion is generally assumed to have made up his mind one way or the other. I am not in that position. I have thought a good deal on this subject, and I hold my judgment in suspense, and am bound to do so until I see good grounds for differing on the one hand from the position which has been taken by my old friend Sir J. Crichton Browne, or, on the other hand, from the position which has been formulated somewhat in opposition to this by Dr. Clifford Allbutt, also my friend. I think I see the way to an agreement between them. I think that the position taken up by the former tends to the question of knowledge; some more intimate knowledge than we possess of the nature of insanity—some scientific knowledge of the nature of insanity which we may possibly come across by adopting what he suggests. Now, what we have heard so ably and eloquently set before us to-day by Dr. Clifford Allbutt tends rather to the perfection of treatment. Now, if the hospital for minute observation, and possibly experiment, had been established by the London County Council it is possible that some discovery might have been made which would have thrown the electric light of science upon the operations of the brain. I don't think, however, that if I were to become insane myself I should wish to become an inmate of that asylum. (Laughter.) I would rather inhabit one of the cottages which Dr. Clifford Allbutt has pictured to your minds, where individual treatment would be adopted, and where the individual knowledge of the medical man would cheer and console. I quite agree with Dr. Allbutt that the physicians of a curative hospital should not be visiting medical officers. They should be resident. I am old enough to remember the days of the visiting physicians of asylums, but in no case did I know of any asylum where the visiting physician was of any good. I was appointed to the Devon Asylum

myself in 1844, before it was opened, and there were visiting physicians to a good many asylums. They were really obstructive, and of no assistance, a great many of them. I think, therefore, that to return to the system of visiting physicians would be of no good whatever. What strikes me with regard to the possible improvement of county asylums is the increase of the medical staff. In the United States, and I think on the Continent, they have special persons—medical men—whose duty it is to make scientific observations—pathologists they call them; but they ought also to be chemists, and be also able to take the variable character of the secretions, and to relieve the superintendent, who ought to be all that Dr. Allbutt describes him, and I am fain to believe very frequently is. Such an arrangement ought to be able to relieve the burden, and duty, and responsibility from him; and I think that the medical service of county asylums might be so arranged and so improved that a good deal of scientific investigation might be carried on there. I cannot endorse the word I have heard since Dr. Clifford Allbutt's paper was read about "failure." I read the *Journal*—which is worth reading in these days—and I noticed there a record of 68 per cent. in one of our asylums cured last year. That is not a failure, and will compare with the treatment of almost any serious disease. Therefore do not let us say our treatment in the county asylums is a failure. I endorse what was said by a gentleman just now, that almost all cases are improvable, and that is an enormous gain. It is an enormous ground for satisfaction and pride. Of course one would like to cure all the patients who come under one's treatment, but that cannot be. Still, if we can cure 68 per cent., and if we can improve all the remainder, it is something to be proud of. I don't know that I have anything more to say. While, therefore, I don't think it is our place to object to the establishment of a hospital for observation and experiment if the County Council of Middlesex, or any other body of men who have the expenditure of public money, can afford to spend money in such a way, I think we are quite justified in claiming for our own treatment and our own system—our own greatly-improved system, which I have seen the growth of—that it is now a thoroughly successful system, and that we are quite justified in saying that no one has a right to taunt us with failure.

Dr. HOWDEN—I have listened with great pleasure to Dr. Clifford Allbutt's address, which contains so much good sense. I regret that I have not the fortune or misfortune of having formulated my ideas on the subject. My mind is very open indeed, and at present I should feel exceedingly disinclined to express any opinion as to the desirableness or otherwise of this proposed hospital. The only thing that weighs with me is that there are so many "ifs" about it. *If* it is to do good, certainly we should have it. But what is to be done? I don't know that there is any particular medicine which could be found and used in such a hospital that could not be employed in any asylum if the medical skill were sufficient, which it ought to be. I think the great thing in an asylum, or in lunatic colonies, is to have the greatest possible variety of treating patients; not to have the patients contained in one large block of buildings, such as we were accustomed to some years ago, but to have every variety of accommodation and means of treatment. Why should we not have the hospital in connection with an asylum, where you could apply other means of treatment, just the same as you would in London? In the institution I am connected with just now we have built a hospital containing 100 patients, 50 of each sex, and although we have not done anything very wonderful in the way of medication, we have surrounded the patients with complete sanitary conditions, and everything we could think of to make them well, and I am bound to say many of those chronic patients who would probably have been sent away to an incurable hospital have since been in a more favourable mental condition. I don't know whether a chronic asylum is a good thing or not. I

have very great doubts about it; and I don't see why in the large lunatic colonies, as I prefer to call them, we should not have cheap wards where chronic patients could be more cheaply kept than in the main building or special hospital. We have in Scotland, besides the boarding-out system, a plan of putting small colonies of patients in cottages and separate houses on the estate under the charge of the tenant, small colonies of 15 or 20, who have absolutely no restrictions upon their liberty. These patients live on the farm, and they seem so contented and well that many visitors ask why they should be kept there at all, and not sent home? Unfortunately there is a very large number of chronic lunatics who don't do well at home under the care of their own relatives, and who have not the supervision necessary when they are boarded with strangers. As Dr. Macpherson has said the time has come when there is a difficulty in getting people to take boarders on that system. In the old days a great many people were always glad to eke out their incomes by taking patients at five or six shillings a week. That time is past, and now they won't take them, their circumstances being such that it is not an advantage to have patients of that kind boarded with them. I should have been very glad if we had had some knowledge of what is proposed to be done in this London hospital which we cannot do as well in a district county asylum. Possibly there may be something; there may be brain surgery, for instance. That is a matter which may be supposed to be likely to be considered, but I don't think the time has come when we can give our sanction to indiscriminate brain surgery. (Hear, hear.) If it is a thing we have a great deal to hope from, we have not quite arrived at that stage yet. If this hospital would teach us country people to adopt measures for the cure of insanity, I am sure we shall be only too thankful to adopt them, whatever they are, but I think we are quite as well prepared to adopt them in a county as in a metropolitan asylum.

Dr. P. W. MACDONALD—As superintendent of an asylum I must thank Dr. Clifford Allbutt for two remarks he has made. The first is that he, as a member of the Lunacy Commission, has raised his voice so distinctly and clearly against building huge asylums. If a superintendent who now manages a county asylum with 2,000 patients, being a humane man, says it is easy to work it, I can only tell him I don't believe it. He cannot do it. Another thing I was very glad to hear Dr. Allbutt say was in reference to the many who complain so much of the lay work they have to do. My opinion and experience is that you never hear the hard-worked superintendent who is thoroughly imbued with the true scientific spirit of his work, complaining of his work, but he takes it, as I always have, as a mental recreation. But I fear very much that a great many superintendents do not, as Dr. Allbutt hinted, delegate certain duties to others, but keep them on their own shoulders, and thereby increase their burdens. In one thing I differ entirely from the opinion that has been expressed as to the future. I agree that a hospital should be built in connection with the county asylums, but I hope never to see the chronic cases separated entirely from the acute. If you do that, what does it mean? It means that you take away from us the opportunity of getting experience of chronic insanity. From what class do we get our pathological knowledge? Is it not from the chronic? A few cases die, and this gives you the opportunity, but if you take them away you run the risk of not getting any post-mortems. I think in most well managed asylums you have your chronic wards, your acute hospital wards—such as have been built so successfully by the last speaker in Scotland—as to form a perfect model to the whole of the asylums of the United Kingdom—and it should have the infirmary ward.

Dr. CLIFFORD ALLBUTT, in reply, said (after making a few remarks as to the views of the Commissioners, which he preferred not going further):—I venture to think that the scheme which I put forth, and which I told you was not original, is not Utopian at all. It is a scheme which is more or less in exis-

tence, although, of course, there are no two schemes exactly alike, but it is running on all fours both in America and on the continent. This plan of breaking up asylums into separate buildings, and having bungalow houses for certain classes of cases, is done both in America and in Germany in a certain way which may or may not be perfect. It is certainly not a matter of Utopia. It is done there, and will, in fact, come into England. I know that Dr. Hack Tuke is in favour of a scheme of that kind, and urged it upon the London County Council. They have declined at present, but I know that he has pressed it upon them very strongly. In cases where the scheme is defective I think it is due to not being well carried out. In one large German asylum certain wards are stuck down among piggeries and things of that kind, which obviously the meeting would complain of, and properly so, but that does not affect the essential nature of the scheme. There is another matter in which I have been very much misunderstood, as it seems from the remarks of Dr. Macdonald, which I was glad to hear. I did not think it would be possible that I should be supposed to say that the chronic insane should be separated from the acute. I quite understand Dr. Macpherson took that point, and I am bound to say that when I was a visiting justice I did think that; but since I have had my experience very much enlarged I no longer think so. What I mean was simply that there should be a separate hospital, not in the same building, not part of an immense huge public block or barrack, but grouped round about it on the same estate, and sufficiently near to readily give access from one place to another; what are roughly called bungalows, to contain, say, thirty patients apiece, if not too costly, scattered about the estate if you like, or grouped round the central hospital, and all under one superintendent. The arguments Drs. Macdonald and Mercier put forward against separating the chronic from the acute in entirely distinct asylums were, I think, unnecessary, as I have held the same view for some time. With regard to Dr. Bucknill and Sir J. Crichton Browne, I have been a little misunderstood there. I have not been abusing Crichton Browne at all. So far as the published report goes—I did not hear his evidence—he did not anywhere, I was rather surprised to find, advocate the establishment of a hospital entirely on the lines proposed by the London County Council Committee. At any rate, he is not stated to have favoured the plan of having general physicians visiting the hospital. The scheme is entirely Dr. Batty Tuke's, so far as I know, and taken up by some other members of the profession. Crichton Browne has merely said that he is exceedingly anxious to see light thrown upon the whole subject of investigating insanity. The difficulty about having one in London is that you can't have one to give that treatment which we think the right treatment for the insane. There is no reason why it should not be a few miles out of London, where estates could be got, and if you have a resident staff the thing could be done. I am very far indeed from objecting to seeing a hospital of that kind, only you must have plenty of air and water, and opportunity for working outside the town. I think, however, that such a hospital would only give a special impulse to the subject while it was new. I think after twenty-five years it would take the position of any other hospital, such as that superintended by our President, and would then settle down on a level with the others.

THURSDAY, JULY 20, 1891.

Dr. SAVAGE read a paper on "The Influence of Surroundings on the Production of Insanity" (see Original Articles). This was followed by a communication by Dr. WALLACE on "The Truth of the Idea of Heredity," and the two papers were taken and discussed together.

Professor BENEDIKT said that of late his views with regard to heredity had been modified, and he concluded heredity as a cause of disease was on the increase. He quoted a case where the neurosis of the offspring appeared before that of the parent, who ultimately became a general paralytic. He

called attention to the fact noted by Professor Engel that the bones of the face became changed by the influence of psychic, moral, and social conditions.

Dr. MERCIER said the organization we inherited from our ancestors was our fate, and we looked for the influence of our surroundings to modify our destiny. Insanity he believed to be (1), the result of heredity; and (2), the stress of circumstances. The strongest nervous system would fail if sufficient strain were brought to bear upon it. He was amazed at Dr. Wallace's doctrine. If qualities were not transmitted how was it that sheep were not born of oxen, or that children were not produced out of the traditional strawberry bed. With regard to mutilations being transmitted, not one of those mentioned could compare with the mutilation of the hymen, which had occurred for countless generations.

Dr. FLETCHER BEACH thought that it was an acknowledged fact that not only the characters of patients, but also those of the ancestors, were transmitted. He strongly believed in maternal impressions. Idiocy and imbecility often were the result of worry and anxiety of the mother during pregnancy.

Dr. NEECH discussed at some length the theory of mind.

Dr. WARNER stated some facts connected with cranial abnormalities.

Dr. NICHOLSON had worked out the effects of surroundings in the case of prisoners in solitary confinement, and his researches proved to him the enormous influence it had upon the mental condition of the convict.

Dr. SAVAGE and Dr. WALLACE briefly replied.

Dr. AUGUSTE VOISIN (physician to the Salpêtrière, Paris) read a paper on "Incendiarism Committed under the Influence of Hypnotic Suggestion." He described in detail how patients of his had been hypnotized, and when in the hypnotic state had been induced to set fire to imaginary buildings. The gist of the paper was to prove that persons could be made to commit crimes when in the hypnotic state at the suggestion of the operator. All the details of the surroundings of the suggested crimes were prepared most elaborately, and then the patient sent to commit the fatal deed at the word of command.

Professor BENEDIKT said in considering the subject we must not forget that criminals would seize upon the idea conveyed in M. Voisin's paper, and accuse innocent people. Manslaughter might be committed as an experiment in a drawing-room, but he doubted if it could be carried out in reality as suggested. Hypnotism was a remedy for some states, but it had its dangers, and should be employed with caution.

Mr. ERNEST HART said he had given the subject much attention for many years. It was easy to say that hypnotic phenomena must be phantasms of the imagination; that was what anyone would say without knowledge or investigation. He, however, had proved that the phenomena could be verified in various ways, both by physical influence and by suggestion. It was the same kind of influence as that which acted upon a hungry boy looking into a confectioner's who thought he would like a jam tart. He felt a watering in the mouth and a hollowness in the stomach. This was the influence of suggestion producing a flow of saliva and gastric juices without his knowing how it came. In this the will had nothing whatever to do with the phenomena; they were subjective. It was quite easy to make anyone sleep; this was a subjective state produced either by the mental condition of the patient, or by his induced physical condition. Hypnotism was accepted by all the world. Somnambulism was also accepted. Professor Benedikt had ridiculed the idea that persons hypnotized would obey orders of a very complex kind. It was known that a simple order such as to jump out of the window would be followed by an endeavour to do it. They had seen dozen of times, no doubt, that a mesmerist could impose his announced will upon a hypnotized or mesmerized subject. No one who had real knowledge of the facts would deny that. Now because Professor Voisin said he could by word of mouth produce post hypnotic effects which were more complex operations, surely it was not philosophical to say that because it

was more complex it was impossible or untrue. For anyone to say such things were impossible was to say that which was beyond their knowledge. To have that knowledge it is necessary to see the things such as had been shown to him by close observers—not by M. Voisin, but by Professor Charcot and his students, men of the closest observation and the most extreme scepticism. It did not follow that hypnotic suggestion might not be more harmful than useful, or that it might possess therapeutic value, but he could assure them if they investigated the phenomena it would be seen that they were real.

Dr. DRAPER (Huddersfield) said twelve months' investigation had produced in his experience astonishing results, and he gave the details of several cases showing that hypnosis had a therapeutic value.

Dr. MCNEE (Inverness) thought the subject required working out. He related a case where hypnotism had been used by a charlatan with bad results to the patient.

Dr. DOUGLAS (Leamington) said all who had investigated this subject must admit there was something in it, and that it possessed considerable therapeutic value. He hoped the Committee appointed by the Association would report after due investigation, so that the profession and the public should be made aware of its limitations. He gave cases in which he had found hypnotism of use. He asked if it was possible to protect a person from being hypnotized.

Dr. WILBERFORCE thought that hypnotism should be treated like morphia and other valuable remedies, and placed under wise restrictions.

Dr. OUTERSON WOOD said he would answer Dr. Douglas's question by stating that he had succeeded in hypnotizing a patient said to be protected. Since the meeting in Birmingham last year, when he was appointed a member of the Committee to investigate the phenomena of hypnotism, he had conducted a number of experiments, and he was bound to confess he had found hypnotism of therapeutic value in certain cases. The details of these experiments would be made known later on. He was strongly of the opinion that no public exhibitions of hypnotism should be tolerated in this country.

Dr. NEECH said they must be careful not to confound hypnotism with suggestions made under hypnotic influence. He believed with Mr. Ernest Hart the phenomena were actual and real.

Dr. BRIDGEWATER would warn the members against going to either extremes in this matter. He thought hypnotism might be used now and then by intelligent medical men with advantage.

Dr. NICOLSON said personally he should object to use hypnotism for the detection of crime. At the same time he should give the facts laid before them due consideration.

The PRESIDENT did not profess to have any experience of hypnotism, except from having witnessed some degrading public exhibitions, which he hoped would soon be a thing of the past, and he supported the suggestion that they should be put a stop to. He begged, therefore, to propose the following resolution:—"That in the opinion of this Section popular exhibitions of hypnotism, and of persons under the influence of hypnotic suggestion, should be prohibited, and that the Council of the Association be requested to make representations to the proper authorities urging the necessity of such prohibition."

This was seconded by Mr. ERNEST HART, and after some discussion was carried.

FRIDAY, JULY 31.

Professor VICTOR HORSLEY, F.R.S., read a paper on "Craniectomy," in which he described the operations he had performed to relieve intra-cranial pressure. In one case headache due to pressure was relieved by the operation which gave fibrous tissue of some elasticity instead of bone. The details of cases were given. He considered the first risk was shock from the operation, which consisted in removing a large strip of bone in a line with the vertex from before backwards on one or both sides.

M. VOISIN related a case where an operation similar to that described by Professor Horsley had been followed by good results. In cases where the brain is small and the membrane healthy the operation might succeed, but not in those where the membranes had become opaque.

Dr. CLAY SHAW read a paper on "The Surgical Treatment of General Paralysis." The operation had been successful in relieving pressure and in prolonging life. In one case the epileptic fits from which the patient suffered ceased, and the mental symptoms improved. In another case the patient so far recovered after the operation as to resume his occupation. In another delusions and headache were both cured by the operation.

Professor VICTOR HORSLEY had no experience of operating in general paralysis, but he knew a case where epilepsy and headache were completely cured by operation.

Dr. MERCIER considered this a serious operation, which should not be undertaken without strong reasons. He thought you might as well try to improve the ritual of the Church by removing a few slates off the roof of the building.

Professor BENEDIKT thought we wanted practical results, and not mere surgical theories.

Dr. HACK TUKE said that in considering the subject they should ask themselves two questions—1st. Is the operation justifiable? and 2nd. Is it likely to be beneficial? He did not see any intrinsic objection to the operation in the hands of capable men. At the same time he confessed that the evidence hitherto advanced in favour of the operation drawn from actual cases was not encouraging.

The PRESIDENT thought they should suspend their judgment while waiting for further information upon this interesting subject. One point struck him as being of great importance, and it was the continuance of the improvement in the symptoms long after the cicatrization of the wound.

Dr. MACPHERSON gave notes of a case where the symptoms disappeared on the deposit of tubercle in one lung.

Dr. SNOW remarked that improvement often followed operations on other parts of the body.

Mr. JOHN EWENS (Clifton) gave particulars of a case where relief to mental symptoms followed a suicidal attempt with wounds of the head.

Dr. NICOLSON doubted if a patient could improve sufficiently after the operation as to make a will.

Dr. NEEDHAM pointed out the difficulty in dealing with the earlier stages of the disease, which was simulated by many other diseases in their initial stages.

Dr. CLAYE SHAW, in reply, did not consider the operation was a serious one if due care were taken.

Dr. HERBERT SNOW's paper on "Cancer in its Relation to Insanity" (see "Original Articles") and Dr. BENEDIKT's paper on "Spinal Adynamia" concluded the business of the Section.

Dr. LANGDON DOWN proposed, and Dr. HACK TUKE seconded, a vote of thanks to the President.

THE LUNACY ACT, 1891.

(54 and 55 Vict., c. 65.)

An Act to amend the Lunacy Act, 1890.

[5th August, 1891.]

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1.—This Act may be cited as the Lunacy Act, 1891, and this Act shall be construed as one with the Lunacy Act, 1890 (in this Act called the principal Act), and this Act and the principal Act may be cited together as the Lunacy Acts, 1890 and 1891.

2.—(1.) A constable, relieving officer, or overseer whose duty it is, under the principal Act, to convey a lunatic to or from an institution for lunatics, may make proper arrangements for the performance of the duty by some other person or persons.

(2.) Where in a union there are two or more relieving officers, and the guardians, with the sanction of the Local Government Board, direct one relieving officer to discharge throughout the union the duties of a relieving officer in respect of lunatics, every other relieving officer in the union shall inform the officer so directed of any case of a lunatic, with which it would otherwise devolve upon such other relieving officer to deal, and it shall be the duty of the relieving officer receiving such information to deal with the case, and the other relieving officer shall be discharged from any further duty in the matter.

3.—A lunatic sent to an institution for lunatics under section thirteen or sixteen of the principal Act shall be classified as a pauper, until it is ascertained that he is entitled to be classified as a private patient.

4.—(1.) Every pauper suffering from mental disease in a workhouse at the commencement of the principal Act, as to whom a report had before the commencement of the principal Act been made under section twenty-two of the Poor Law Amendment Act, 1867, may be detained in the workhouse against his will without an order under section twenty-four of the principal Act.

(2.) The medical superintendent of an asylum provided under the Metropolitan Poor Act, 1867, shall not be required in any certificate under subsection one of section twenty-four of the principal Act, or under this Act, to certify to the effect in sub-clause (c) of that sub-section mentioned, and upon the transfer from a workhouse to an asylum provided under the Metropolitan Poor Act, 1867, of a lunatic, with regard to whom a certificate or order under the said section twenty-four made while he was in the workhouse is in force, no further certificate or order shall be required for the detention of the lunatic in the asylum.

5.—There shall be attached to every order made by a justice under section twenty-four of the principal Act the medical certificates on which such order is founded.

6.—Where a workhouse is situate in a county which does not include the union to which the workhouse belongs, a summary reception order made by a justice of the county in which the workhouse is situate may order a lunatic in the workhouse to be received in any asylum, in which pauper lunatics chargeable to the union, to which the workhouse belongs, may legally be received.

7.—Subsection four of section thirty-eight of the principal Act is hereby repealed, and the following subsection is substituted therefor :—

(4.) A reception order shall remain in force for a year after the date by this Act or by an order of the Commissioners appointed for it to expire, and thereafter for two years, and thereafter for three years, and after the end of such periods of one, two, and three years for successive periods of five years, if not more than one month or less than seven days before the expiration of the period at the end of which, as fixed by this Act or by an order of the Commissioners under subsection two, the order would expire, and of each subsequent period of one, two, three, and five years respectively, a special report of the medical officer of the institution or of the medical attendant of the single patient as to the mental and bodily condition of the patient with a certificate under his hand certifying that the patient is still of unsound mind and a proper person to be detained under care and treatment is sent to the Commissioners.

8.—Section thirty-nine of the principal Act shall not apply to lunatics received under a removal order or to lunatics so found by inquisition.

9.—(1.) In subsection three (a) of section fifty-five of the principal Act the words "or to travel in England" shall be inserted after the word "place."

(2.) In sub-section six of section fifty-five of the principal Act, for the words "licensed by visitors" shall be substituted the words "licensed by justices," and for the words "the Commissioners or visitors" shall be substituted the words "such Commissioner or such two visitors."

10.—In subsection three of section fifty-six of the principal Act the words "or permit the patient to be absent upon trial for such period as may be thought fit" shall be added after the word "health" at the end of the subsection.

11.—In subsection one of section sixty-one of the principal Act the words "to the workhouse of the union to which the lunatic is chargeable, or if the lunatic is chargeable to a county or borough, to the workhouse of the union from which he was sent to the hospital or licensed house" shall be inserted after the words "of the lunatic."

12.—The managing committee of every hospital may, with the approval of a Secretary of State, alter the regulations of the hospital.

13.—(1.) Where under section two hundred and forty-six of the principal Act, a borough ceases to be a local authority under that Act, the borough shall for all purposes of that Act be annexed to and treated as part of the county in which the borough is situate, and if or so far as the borough has not contributed towards the expense of providing the asylum of the county, a sum to be paid by the borough towards the expenses already incurred in providing the asylum shall be fixed by agreement between the councils of the county and borough, or in default of agreement by an arbitrator appointed by the parties, or, if the parties cannot agree upon an arbitrator, by an arbitrator appointed by the Local Government Board. In fixing the sum to be paid by the borough, the borough shall be credited with any sums already contributed by the borough for lunacy purposes in excess of its legal liability; and the arbitrator shall take into consideration the amounts that may have been paid by the borough for the reception or maintenance, in the asylum of the county, of the lunatics of the borough.

(2.) Where a borough had before the passing of this Act, by virtue of section eighty-six of the Local Government Act, 1888, and the determination of any contract, become liable to contribute to the county rate of the county in respect of a lunatic asylum, this section shall apply to such borough as if it had immediately after the passing of this Act ceased under section two hundred and forty-six of the principal Act, to be a local authority.

14.—Any question relating to lunatic asylums or the maintenance of lunatics arising between any local authorities under the principal Act and any boroughs not being local authorities under that Act, and any visiting committees or any two or more of such parties respectively, may be referred to an arbitrator appointed by the parties, or, if the parties cannot agree upon an arbitrator, by the Local Government Board.

15.—The provisions of sub-sections five, six, and seven of section sixty-two of the Local Government Act, 1888, shall apply to every sum by virtue of this Act agreed to be paid or awarded by an arbitrator as if such sum had been agreed to be paid or awarded under section sixty-two of the Local Government Act, 1888.

16.—In sub-section two of section two hundred and fifty-four of the principal Act, there shall be added after the word "contracts" the words "for the purchase of lands and buildings and for the erection, restoration, and enlargement of buildings."

17.—Where a contract between the council of a borough and the subscribers to a hospital for the reception of pauper lunatics into the hospital was subsisting on the twenty-sixth day of August one thousand eight hundred and eighty-nine, such contract, unless determined by the parties or one of them, shall be deemed to have continued in force since that date, and may be renewed subject to the same conditions and with the same consequences as if the contract had been entered into by a visiting committee on behalf of the borough.

18.—The provisions of the Local Government Act, 1888, relating to the accounts of county councils and their officers, and to the audit of such accounts, shall apply to the accounts of every asylum belonging wholly or in part to a county council and of the visiting committee and officers thereof.

19.—(1.) Where a lunatic in a hospital or licensed house becomes a pauper, the manager of the hospital or house may, after having given notice to the authority liable for the maintenance of the lunatic of his intention so to do, apply to a justice of the peace having jurisdiction in the place where the hospital or house is situate for an order for the removal of the lunatic, and such justice may, if he thinks fit, make an order for the removal of the lunatic to an institution for lunatics to which pauper lunatics for whose maintenance the authority is liable may legally be sent and for the reception of the lunatic therein, and such institution shall be named in the order, and the manager of the hospital or house shall forthwith cause the lunatic to be removed to the institution named in the order. In the case of such removal the original reception order shall remain in force, and shall authorise the classification of the lunatic as a pauper lunatic in the institution to which he is removed.

(2.) The costs of obtaining an order under this section and of the removal of the lunatic shall be repaid to the manager who obtains the order by the authority liable for the maintenance of the lunatic, and any justice having jurisdiction in the place where the hospital or house from which the lunatic was removed is situate shall have power to fix the amount of such costs and to order such authority to repay the same. The provisions of section three hundred and fourteen of the principal Act shall apply to every such order for the repayment of costs.

20.—Where a boarder is received into a licensed house not within the immediate jurisdiction of the Commissioners in Lunacy, or into a registered hospital, notice of his reception shall be given to the Commissioners in Lunacy within twenty-four hours of his reception by the manager of the licensed house or hospital into which such boarder has been received.

If any manager fails to comply with the provisions of this section he shall, for each day or part of a day during which the default continues, be liable to a penalty not exceeding five pounds.

If the Commissioners after inquiry are of opinion that the mental state of any boarder received into a licensed house or hospital is such as to render him unfit to remain as a boarder, they may order the manager of the licensed house or hospital either to remove such boarder or to take steps to obtain an order for his reception as a patient into the licensed house or hospital.

Any manager failing to comply with an order of the Commissioners in Lunacy made pursuant to this section shall, for each day during which the default continues, be liable to a penalty not exceeding five pounds.

21.—If complaints are made by persons resident in the neighbourhood of any hospital that the patients are allowed to go outside the hospital without a sufficient number of officers to control them, or that the patients are allowed to wander at large without any control, the Commissioners may, if they are satisfied that there are *prima facie* grounds for such complaints, inquire into the same, and may make such order in relation thereto as the Commissioners think just, and the superintendent of any hospital disobeying any such order shall be guilty of a misdemeanor.

22.—The provisions of the principal Act for the payment of expenses in relation to pauper lunatics shall be applicable with respect to lunatics in institutions for lunatics who become paupers.

23.—In Form 1 in the Second Schedule to the principal Act there shall be substituted for the word "Dated" the words "Date of presentation of the petition."

24.—(1.) A justice of the peace specially appointed under section ten of the principal Act may exercise the powers of the judicial authority under that Act, notwithstanding that he may not have jurisdiction in the place where the lunatic or alleged lunatic is.

(2.) A judicial authority may, if he considers it expedient, transfer a petition for a reception order presented to him to any other judicial authority who is willing to receive the same, whether such other judicial authority has or has

not jurisdiction in the place where the lunatic is, and such other judicial authority shall have the same powers as the judicial authority to whom the petition was presented would have had.

(3.) A reception order made after the passing of this Act shall not be invalid on the ground only that the justice of the peace who signed the order shall appear to have not been duly appointed under section ten of the principal Act, if the order is within fourteen days after its date approved and signed by a judicial authority.

(4.) The appointment at any time before or after the passing of this Act by the justices of a county or quarter sessions borough of justices to exercise the powers of the judicial authority under the principal Act shall not be invalid on the ground only that the appointment includes all the justices of the county or borough.

(5.) Every justice appointed under section ten of the Lunacy Acts Amendment Act, 1889, shall be deemed to have had power to exercise the jurisdiction conferred upon the judicial authority under the principal Act, and the jurisdiction of such justices and of any justices appointed or hereafter to be appointed under the principal Act shall be deemed to have continued and shall continue until a fresh appointment is made.

25.—If for the due administration of the Lunacy Acts, 1890 and 1891, in any union it appears to the Lord Chancellor desirable, he may by writing under his hand empower the chairman of the board of guardians to sign orders for the reception of persons as pauper lunatics in institutions for lunatics, and every order so signed shall have effect as if made by a justice of the peace under the principal Act.

26.—(1.) The provisions of section ninety-four sub-section two of the principal Act as to the trial of issues in the High Court shall extend to all inquisitions, and the masters may, for the purpose of inquisitions held before them, exercise the powers by that sub-section conferred upon the judge who tries the issue.

(2.) The masters may make orders for the attendance of an alleged lunatic at such time and place as the order directs, for examination by the masters or a medical practitioner, and such order may be enforced in the same way as an order of a Judge of the High Court.

27.—(1.) Subject to rules in lunacy the jurisdiction of the Judge in Lunacy as regards administration and management may be exercised by the masters, and every order of a master in that behalf shall take effect unless annulled or varied by the Judge in Lunacy.

(2.) The power to make rules under section three hundred and thirty-eight, sub-section (2), of the principal Act shall extend to all applications under the principal Act and this Act, and also to applications in the Chancery Division of the High Court in cases where such applications are also made under the principal Act.

(3.) The power conferred by section one hundred and forty-eight of the principal Act to make rules fixing percentage and fees shall be deemed to extend to all proceedings under the principal Act or this Act, whether relating to lunatics so found by inquisition or to any other person in relation to whom or to whose property an order under the said Acts has been or may be made. Provided that in the case of lunatics under the protection of the Judge in Lunacy by virtue of the transmission of the record of an inquisition from Ireland and its entry of record in the High Court, and in the case of persons residing out of England and declared lunatic according to the laws of their place of residence, no percentage shall be levied except upon income arising from property within the jurisdiction of the Judge in Lunacy and administered under his direction.

(4.) The provisions of section one hundred and sixteen, sub-section two, of the principal Act shall apply to the persons named in sub-section one (d) of the same section though not lunatics.

28.—In the principal Act, the word "seised" shall include any vested

estate for life or of a greater description, and shall extend to estates at law and in equity in possession or in futurity in any lands; and the word "possessed" shall include any vested estate less than a life estate at law or in equity in possession or in expectancy in any lands.

29.—The enactments in the schedule are hereby repealed.

SCHEDULE.—ENACTMENTS REPEALED in The Lunacy Act, 1890, 53 and 54 Vic., c. 5.

Section 9, sub-section 1, from "having" to the end of the sub-section. Sec. 10, in sub-section 1, the words "within the county and borough respectively" and in sub-section 4 the words "within the same" occurring twice. Sec. 13, sub-section 2, from "within" to "jurisdiction." Sec. 24, sub-section 6, from "that a pauper" to "asylum" where that word next occurs. Sec. 62. Sec. 99 the words "with a jury." Sec. 149. Sec. 246, from "subject" to "an asylum." Sec. 279. Sec. 338, sub-section 2, the words "in lunacy."

The Second Schedule, Form 13.

The Fourth Schedule, the references to "Dover" and "Maidstone" repealed as from the commencement of the Lunacy Act, 1890.

NOTICE OF NEXT QUARTERLY MEETING.

The next Quarterly Meeting of the Medico-Psychological Association will be held in London on the third Thursday in November (19th), at the house of Dr. B. W. Richardson, F.R.S., 25, Manchester Square.

FLETCHER BEACH, Gen. Secretary.

Darenth Asylum, Sept. 1, 1891.

Correspondence.

PAROTITIS IN THE INSANE.

To the Editors of "THE JOURNAL OF MENTAL SCIENCE."

SIRS,—I have read with very great interest the cases reported by Dr. Hyalop of parotitis in the insane (Oct., 1890). As I am not aware that such cases in connection with asylum practice are referred to in any work on insanity, I am induced to give some account of them, based upon my 32 years' experience in two large county asylums. I have seen many patients with acute mania or melancholia attacked with acute parotitis, and these, as far as I can remember, were without exception persons whose health and strength had been impaired; they all obstinately refused food, and had to be fed by force. One attendant fixed the head by firmly grasping the face with both hands, whilst another attendant administered the nourishment by means of a spoon; in proportion as the patient struggled to release his head the attendant, of course, increased his pressure on the two cheeks, and this excessive pressure, in my opinion, set up an inflammation of the parotid gland, which the low vitality of the patient would tend to intensify and prolong; hence arose rapid, extensive, and deep-seated suppuration, sometimes with fatal œdema of the glottis. In all cases where deep-seated fluctuation could be detected the lancet should be early and freely used.

As a preventive measure, I, some years ago, instructed attendants, whenever they had to administer food by force, not to grasp the cheeks, but the temples, of the patient, in order to fix and steady the head; and after this plan was adopted, cases of parotitis became comparatively rare. Quite recently I have seen a case, in consultation, which was evidently due to the adoption of the older method of feeding, so that to it, as a cause, if not the *vera causa*, I think I am justified in attributing many of those cases of parotitis occurring in asylum practice. I hope others will be induced to give their experience in this

matter, and if this should confirm my own, it will be another instance of an apparently trivial fact assuming the very highest practical importance in the management of the insane.

I am, etc.,

WILLIAM C. HILLS, M.D.

Thorpe St. Andrew, Norwich.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

M.P.C. EXAMINATION.

ENGLAND.

The following candidates for the M.P.C. passed the Examination held at Bethlem Hospital, July, 1891:—

Distin, Howard, M.R.C.S., L.R.C.P.
 Douglas, A. R., L.E.C.P. Edin., and L.F.P.S. Glasgow.
 Gill, J. Macdonald, M.B.
 Kelson, W. H., M.D.

SCOTLAND.

July, 1891.

Adamson, Robert O.
 Bond, C. Hubert.
 Bowlan, Marcus M.
 Carmichael, W. J.
 Collier, Joseph Henry.
 Cowan, John J.
 Graham, F. B.
 Grant, J. Wemyss.
 Genney, Fred. S.
 Giles, A. B.

Griffiths, Edward H.
 Ker, Claude B.
 Leslie, E. Murray.
 Livingstone, John.
 Macdonald, David.
 Mitchell, Charles.
 Parker, William A.
 Rust, James.
 Skeen, George.
 Young, D. P.

The next Examination for England and Scotland will take place in December next.

Appointments.

CANDWELL, E., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Norwich City Asylum, Hellesdon.

COTTAM, FRANCIS H. W., M.R.C.P., appointed Assistant Medical Officer at the County Asylum, Prestwich.

DAVIS, ARTHUR N., L.R.C.P., appointed Medical Superintendent to the New Asylum for the Borough of Plymouth.

RAINSFORD, FREDERICK EDWARD, B.A., L.R.C.S., appointed Second Assistant Medical Officer to the Bristol City Asylum.

RYAN, R. P., L.R.C.S., L.R.C.P. Ire., appointed Junior Assistant Medical Officer to the Norwich County Asylum, Thorpe.

RUDD, W. A., M.B., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Dorset Asylum.

SIMPSON, FRANCIS O., L.R.C.P., M.R.C.S., appointed Third Assistant Medical Officer to the Hants County Asylum, Knowle, Fareham.

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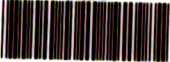
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